

The Strategic Role Of Identity Resolution

Identity Is Context In The Age Of The Customer

by Joe Stanhope

October 17, 2016 | Updated: October 21, 2016

Why Read This Report

The ability to accurately identify customers is the most basic prerequisite for marketing analytics, orchestration, and execution. And it's becoming more critical than ever for firms planning to link systems of insight and engagement to foster seamless and relevant cross-channel customer experiences. This report helps B2C marketers understand a comprehensive process and applications for identity resolution.

Key Takeaways

Identity Resolution Is Key For Contextual Marketing

Identity resolution is a key enabler for contextual marketing by connecting multiple sources of identity and customer information to support robust targeting, personalization, and addressability across touchpoints and devices.

Identity Resolution Is Strategic

For customer-obsessed marketers, customer recognition in single channels isn't enough; identity resolution spans every interaction and provides a broad view of the customer, creating the strategic foundation for cross-channel marketing.

Identity Resolution Is A Process

Implementing an identity resolution strategy requires planning, development, and management of an ongoing process that incorporates data collection, integration, and distribution for marketing applications.

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Forrester interviewed 18 vendor and user companies, including Drawbridge, Conversant (Epsilon), Experian, Harte Hanks, Janrain, Krux, LiveIntent, MediaMath, Merkle, Neustar, Oracle, Salesforce, Viant, and Wunderman.

Related Research Documents

- [Bridging The Cross-Device Chasm](#)
- [Combine Systems Of Insight And Engagement For Contextual Marketing](#)
- [How Dirty Is Your Data?](#)

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Contextual Marketing Starts With Identity Resolution

At its core, marketing has always been about knowing the customer; it's a truism that outlives buzzwords, trends, and the acronym-of-the-month. Knowing the customer means being able to identify them. And identity is more than name recognition. Identity is the barista at the coffee shop you visit each morning knowing your name and your order, or the coffee shop's application knowing your name, order history, frequented shop locations, and loyalty card number. Complete identity resolution marries multiple sources of identifier and interaction information to form a cross-channel view of the consumer. The ability to accurately identify a customer is the most basic assumption made at every step of the marketing process — whether it is deliberately considered or not — making accurate identity resolution the literal foundation for all marketing activities. As B2C marketers pursue contextual marketing and contend with its inherent complexity, identity resolution is more important than ever, as connecting the dots between customer interactions is a critical success factor.¹ Identity resolution is critical at all phases of the marketing process to support:

- › **Coordinated customer experiences.** Effective identity resolution spans devices and touchpoints, creating the addressability for systems of engagement to deliver cross-channel customer experiences. Recognizing customers across the full customer journey reduces waste by eliminating duplicate contacts, enhances experiences by enabling interactions in the right channel at the right time, and makes basic customer tasks such as registration and logging in more efficient.
- › **Deep customer insights.** Effective identity resolution allows B2C marketers to build robust customer profiles based on multiple data sources and interactions. Complete and granular customer profiles drive rich customer insights that enhance marketers' ability to precisely target campaigns and craft relevant interactions for high performance acquisition, cross-sell, and upsell efforts.
- › **Better data governance.** Effective identity resolution supports firms' commitment to data stewardship, and ultimately consumers' trust and confidence in brands. Identities connect the marketing systems, interactions, and consumer data that make customer preference management, regulatory and corporate policy compliance, and privacy management possible.

Modern Customer Experiences Raise The Bar For Identity Resolution

Evolving consumer expectations and complex customer experiences put identity resolution capabilities in the spotlight due to its potential to support fluidity between devices, interactions, and data sources. But the all-too-common historical split between digital and offline marketing — with unique but rarely intersecting anonymous and personally identifiable information (PII)-centric approaches to identity — is antiquated in a post-digital world.² Identity resolution has a part to play in reaching the customer on any device, in real-time, and with relevant interactions, but B2C marketers struggle with:

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- › **Forced choice between scale and accuracy.** Marketers find themselves in the position of serving two masters: creating relevant and timely interactions that depend on complete and accurate data, and reaching and converting enough customers to generate return on investment. Thus they face a stark choice between using rich data with limited scale to drive returns and maximizing reach at the expense of accuracy, both of which depend on entirely different methods of identity resolution.³
- › **Disjointed online and offline identities.** Connecting online and offline identities is the elephant in the room for customer-obsessed marketers who want to create cross-channel customer journeys.⁴ Efforts to marry digital and offline identities is stymied by poor data persistence, degrading daisy chains of vendors matching and passing data, and technology silos. Some aspects are nominally within marketers' control such as internal organizational design and vendor selection, but many factors — like cookie expiration and device obfuscation — are completely independent.⁵
- › **Fragmenting identity.** The explosion of devices and touchpoints creates exciting customer engagement opportunities but also results in a deluge of data to incorporate into the identity resolution equation.⁶ Each new digital source has its own identifier, data collection and matching requirements, and privacy considerations. Prioritizing time-consuming and resource-intensive efforts to incorporate new identifiers and data is difficult, particularly when it's challenging to estimate the incremental value of identity enhancements on marketing program efficacy and KPIs.
- › **Lack of portability.** Many marketing technologies and service providers offer identity resolution capabilities today to connect identifiers and build customer profiles. But in many cases, these functions act purely as internal operational mechanisms. For example, a demand-side platform may assign a master ID to records within its system to support ad buys for specific audiences, but does not offer a productized method to externalize those identifiers. Marketers are often frustrated when the robust identity assets they've built within these systems cannot be easily exported or shared with other applications and databases.

Identity Resolution Is A Strategic Imperative

The value of identity resolution isn't limited to the context of a single touchpoint or device, such as a cookie ID for display ads or an email address for newsletters.⁷ It's a strategic capability that facilitates the links between systems and interactions.

Identity resolution is the process of integrating 1) identifiers across available touchpoints and devices and 2) behavior, transaction, and contextual information into a cohesive and addressable consumer profile for marketing analysis, orchestration, and delivery.

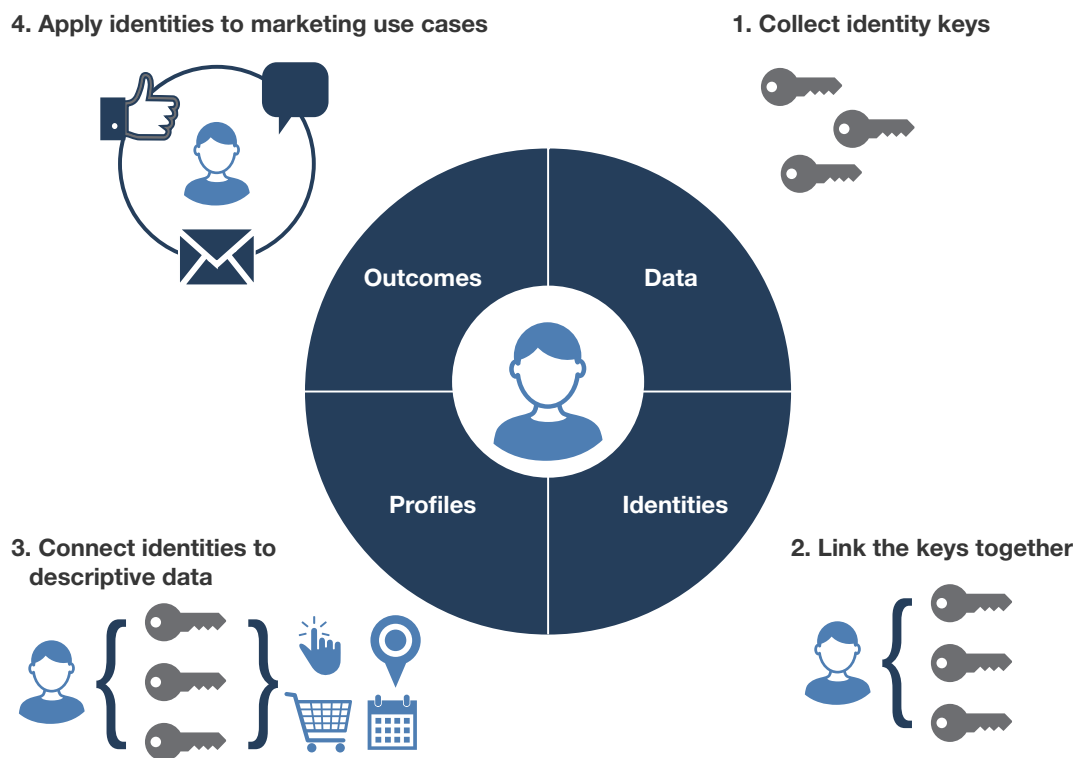
Consider four aspects of identity resolution: data, identities, profiles, and outcomes.

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The precise breadth and depth of identity resolution will vary by company, industry, geographic region, marketing use case, and the individual consumer, but B2C marketers must marry the components to operationalize identities that bring contextual marketing to life. B2C marketers must take ownership of an identity resolution strategy that builds and applies identity for customer-obsessed marketing. To articulate a complete identity resolution plan, consider four aspects of identity resolution: data, identities, profiles, and outcomes (see Figure 1).

FIGURE 1 Follow The Four-Step Identity Resolution Process



Data: Collect The Identification Keys

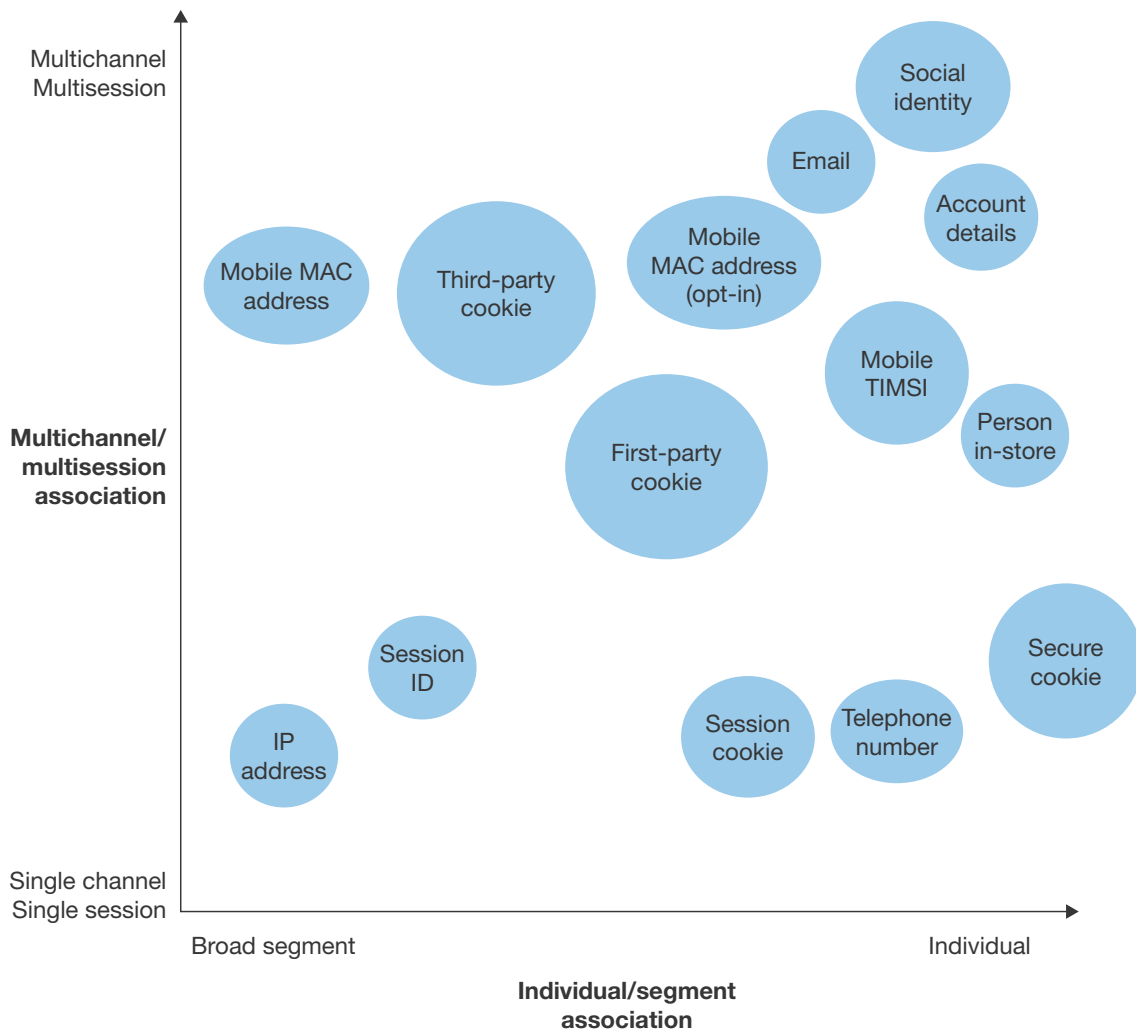
At its core, identity resolution is a data management exercise. Every interaction in the customer life cycle generates or leverages a key (see Figure 2).⁸ These keys represent a broad span of granularity and depth — for example, consider the difference between a session cookie, anonymous and temporal, and an email address, individual and persistent — but ultimately serve as a means for identifying consumers. Keys may also be sourced from marketing services and technology vendors offering data management, data enhancement, or cooperative data products.⁹ Given the variance

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in identifiers, it's critical to inventory each key's metadata (see Figure 3). This process provides an understanding of the context of each key, how each key fills in part of the identity puzzle, and areas of strength and potential improvement.

FIGURE 2 Customer Identity Comes In Many Forms



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FIGURE 3 Catalog Descriptive Metadata For A Deep Understanding Of Identity Keys

Metadata type	Description
Key	An identifier referencing a consumer, device, audience, or application
Source	The system where the key is generated, such as in an application or device, a third-party database, or self-reported by the consumer
Touchpoints	The channels and devices where the key is applied
Access	How a key is accessed, managed, selected, and extracted for identity resolution purposes
PII	Whether or not the key is associated with PII and its relationship to privacy and regulatory mandates
Data association	The additional data associated with the key such as behavior, transactions, or customer information
Controls	The business rules, privacy rules, and regulatory mandates that govern how this key is collected, stored, used, and distributed
Persistence	Whether the key is temporal or persistent over time in its association with the consumer
Scale	How large the audience covered by the key is
Accuracy	How reliable the key is in its ability to resolve an identity, either directly or as part of linking other keys

Identities: Customer Recognition Is A Relative Term

Effective identity resolution is the result of creating links between keys — for example, associating a cookie ID with an email address, or a phone number with a loyalty card number. Depending on the available keys, matches may be established via probabilistic or deterministic means, and enhanced using second- or third-party data sets.¹⁰ More keys and linkages create increasingly robust identities that support larger portions of the customer experience. But there's no such thing as a one-size-fits-all identity graph, not even within a company's customer base. Varying degrees of identity resolution are likely depending on the available keys. Even well-established customer identities can be

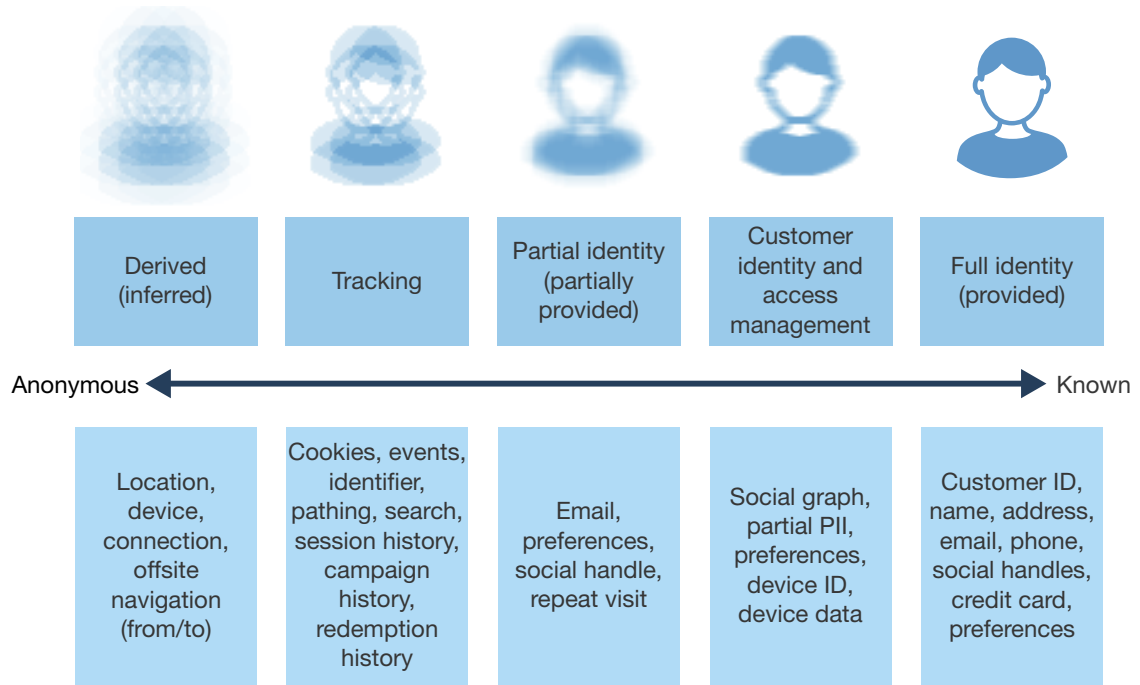
There's no such thing as a one-size-fits-all identity graph . . . there is a spectrum of identity, all of which is useful.

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volatile because keys change frequently — for example, browser cookies expire or customers use new devices. B2C marketers don't need 100% granularity all the time for an identity to be valuable; there is a spectrum of identity, all of which is useful (see Figure 4).¹¹

FIGURE 4 Identities Come In A Variety Of Shapes And Sizes Along A Spectrum



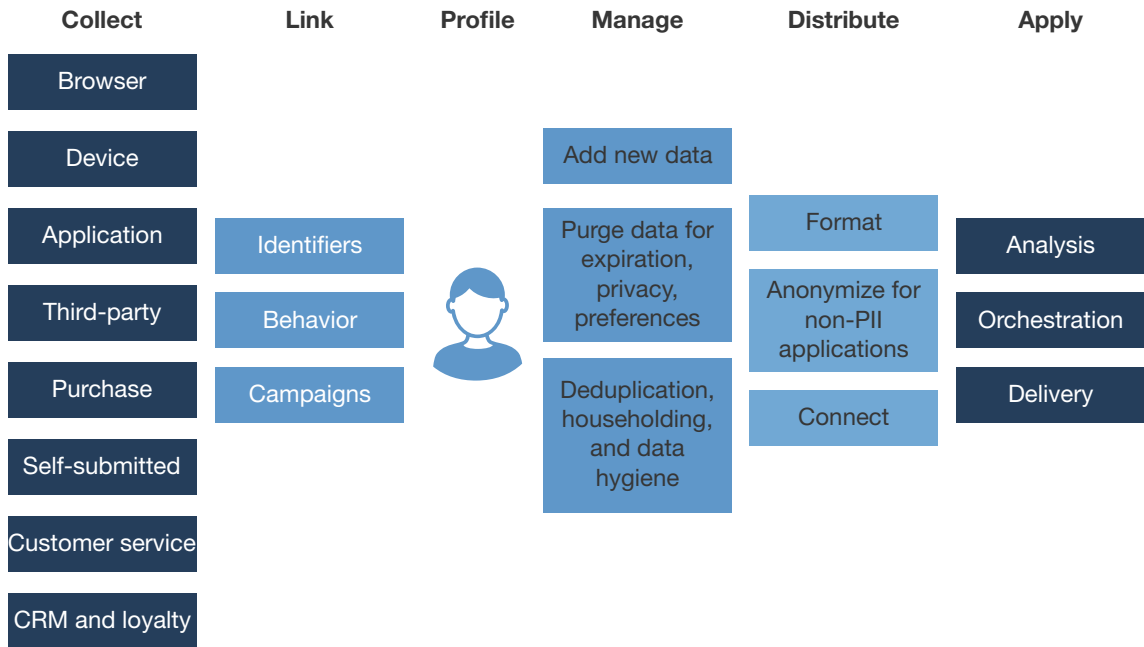
Profiles: An Identity Graph Isn't Enough

A consolidated identity supports consumer recognition and addressability across touchpoints, but it isn't complete. Profiles unite identity and descriptive information about the consumer to support contextual marketing.¹² Build profiles by aggregating device and channel data, behavior and interactions, self-submitted information, purchase and customer data, and third-party data sources. Profiles also require ongoing management, whether they are assembled and stored or processed in real-time. First, the ability to continuously update profiles as identity keys and personal data changes over time, and second, delivering profiles at the appropriate level of granularity such as anonymizing consumer profiles to remove PII for digital media applications (see Figure 5).

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FIGURE 5 Manage Dynamic Customer Profiles With A Defined Process



Outcomes: Put Resolved Identities To Work

Collecting keys, syncing identities, and compiling profiles are not the end game. Identity resolution’s purpose is to support audience activation. Successful identity resolution accomplishes three key directives: recognize customers across devices and touchpoints, put customer activities into context, and support relevant customer experiences. B2C marketers leverage identity resolution today to enhance the breadth (via identity) and depth (via profiles) of many tasks spanning customer insights, journey orchestration, and experience delivery (see Figure 6).

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FIGURE 6 Identity Resolution Supports A Variety Of Marketing Applications Today

Use case	Description
Data management	Data integration for database management, data quality management, and data enhancement
Unified customer ID	Apply a persistent identifier to consumer records to link internal enterprise systems across sales, marketing, and service
Segmentation	Linking identities and data to enrich profiles for more audience segmentation options
Customer journey visibility	Connecting interactions such as online, offline, in-store, and transactions to fully analyze and address customer experiences
Audience building	Extending reach by making audiences addressable in more channels and the basis for modeling lookalike audiences
Targeting	Linking identities and data to enrich profiles for more personalization and dynamic creative options
Insights and measurement	Linking identities and data to enrich profiles for closed-loop measurement and understanding how to move customers through the funnel
Cross-channel attribution	Linking interactions and purchases across touchpoints for complete attribution
Customer preference management	Collecting and following customer preferences across all touchpoints
Onboarding	Making offline first-party data available for digital applications

Identity Resolution's Time Has Come

A well-conceived and executed identity resolution plan yields marketing benefits in the immediate term, but it also provides a stable foundation to power cross-channel customer journeys in a rapidly changing landscape. An extensible identity resolution capability will become increasingly important as marketing use cases emerge that depend heavily on data connectivity, customer recognition, and robust profile data (see Figure 7). Savvy marketers put themselves in the best position to capitalize on future opportunities with identity resolution strategies that:

- › **Start with first-party data.** Anonymous data and probabilistic matching approaches are a huge portion of the identity resolution mix today and will always have a role to play. But the future will be based on a first-party perspective. As data collection and matching techniques improve, along with access to third-party and cooperative data sources, the use of known customer data and deterministic matching techniques will reach a level of scale that achieves primacy in the identity resolution spectrum.

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- › **Connect systems of insight and engagement.** Marketing will continue to rely on a large technology stack to conduct analysis, orchestration, and customer experience delivery. But identity resolution will outpace the function of technical integrations that facilitate data movement with logical connectivity across tech stack components. Robust identity resolution plans will incorporate identifiers and profiles between and within systems of insights and engagement for consistency and accuracy.
- › **Go beyond the traditional identity mindset.** Current identity resolution approaches are myopic in their tendency to place consumers at the extremes of a known individual versus anonymous audience continuum. But this is a false choice. Because post-digital customer experiences aren't either-or affairs, marketers need a more nuanced view of consumers. Fortunately, marketers and solution providers are finally chipping away at the gap as new identity resolution approaches are coming online that enable B2C marketers to maximize profile accuracy and scale. For example, hybrid approaches layer multiple techniques, such as starting with deterministic matches, then applying probabilistic identification to unmatched records, and enhancing owned identifiers and data assets with second-party data to access a broader set of identifiers and data points.
- › **Never lose sight of the risks.** Collecting and using consumer data is a powerful marketing tool, but also escalates the risk of damaging brands and incurring legal consequences. The first risk is adhering to privacy and regulatory mandates; firms must align all marketing efforts with relevant rules and laws, provide opportunities to opt out at all stages, and proactively monitor for compliance. The second risk is delivering customer interactions based on poorly executed identity resolution; firms must track identity resolution processes to ensure that consumers are associated with correct and complete identifier, behavior, and device data. And the third risk is delivering interactions that consumers perceive as intrusive or overly intimate; firms must use common sense and emotional intelligence when targeting campaigns and personalizing messages to avoid crossing into "creepy" territory.¹³

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FIGURE 7 New Applications Show Identity Resolution's True Potential

Use case	Description
Individual targeting in digital channels	Extend 1:1 targeting specificity to reach individual customers on specific devices
Frequency management	Link identities and campaigns to accurately track interactions across touchpoints to manage contact frequency
Campaign suppression	Sync audiences to transactions, service activity, and interaction data to proactively omit customers from campaigns
Linking suppliers	Leverage the same identity keys across technologies and suppliers for consistent treatment and connectivity across the marketing tech stack
Data monetization and sharing	Leverage identity to connect audiences across brands for marketing, data enhancement, and reach on a private or commercial basis
Offboarding	Making online data available for offline applications
Emerging channels	Incorporate new channels such as Smart TV and internet of things devices into identity and customer profiles
Security and risk	Leverage accurate identity for technical activities such as fraud detection, VPN authentication, and transaction authorization

Take Responsibility For Identity Resolution Quality

It's crucial for marketers to establish methods for tracking and validating identity resolution efforts given their outsized impact on marketing effectiveness. Even established programs require vigilant monitoring because data sources, matching techniques, and customers change constantly. B2C marketing pros need to take ownership of verifying identity resolution quality within the context of their own marketing strategy and cannot assume that anyone else is doing it for them. Claims of accuracy made outside your firm's context and on other people's data are extremely difficult to back up. Similar to marketing measurement best practices, tracking identity resolution quality is a multidimensional effort.¹⁴ A comprehensive assessment of identity resolution efficacy looks at:

- › **Matching.** High match rates are obviously high on everyone's wish list, but it's easy to oversimplify this metric. Success matches should be viewed on two axes: volume as a percent of identifiers matched and match quality either as a statistical confidence level in probabilistic matching scenarios or profile depth as expressed by the number of keys — for example email addresses, customer IDs, and device IDs — associated with profiles in deterministic scenarios.

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- › **Addressability.** Addressability builds on match rate as a measure of reach to assess the number of consumers you can actually contact. This is important because it defines the audience or maximum universe for an organization's marketing campaigns. This number is in constant motion and typically calculates on a rolling basis over time, and can be broken down by touchpoint.
- › **Accuracy.** Tracking accuracy measures whether marketing programs reach the intended recipients. Marketers can evaluate accuracy at an individual profile level by tracking the match rate between campaign history and conversion data to show the proportion of targeted consumers associated with actual buyers. Marketers can also assess accuracy at the audience level by comparing segment definitions between targeted and buyer segments. For example, for a campaign that was targeted at women, how many men responded?
- › **Persistence.** Persistence of contact is a running clock measuring the length of time a consumer is addressable. This is important because maintaining contact with customers is critical in cross-channel customer journeys. Persistence of contact can be highly variable; for example, situations that rely heavily on anonymous web data may see persistence scores in low single-digit months, while brands that enjoy long-term relationships with known customers may see persistence scores of multiple months or years. A high and increasing average persistence of contact indicates that identities have the depth to withstand data changes such as deleted cookies.
- › **Usability.** Usability refers to how profiles are applied to marketing and establishes a tracking mechanism to ensure that identity is utilized within regulatory, privacy, and contextual limits. Visibility to usability is crucial because expansive customer profiles increase the possibility of misusing data — even if inadvertently — and violating either formal rules or informal emotional boundaries. Firms must track data usage against industry regulations, for example industries such as financial services and pharmaceuticals restrict certain uses of individual data for marketing purposes. It's also important to regularly audit sensitive data usage in marketing programs for data leakage and identity resolution processes for errors such as incorrect householding where spouses see ads intended for one another.
- › **Marketing performance.** To ensure that identity resolution investments are commensurate with business impact, marketers are increasingly working to correlate identity quality — and its subsequent targeting and addressability benefits — to campaign results via controlled experiments. The use of value-based metrics to evaluate identity resolution efforts is nascent, but progressive B2C marketers and their agencies are looking at metrics such as return-on-marketing-investment to verify incremental lift at a campaign level against control groups that neutralize extraneous independent variables such as viewability and ad fraud. The value-based yardstick of choice will vary based on a firm's marketing goals and industry; marketers may also look at average order value, average revenue per user, basket size, response rates, or customer retention KPIs.

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Recommendations

Marketers Must Develop An Identity Resolution Strategy

Identity resolution is the connective tissue for contextual marketing. On a tactical level it provides basic access to accurate information for day-to-day analysis and marketing activities, but strategically it is a proxy for the customer, forming the DNA for customer obsession that binds data, systems, content, and experiences together. As a strategic imperative and fundamental enabler for customer experience, identity resolution requires holistic planning across the enterprise. To get started, B2C marketers must:

- › **Start with the use cases.** Identity resolution isn't valuable in isolation, it serves the purpose of enabling analytics and marketing. The application of identity resolution will dictate the plan, processes, and technologies required for collecting keys, syncing identities, and building customer profiles. Establish identity resolution requirements with two assessments. First, inventory the keys; document the full set of unique identifiers within your marketing mix, along with their source and accompanying behavior and customer data. Second, identify the use cases where identity supports recognition and data transitions between touchpoints and devices for consistent and relevant cross-channel experiences.
- › **Prioritize mobile in the identity resolution mix.** Incorporating mobile into identity resolution is critically important because it is the most personal consumer access point that transcends individual channels and media. It natively possesses important customer identity keys — such as phone numbers, MAC addresses, and user IDs from authenticated app and browser usage and transactions — and offers powerful location and behavioral data for constructing customer profiles, linking digital and offline behavior, and establishing the basis for cross-channel attribution. B2C marketers must identify the points where mobile interactions occur within customer journeys and define the mobile-sourced keys that facilitate connections across touchpoints, devices, and behavior.
- › **Establish benchmarks to track efficacy.** B2C marketers must build measurement and quality assurance into identity resolution plans. Start by defining the set of KPIs that correlate to quality for the required use cases. Effective identity resolution measurement requires a combination of three metrics; utilize a matching metric to track operational quality, an accuracy or persistence metric to track audience-building effectiveness, and a performance metric to track business value. Benchmark those KPIs for continuous monitoring to observe changes over time to data and processes.

Identity resolution forms the DNA for customer obsession that binds data, systems, content, and experiences together.

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- › **Get used to a moving target.** Identity resolution requires ongoing management because it's going to change continuously. After establishing initial matches and profiles, data will age, devices will change, cookies will expire, and customers will indicate new preferences. B2C marketers will also contend with changing capabilities offered by vendors, evolving privacy and regulatory mandates, new data sources, and evolving technical specifications. Knowing that ongoing change will necessitate intervention and maintenance, set KPI monitoring thresholds at the point where diminished or altered identity resolution quality correlates to reduced marketing performance and develop processes to troubleshoot deviations and implement enhancements.
- › **Avoid chasing the “golden record.”** It's tempting to view identity resolution as the pursuit of an idealized customer profile that encompasses all the data and linkages to drive any application. Sadly, the so-called “golden record” is a myth; in practice there is no perfectly unified identity. Rather, identity resolution provides coverage across a spectrum and creates links across appropriate variations of identity. Supporting the varied touchpoints and priorities of modern marketing requires many permutations of identity based on available data, privacy requirements, and the technicalities of channels and devices. Focus resources and energy on developing versions of identity that specifically support your brand's marketing use cases and customer experiences — no more, no less.

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Oracle

Janrain

Salesforce

KruX

Trueeffect

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Viant

Wunderman

Endnotes

- ¹ The increase in customer choice for researching and buying products puts pressure on marketing strategies. Customers also expect brands to engage with them in personal, relevant ways, further confounding how marketers respond. See the [“Combine Systems Of Insight And Engagement for Contextual Marketing”](#) Forrester report.
- ² The post-digital future has arrived with its different customer behaviors, attitudes, and business practices. However, decades-old habits forged in the mass marketing era still undergird most marketing plans. See the [“Thriving In A Post-Digital World”](#) Forrester report.
- ³ Today, most cross-device targeting tools manage user identification across devices in two ways: deterministic data and probabilistic matching. It is imperative that marketers evaluate these two methods against what they are trying to accomplish. See the [“Bridging The Cross-Device Chasm”](#) Forrester report.
- ⁴ Traditional direct marketing typically relied on a limited volume of data — transactions between the company and its customers; demographic data acquired through data append; and limited rental of customer lists from noncompetitive partner companies. But with the explosion of digital data, customers, both named and unnamed, can be targeted in increasingly granular ways. See the [“How Dirty Is Your Data?”](#) Forrester report.
- ⁵ For example, Apple added a feature to iOS 8 in June 2014 that randomizes device MAC addresses. Source: Drew Breunig, “Why iOS 8’s MAC address randomizing is a huge win for privacy,” VentureBeat, June 19, 2014 (<http://venturebeat.com/2014/06/19/why-ios-8s-mac-address-randomizing-is-a-huge-win-for-privacy/>).
- ⁶ Nearly half of US online adults start researching or purchasing products on one device before migrating to another. While they typically begin on a smartphone, 74% switch to a PC and 26% move to a tablet. Consumers reveal that they use various screens for their shopping activities, depending on what they are trying to accomplish and where they are. See the [“One Task, Many Devices”](#) Forrester report.
- ⁷ Addressability is the absolute foundation for marketing; nothing else matters if experiences are delivered to the wrong consumers. By definition, this makes consolidated identity across profiles, devices, and touchpoints one of the most valuable assets that corporations own. See the [“The Next Generation of Enterprise Marketing Technology”](#) Forrester report.
- ⁸ Similarly, there are links that identify a person at points of sale, on eCommerce websites, on social media, and on every channel that we use to interact with customers. Forrester calls these links touchpoint interaction keys (TPIKs), which we define as: Identifying keys for ongoing recognition and tracking of customers as they interact across multiple touchpoints and sessions. See the [“Customer Recognition: The CI Keystone”](#) Forrester report.
- ⁹ Acxiom, a leading marketing service provider (MSP), is investing in the technology and publisher partnerships necessary to stitch together a massive pool of targetable consumers across platforms, using its Abilitec product, its universal match key for consumers. See the [“Solving The Cross-Platform Targeting Riddle”](#) Forrester report.
- ¹⁰ Deterministic techniques connect records by comparing and establishing exact matches between known identifiers, typically PII, such as email addresses or ID numbers. Probabilistic techniques connect records by using statistical models to infer matches between records. Source: Allison Schiff, “2015 Edition: A Marketer’s Guide To Cross-Device Identity,” AdExchanger, April 9, 2015 (<http://adexchanger.com/data-exchanges/a-marketers-guide-to-cross-device-identity/>).
- ¹¹ Not every touchpoint requires that a customer be 100% identifiable. Display ads, for example, can be extremely effective when the audience is well targeted based on aggregated, anonymized information. Similarly, BI and reporting tools don’t need to contain customer PII in order to deliver insight. See the [“How Dirty Is Your Data?”](#) Forrester report.

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- ¹² Forrester distinguishes four types of personal data: 1) individual identity data; 2) behavioral data; 3) derived data; and 4) self-identified data. See the [“Personal Identity And Data Management Success Starts With Customer Understanding”](#) Forrester report.
- ¹³ In the past decade, technological innovation has fundamentally changed the way organizations do marketing and advertising. Simultaneously, new technologies have changed how consumers interact with brands and with each other. While these advances have had immeasurable benefits for both, they have also made it much easier for marketers to cross a line from cool to creepy. See the [“Brief: Be Cool, Not Creepy”](#) Forrester report.
- ¹⁴ B2C marketers must create a multidimensional analysis aside from typical click-through rates and open rates. You need to look at marketing’s impact on the customer and on the overall channel. Marketers must use value-based, leading-indicator, and diagnostic metrics to best measure marketing performance to ultimately quantify the customer journey and recommend the best interaction cadence and communication strategies. See the [“Marketers: Stop Using Vanity Metrics To Value Your Marketing”](#) Forrester report.

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