

# Identity Resolution: The Key to Customer Data Value

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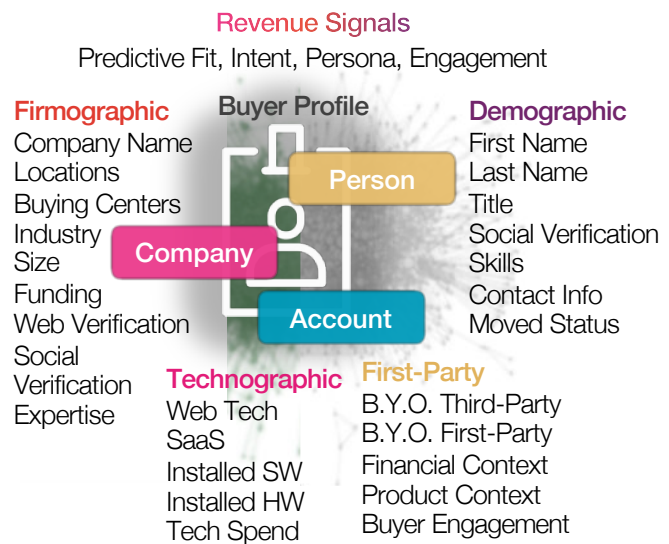


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Today's marketers collect an ever-growing stream of customer data, but few are comfortable with the results. The problem starts with data quality: many inputs are inaccurate, incomplete, outdated or inconsistent when they are loaded. But even perfectly accurate data is often stored without being connected to other items that relate to the same customer. Without the final step of linking related items, even accurate data is an unassembled jigsaw puzzle: a coherent picture emerges only after the pieces are fit into place.



In this paper we'll explore the reasons for fragmented customer data, the problems it can cause, and solutions that empower marketers to create unified customer profiles.

## Customer Data Is Naturally Fragmented

Customer data comes from many different systems. One study estimated that marketing organizations had an average of eighteen data sources<sup>1</sup>, and many companies have far more. Common sources include email, websites, purchases, surveys, offline activities, and apps as well as second- and third-party relationships. As new marketing channels continue to emerge, the number of sources will continue to grow.

More problematic than the number of sources is the fact that each source often has its own customer identifier. Email addresses, phone numbers, postal addresses, cookie IDs, account numbers, and device identifiers are all captured separately and have no self-evident relationship to each other.

In addition, ever-expanding privacy rules and policies often prevent companies from sharing customer identifiers. Third-party cookies, widely used to track individuals across websites, are already blocked by many web browsers and are expected to be blocked by the last major exception, Google Chrome, by the end of 2024. When given the choice, many consumers will opt not to share their data: for example, two-thirds of Apple users withhold tracking permission when prompted to make a choice while downloading a new mobile app.<sup>2</sup>

The challenge is even greater for business data, where matching extends beyond identifying individual users to associating those users with organizations, accounts, locations, and buying teams.

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## Fragmented Data Causes Problems

Taken by itself, each stream of fragmented data provides only a partial view of each customer. Even something as simple as purchase history will be incomplete if purchases made through different channels are not combined. More subtle information, such as an understanding of interests and preferences, relies heavily on having a complete picture of behaviors across all channels and systems. Key goals such as identifying sudden changes in activity levels also require knitting together data from different touchpoints to identify meaningful trends.

Patterns that are based on group behaviors are even more dependent on accurately determining which individuals belong to groups such as a department or buying team. Identifying team members and aggregating information about their behaviors can provide a much clearer signal of organizational intent than viewing each individual in isolation.

Specific applications that depend heavily on data unification cover the full range of business activities:

### Marketing

- **Data quality and compliance.** Customer data changes quickly, especially business data such as employer and title changes. Each interaction with a customer is an opportunity to capture the latest information. When data is fragmented, this new information is applied only to the original source, leaving incorrect information in place in other records for the same person. A unified customer view gives all channels access to the most recent information and enables companies to compare data from multiple sources to pick the best version of each element. This becomes even more important as privacy regulations hold companies responsible for respecting customer preferences across all channels and systems.
- **Customer segmentation.** Fragmented data often means that transactions in different channels are not combined to create a complete view of past behaviors. This may mean that one high-value customer who makes purchases in different channels looks like several low-value customers who purchase in one channel each. Similarly, customers who have purchased a particular product in one channel may be treated in other channels as if they had never purchased that product. The result is wasted opportunity as customers are sent inappropriate offers, as well as annoyance among customers who feel the company does not understand their needs or recognize their value.
- **Customer profiling and targeting.** A unified customer view gives a more accurate understanding of the company's customers. This can drive more effective prospecting efforts by ensuring that promotions are aimed at the right audiences, sent in the right media, and deliver the most appropriate messages to each audience.

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## Sales

- **Lead scoring.** Incomplete data can result in misjudging the value of new lead or failing to link that lead to an existing account. This results in misallocated marketing and sales resources and can lead to missed sales opportunities.
- **Understanding the buying group.** The first challenge is simply to understand which individuals are members of a given buying team. This enables sales and marketing teams to give each team member the information that's appropriate to their role in the purchase process. The second challenge is to collate information about behaviors of all team members. This enables sellers to build an accurate understanding of the team's stage in the purchase process, to understand team concerns, and to react to significant behaviors.
- **Consultative selling.** Content consumption is a powerful indicator of buyer concerns. This is especially important in business marketing where buyers may not contact sales people until late in the purchase process. Sales teams who want to offer appropriate information to their prospects are handicapped if they lack of complete view of which content each individual has consumed. At a minimum, time is lost as the salesperson tries to understand the customer's situation. A worst, the buyer decides that the salesperson is incapable of meeting her needs.

## Personalization

- **Taking advantage of AI to create or select best messages.** Predictive systems are entirely dependent on the data that feeds them. Fragmented data will result in creating several separate identities, each holding one part of the information associated with an individual. This will likely result in AI systems selecting different messages for each identity, subjecting the customer to inconsistent treatment in different channels. None of these treatments will be as appropriate as a treatment based on a complete customer view.
- **Reacting quickly to significant customer behaviors.** Key buying signals such as downloads of pricing information or requests for sales contacts may be missed or given low priority if those signals are not associated with the correct customer or the customer is not linked to the right account. A sudden surge in activity among team members may be missed if the team members are not connected.
- **Delivering messages across channels.** Customer identifiers such as email and telephone number are also used to send messages in the channels that capture them. Delivering coordinated messages across channels is only possible when fragmented customer records are merged so different identifiers are associated with the same person.
- **Personalizing real-time customer treatments.** Identity resolution enables real-time systems such as websites and call centers to instantly identify a known customer, retrieve their profile, and act accordingly. This process will be fully automated for website or app personalization. It may be more manual for call centers and sales agents, who will review the customer profile and choose the best actions based on their judgment. Even in those cases, the ability to automatically identify the right customer and present their profile will speed the interaction, making it more effective for both the agent and the customer.

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## Analytics

- **Measuring marketing results.** Purchases in one channel can only be tied to promotions in a different channel if the customer can be identified across both channels. This is even more difficult in business marketing, where individuals must be associated with buying groups to measure results at the buying group level, where important influencers may not be part of a particular buying group, and where buying processes run much longer than for most consumer products.
- **Operationalizing support.** Fragmented customer data can also create problems outside of marketing and sales. Customer service and support teams may struggle to find all the information they need about a customer's purchase and service history when the data is scattered in different systems. Operational tasks such as delivery route planning also work best with complete, unified data. So do analytical tasks such as store location planning and product use studies.

## ID Resolution Unifies Fragmented Data

Virtually all analytics, IT, and business leaders feel their organization should be getting more value out of its data. One study finds 94% of respondents feel this way but finds just 45% of marketers have complete confidence in the accuracy of their data<sup>3</sup>. Data quality and fragmentation consistently rank among the top data problems:

- 36% of B2B marketers say tracking and consolidating data from different sources is a challenge in using data for multi-channel marketing<sup>4</sup>
- 44% of B2B marketers cite data quality as their greatest challenge to executing a successful multi-channel marketing strategy<sup>4</sup>
- 47% of business, analytics, and IT professionals say their data is too fragmented to gain single views of all relevant data<sup>5</sup>
- 61% of digital experience and product leaders say it's difficult to consolidate and organize data across different tools<sup>6</sup>

It doesn't have to be this way. Identity resolution is a long-established function in customer data management, starting decades ago with systems to remove duplicate postal addresses from mailing lists. Identity resolution for businesses is more difficult because of special challenges such as job titles, separate office and delivery addresses, multiple phone numbers and email addresses, and alternative company names. The demand for business identity resolution has also been suppressed to some degree by a reliance on CRM systems, which largely rely on users to manually identify and merge duplicate records – something that rarely happens in practice.

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Today's B2B identity resolution systems do far more than reconcile slight variations in mailing addresses. Key capabilities include:

## Data Preparation

- **Include all data sources.** While CRM data remains the backbone of B2B sales and marketing operations, company sources outside of CRM include websites, mobile apps, purchases, surveys, and offline events. Still other sources include data from outside the company, acquired through second- and third-party relationships. These sources may use different identifiers from CRM, such as website cookies, or capture different versions of common identifiers, such as a personal phone number or home address. Some sources may contain outdated information which is still useful for matching.
- **Near-real-time updates.** Identity resolution systems should be able ingest new identifiers, match them against existing customer records, and add any associated data to the customer profiles almost instantly. This ensures that all systems relying on the profiles are working with the most current data and that the system can react quickly to relevant events. Although real-time updates are the ideal, some variation in the speed of different processes is acceptable. It's common to instantly match a new identifier against customer master records but take longer to assess whether the new identifier requires merging or splitting existing master records. Similarly, it's usually quick to append new data to the customer profile but may take longer to recalculate values based on that data, such as segment assignments, lead scores, or next-best-offer recommendations.
- **Best data identification.** Some identity resolution systems can find conflicting values in different customer records and suggest which is most likely to be correct. This is sometimes called a "golden record." Judgments are based on a combination of factors including the reliability of the source system (invoices are more reliable than web forms), time since the data was captured (newer data is more likely to be correct), and value itself ("Susan" is a more likely first name than "Susna"). While some elements can be treated independently, others must be evaluated as part of a group: you cannot combine the street name from one address with the building number from a different address.

## Identity Management

- **Maintain persistent customer identities.** All customer identifiers should be linked to a master customer identity which remains fixed over time. This enables the system to link new identifiers, such as an email address or phone number, to the customer without changing the master identity. Customer data can then be attached to this master identity. Even outdated identifiers remain attached to the master identity so the system can link any data associated with those identifiers to the individual. This ensures that the customer history remains accurate even if any particular identifier becomes obsolete.

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- **Capture multiple identifiers from the same source.** A typical CRM record will have several identifiers, including email, telephone, and postal address, and often has several of each. Since these are all captured in the same system, they are almost certain to refer to the same individual. This makes them all useful as potential matching keys for records from other systems, which may have only one identifier.
- **Merge identities when new matches are found.** An anonymous website visitor might be tagged with a web browser cookie. This can recognize them on a return visit but may be otherwise anonymous. However, the visitor may subsequently fill out a web form that captures other identifiers that belong to a known individual, such as email address. The identity resolution system can then recognize the browser cookie as an identifier for that same individual. This allows adding all data associated with the cookie to the individual's existing profile, providing a more complete customer record.

## Unification

- **Probabilistic matches.** Broadly speaking, any match based on something other than exactly matching identifiers is “probabilistic”. But the term “probabilistic” usually refers to matches based on correlated behaviors, such as two mobile devices that are frequently used in the same places at the same time. The inherent uncertainty means such matches are generally avoided where the cost of a false match is high, such as granting access to a bank account, and accepted where the cost of a missed match is high, such as finding fraud or money-laundering. They may also be accepted where the cost of a false match is low, such as sending two emails to the same person. Many business identity resolution systems apply probabilistic methods sparingly because false matches can be annoying to customers. Some systems accept different levels of probabilistic certainty depending on the purpose of the match.
- **External profiling sources for reference-based matches.** Few companies have complete information on all the identifiers associated with their customers, and the information they do have is often outdated. Many identity resolution systems therefore rely on data collected by firms with a broader base of information. These can find additional matches, correct internal data, add missing data, and flag outdated items. For business data, they can offer additional services such as identifying corporate parents and subsidiaries. Reference data firms vary greatly in the types of data they work with and how much is shared with their clients.
- **Buying group identification.** Business-oriented identity resolution systems may also assign individuals to larger groups such as departments and buying teams. This can be based on a combination of fast-changing demographic data such as job titles, offices, skills or interests and behavioral data such as meeting invitations and website content consumption. Some systems will list the personas expected to be part of a buying team, find any personas that are not represented in the known team membership, and add contacts with the missing personas from existing CRM records, external sources, or targeted advertising.

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## Summary

Most organizations today have vast flows of customer data. Yet this data often cannot adequately fuel the sales and marketing engines that depend on it. Companies need on-going data hygiene and governance programs to ensure the data they collect is complete, accurate, current, and consistent. And they need identity resolution to merge their separate data streams into unified customer profiles.

Identity resolution isn't easy. It must take data from all sources, find different kinds of matches, maintain a persistent master identity, adapt to changes in external identifiers, and respond to new data in near real time. Failure to provide these any of functions can greatly reduce the value that identity resolution provides.

But it's worth the trouble to get identity resolution right. Unified profiles improve results of applications ranging from customer segmentation to AI-based offer selection to marketing performance measurement. Organizations that successfully assemble high-quality, trust-worthy customer data give themselves a huge advantage over competitors who do not.

### Footnotes:

1 State of Marketing, 8<sup>th</sup> Edition, Salesforce Research, 2022

2 <https://www.adjust.com/blog/app-tracking-transparency-opt-in-rates/>, ATT two years on: Opt-in rates keep climbing, Adjust, 2023

3 State of Data and Analytics, Salesforce, 2023

4 The B2B Perspective on Multi-Channel Marketing, Ascend2, 2023

5 Reducing Time to Insight and Maximizing the Benefits of Real-Time Data, TDWI, 2024

6 Data Decoded: The Heap Digital Insights Report, 2023, Heap



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## About Leadspace

Leadspace B2B Customer Data Platform empowers Sales and Marketing to find and convert their ideal customers through accurate, personalized engagement across all channels. By combining customers' 1st party data with unparalleled 3rd party data coverage, intent signals and Artificial Intelligence, Leadspace provides a 360-degree view of customers and prospects, and can accurately recommend the best marketing and sales activities to pursue. Updated in real time and automated directly into leading CRMs and Marketing Automation Platforms, data and intelligence remain constantly accurate and actionable. Based in San Francisco, Denver and Israel, Leadspace is trusted by more than 130 B2B brands and 7 of the 10 largest enterprise software companies, including Microsoft, RingCentral and Marketo.

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## About the CDP Institute

The Customer Data Platform Institute educates marketers and marketing technologists about customer data management. The mission of the Institute is to provide vendor-neutral information about issues, methods, and technologies for creating unified, persistent customer databases. Activities include publishing of educational materials, news about industry developments, best practice guides and benchmarks, directories of industry vendors, and consulting on related issues.

The Institute is managed by Raab Associates, a consultancy specializing in marketing technology and analysis. Raab Associates identified the Customer Data Platform category in 2013. Funding is provided by a consortium of CDP vendors.

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