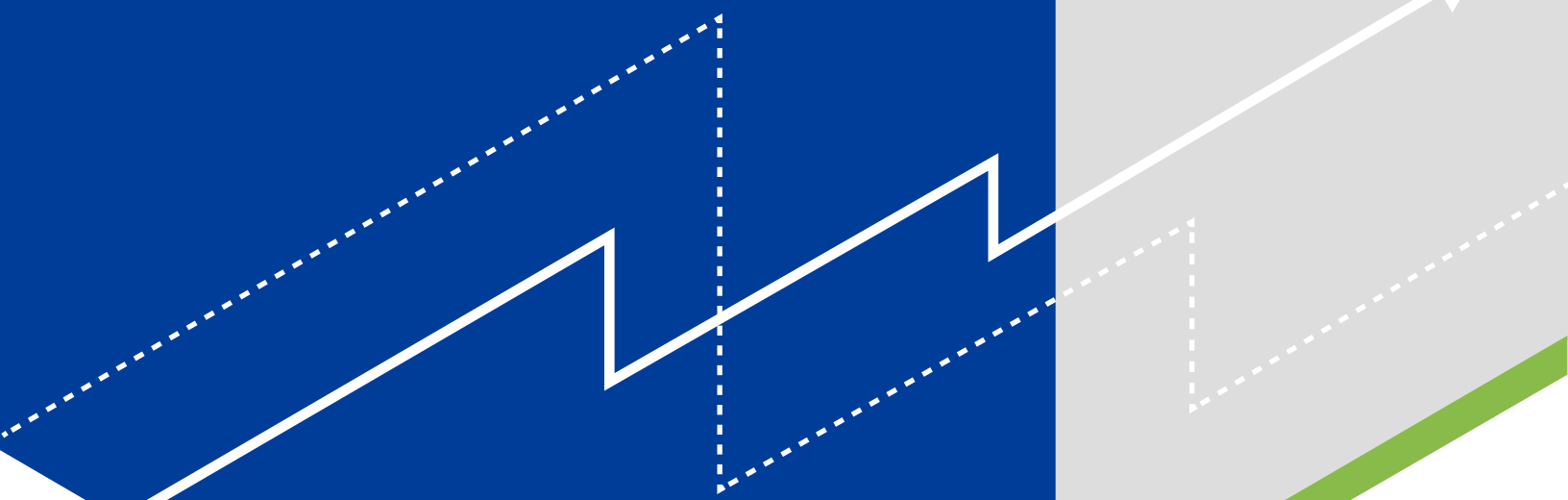
A Forrester Consulting
Thought Leadership Paper
Commissioned By Neustar

July 2019

Bridging The Gap: Advanced Identity Solutions For People-Based Marketers

Drive Marketing And Business Success With A New Approach To Identity Resolution



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Project Director:
Rachel Linthwaite,
Senior Market Impact Consultant

Contributing Research:
Forrester's Infrastructure & Operations research group

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Identity is crucial at every step along the marketer's journey.



Without a way to effectively tie data to a specific consumer, much of this data is useless.

Executive Summary

In today's world, consumers have more power to choose than ever before. While this empowerment is great for consumers, it makes marketers' jobs even more difficult — meaning they can't rely on tried and true solutions. Instead, marketers must become more analytical and dependent on consumer data to attract new customers and create better experiences for current customers. This is where identity resolution comes into play: Without a way for marketers to tie this data to a specific person, much of this data is useless.

However, current approaches to data analytics and identity resolution try to make do with a patchwork of legacy systems and large, variable quantities of data. This leaves brands struggling to tie marketing data back to their customers and, ultimately, prevents them from adopting more advanced identity resolution approaches that could mitigate these issues. Brands cite privacy, accuracy, and scalability as roadblocks to addressing these issues. To break past the limitations of their previous identity resolution capabilities, brands must adopt a modern approach that streamlines customer data and allows for faster technological advancement.

In April 2019, Neustar commissioned Forrester Consulting to evaluate brands' approaches to identity resolution. Forrester conducted an online survey with 175 respondents in a variety of industries in the US, the UK, and Germany to explore this topic. We found that current approaches have numerous limitations and plenty of room for error. For brands to reach beyond their current use cases into more advanced areas requires them to rethink their model in favor of a more modern, innovative approach.

KEY FINDINGS

- **Because most brands still utilize legacy solutions to identity resolution . . .** Sixty-one percent of respondents say their brands are using probabilistic and deterministic data independent of each other, keeping them stagnant and unable to effectively tie data back to customers. To mitigate this issue, many brands attempt to cobble together a patchwork of solutions, which only makes forward momentum more difficult.
- **. . . they experience a multitude of execution challenges.** Respondents report their brands' top challenges with identity resolution come in the form of privacy, scalability, and data accuracy. Without a streamlined, comprehensive strategy, brands can expect these challenges to stick around.
- **The path forward begins with a new and improved approach that extends beyond just hybrid.** Using both probabilistic and deterministic data together is a great start, but it's not enough to fend off data inaccuracies, false positives, and scalability issues. Brands expect a synchronous approach to yield the most benefit across the board.

Brands Struggle To Move Past Legacy Approaches To Identity Resolution

Today's consumers have more choices and are better informed than ever before — which makes marketing more challenging. As consumers become more sophisticated, they're less swayed by traditional marketing methods. As a result, marketers go to great lengths to uncover additional data sources to add to their understanding of their customers and create meaningful interactions. But as the number of data sources increases, so too does the potential for conflicting data to introduce inaccuracies while resolving identity. A vital capability for making the most out of this understanding lies in identity resolution, which Forrester defines as:

The process of integrating customer identifiers across available touchpoints and devices with behavior, transaction, and contextual information into a cohesive and addressable consumer profile for marketing analysis, orchestration, and delivery.[1]

Identity resolution supports a wide range of activities that support marketing, including targeting, measurement, and personalization for both known and unknown audiences. Creating a cohesive, dynamic understanding of a customer from these activities allows brands to more accurately target and understand each customer — an important but not always easy feat. In a recent survey of 175 customer data and analytics decision makers, we found that brands are prioritizing many data, analytics, and customer-related objectives over the next year. These include an increased use in data and analytics, driving customer centricity, improved personalization and content marketing capabilities, and better alignment of brand promise to customer experience. However, none of these objectives would be fruitful without a solid identity resolution foundation.

Most organizations are fully aware of this fact; more than half of all respondents believe identity resolution capabilities are critically important to their brands' ability to deliver on their prioritized initiatives (see Figure 1).

How are companies resolving customer identity today? Our study found:

› **Use of customer identifiers varies.** While options like internal identifiers (91%) and email (86%) are nearly ubiquitous, brands use device ID (34%) and IP address (26%) far less commonly. The sheer volume of channels available for customer engagement compounds this wealth and complexity of identifier data. Brands need to find a way to identify and track their customers everywhere they interact, whether it's websites, social, mobile, addressable TV, or any other device or touchpoint where consumers engage with brands. And they need to do it in a privacy-safe way, correctly managing consent along each customer's journey.



More than half of all brands today believe identity resolution capabilities are critically important to their ability to deliver on key business objectives.

› **Legacy approaches to identity resolution still reign.** Traditionally, brands have two choices when it comes to the methods they use to resolve identity: 1) probabilistic — that which makes inferences based on all of the signals about consumers' web behaviors and interactions — and 2) deterministic — data, like an email address that is associated with a cookie or mobile ad ID, that shows there is an explicit link between identifiers. The majority of brands (61%) are using both of these methods, but independently of one another and for different scenarios. Just 15% of respondents' brands employ a hybrid approach that uses both deterministic and probabilistic data in tandem.

› **Brands cobble together a patchwork of identity solutions.** There is no single solution that addresses all use cases today. Rather, 76% of respondents' organizations draw on both vendor and in-house capabilities to manage identity resolution. And these vendor solutions run the gamut as well. Everything from CRM platforms and data management platforms to ID graph providers and onboarders figure into how brands manage identity resolution today.

Figure 1

"How important do you think customer identity resolution capabilities are to your ability to deliver on these objectives?" (Only "Critically important" responses are shown.)



Base: Variable customer data and analytics decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Neustar, May 2019

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The mere fact that these solutions are legacy systems is not in and of itself a problem. Rather, the issue is that brands are attempting to resolve identity using technology that is not meant to perform that task. For example, identity resolution is not intended to replace any existing database management systems or CRM systems already in place; it is an additive process that looks at the customer journey in its entirety, helping marketers develop a deeper and more accurate understanding of the impact of their marketing over time at the channel, audience, and individual levels. With a single source of truth, B2C enterprises can improve and optimize the output from downstream stakeholders across specific use cases where knowing the identity of a customer is crucial.

CURRENT IDENTITY APPROACHES KEEP BRANDS STAGNANT

Because today's current approaches to identity resolution pose more questions than answers, brands are left far behind the curve. We found that brands struggle with confidence, applying data, and unlocking advanced use cases, all as a result of their current patchwork approach.

The majority of brands lack confidence in their ability to execute on identity resolution-based tasks. Just 10% of the respondents we surveyed say they are very confident in their brands' ability to build a 360-degree view of their customers, yet 77% of these same respondents admit that creating this 360-degree view is either important or very important to the success of their businesses (see Figure 2). Further, only about one-third of respondents are very confident in their brands' ability to resolve identity across devices, and only 42% are very confident that they can resolve identity across online and offline touchpoints. Brands currently look at identity as a method to build customer profiles to activate specific use cases, rather than building a complete, cohesive view of the customer.

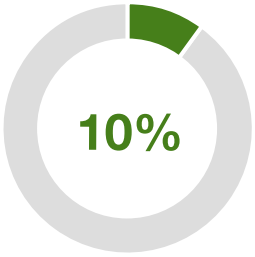
Respondents report a high degree of difficulty tying data generated from a variety of different channels back to customer profiles. While more emerging channels, such as addressable TV, are expected to be most difficult (65%), more common channels like search and display still rank highly in difficulty (58% and 57% respectively). This points to an underlying data usage issue as opposed to brands not being sure how to use these channels.

Finally, we found that brands' identity resolution use cases tend to focus on basic customer engagement and data management tasks like personalization and data deduplication (see Figure 3). However, in the next 18 to 24 months, brands are prioritizing building a data asset that can be applied more broadly and for omnichannel/longitudinal customer engagement.

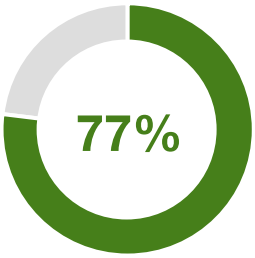
If brands want to be able to adequately support these data-heavy future use cases, they will need to dramatically advance their current identity resolution approaches.

Figure 2

Creating A 360-Degree View Of The Customer Is Critical, Yet Difficult



Very confident in ability to build a 360-degree view of customers



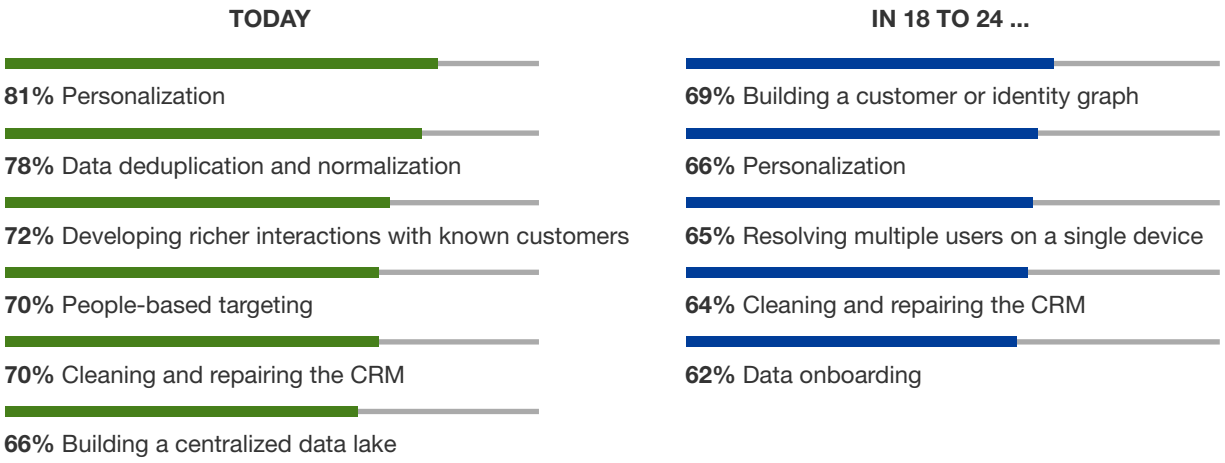
Very important/important to build a 360-degree view of all customers

Base: 175 customer data and analytics decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Neustar, May 2019

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Figure 3

"For which of the following use cases are you leveraging customer identity today/in 18 to 24 months?"



Base: 175 customer data and analytics decision makers
Note: Not all responses shown.
Source: A commissioned study conducted by Forrester Consulting on behalf of Neustar, May 2019

Issues Of Privacy, Accuracy, And Scalability Plague Most Brands

Given the elementary state of identity resolution approaches that most brands take, it should come as no surprise that there are still several challenges remaining to be conquered. We found:

› **Privacy is a top concern.** Given the splash that the General Data Protection Regulation (GDPR) created in Europe in 2018 and the more recent passage of privacy laws in the US (California and New York are leading the charge), it makes perfect sense that privacy would be top of mind for any professional that deals in consumer data. In fact, privacy concerns are both the No. 1 *challenge* when it comes to identity resolution and the No. 1 *impact* of identity resolution challenges on the business. The loss of data and insight into consumer wants, needs, and behaviors would be a considerable problem for data-driven organizations. Not only that, but lapses in privacy in the age of these new laws mean not just a loss of customer trust or reputational goodwill but a hit to brand's bottom line in the form of lost sales, hefty fines, and legal fees. Of course, marketers need to collect and use customer data to create personal, contextualized experiences, but it must never be at the expense of privacy. Brands must reconcile the intersection of personalization and privacy if they are going to have a successful, customer-centric approach to identity resolution.

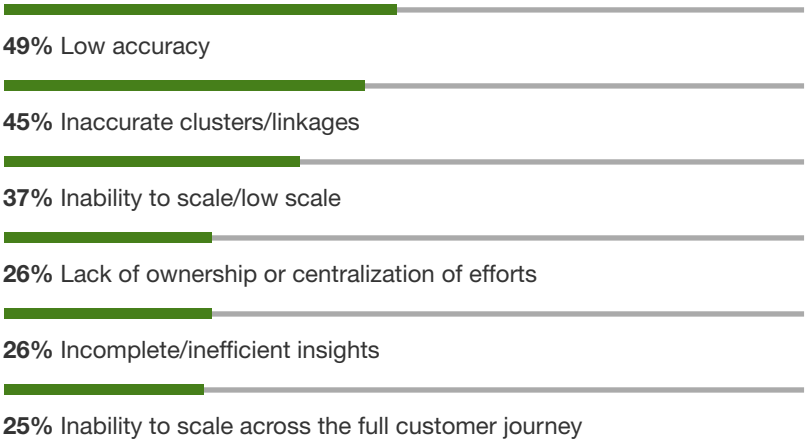
› **Accuracy and scale also pose challenges.** Current identity resolution techniques are letting marketers down. When thinking specifically about the challenges inherent in their current approaches to identity resolution, respondents in our study note low accuracy generally and inaccurate clusters and linkages specifically as the top two issues (see Figure 4). Scalability is also a top concern, coming in as the third biggest challenge for both resolving identity generally and for specific approaches being used. These challenges are only compounded by the proliferation of channels and devices, which further complicate the customer journey and introduce more data into the mix.

To solve these challenges, brands must remember the importance of high-quality data. If data is of poor quality at the outset (i.e., not curated or deduplicated), no identity resolution approach will solve these accuracy problems. Brands must concentrate their efforts into collecting data intelligently and regularly curating that data to ensure it is of sound quality as well as scale before being put to use.

Establishing an accurate customer identity is key to ensuring that the right messaging and media is reaching the consumer. Brands must also measure the impact of those efforts across the customer journey and maintain a persistent record of their customers as they change and evolve over time. It's clear then that an approach that regularly struggles with accuracy needs improvement.

Figure 4

"What challenges do you encounter with your current approach to customer identity resolution?"



Base: 175 customer data and analytics decision makers
Note: Not all responses shown.
Source: A commissioned study conducted by Forrester Consulting on behalf of

Establishing an accurate customer identity is critical to success. Legacy approaches that struggle with accuracy and scale must be amended to prove truly useful.

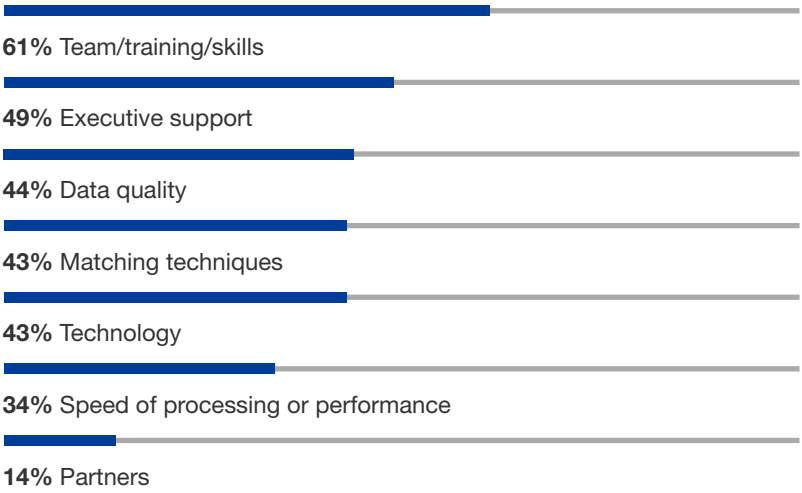
ADDRESSING IDENTITY RESOLUTION CHALLENGES REQUIRES AN ENTERPRISE-LEVEL COMMITMENT

To deal with these issues, organizations must acknowledge that there is no one simple fix. Our study found that brands must:

- **Address obstacles with people, processes, and technology.** To overcome these issues, brands need to invest in all facets of the business (see Figure 5). Specifically, 61% of professionals agree they need to improve their teams, training, and skill sets to enhance identity resolution, while 43% agree that matching techniques must be improved, and the tech used to support these processes must also be better. Forty-nine percent also agree that they need more executive support in this area.
- **Treat identity resolution as the enterprise investment that it is.** Although identity resolution is traditionally thought of as marketing's domain, they are not the sole owners of this powerful technology. IT (61%), analytics (50%), and customer success teams (44%) can — and do — also share responsibility for these methodologies. Importantly, they can also reap the benefits. Identity resolution, when done well, can allow organizations to unify around a singular set of customer data, empowering anyone within the organization who wants to be customer-centric and better understand how customers are interacting with their brand.

Figure 5

"What capabilities do you feel must be improved to enhance customer identity resolution at your organization?"



Base: 175 customer data and analytics decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Neustar, May 2019

Brands must address the people, processes, and tools that support identity resolution to overcome challenges.

A full enterprisewide commitment is particularly critical during the activation and usage phase of identity resolution. Collecting data, resolving identity, laying the framework, and creating the single database are all important steps, but if your brand's infrastructure isn't built in a way that aligns to the business' needs and the specific use cases of each business unit, then you won't be successful. The data must not only be accessible; it must also include the right intelligence and move fast enough for it to be of use to all downstream stakeholders. If the CTO and CMO can work together, they can enable the successful use of identity across orchestration, delivery, and analysis.

A misstep when it comes to identity resolution can be disastrous for the business. Not only could it result in inconsistent messaging, inaccurate customer intelligence, poor customer experience, or a missed sales opportunity, but ultimately shortfalls impact the fundamental relationship between marketer and customer.

Marketers who don't want to put the fragile customer relationship in jeopardy must address these challenges.

Embrace The Next Generation Of Identity Resolution Methodologies To Drive Business Success

Brands need a new approach to identity resolution that addresses the limitations of standalone methods and provides the precision and scale needed to address today's omnichannel consumer. That includes building a trusted two-way communication between the brand and the customer inclusive of personalization and privacy. The complexities of the modern customer journey necessitate a new and improved approach to combine both probabilistic and deterministic methodologies. The minority of organizations that have ventured into this simple hybrid approach have merely taken two graphs and merged them together building probabilistic scale on deterministic data. But as respondents have shared, this method remains imperfect, producing wild inaccuracies, false positives, and inadequate scale.



The synchronous method builds identity clusters from the ground up, using only validated linkages, seamlessly integrating raw data signals from both deterministic and probabilistic sets of identity.

However, there is a different way forward: an emerging approach that looks at identity data side by side using the best of both deterministic and probabilistic methods to create a system of checks and balances validating linkages before joining them together. The result is a more robust and leaner identity graph producing higher accuracy and more effective scale. This synchronous method has the potential to improve the scale and precision of identity resolution, solving for brands' top challenges.

Our study asked respondents specifically about these two new approaches to identity resolution using the following definitions:

› **Sequential hybrid customer identity resolution:** This method uses probabilistic data to create scale on top of deterministic data without evaluating for accuracy.

› **Synchronous customer identity resolution:** The most advanced method, this approach uses raw data signals from both deterministic and probabilistic data in parallel to evaluate which linkages are actually relevant to increase scale.

Regarding their plans for these methods, respondents' answers show a general progression starting from the sequential hybrid method and shifting to the more advanced synchronous method over time.

BRANDS ARE READY FOR MORE ADVANCED TECHNIQUES

Our study also showed that brands believe in the potential of these new identity resolution approaches. We found:

› **Brands see an expanded role for machine learning and AI in identity resolution going forward.** Any brand currently using probabilistic data is already using machine learning (ML) capabilities, so it's not surprising that 35% of respondents in our study have already implemented these technologies in some capacity. Interestingly, 57% — the majority of brands — are currently upgrading this implementation, indicating that they see an expanded role for ML and AI in the future and are paving the way for a synchronous approach.

› **New techniques will enable desired future use cases.** Respondents overwhelmingly agree that a synchronous method is valuable in helping to accomplish their prioritized use cases (see Figure 6). In fact, more than 80% believe this method will be a valuable way to build a customer or identity graph, improve personalization capabilities, and resolve multiple users on a single device, brands' top three goals over the next 18 to 24 months.

› **Brands expect these methods to yield both marketing and business benefits.** Respondents in this study believe that a synchronous approach that has the ability to connect online and offline signals will yield deeper customer insights (59%), more robust targeting (58%), and a more complete view of the customer (57%). This targeting and analytics prowess is critical if brands want to succeed in the people-based marketing they've planned. But the benefits don't stop in the marketing department. The business can also expect to see increased customer retention (58%), increased customer satisfaction (57%), and the ability to address customers' rising expectations (53%). Process and revenue benefits are also to be gained.

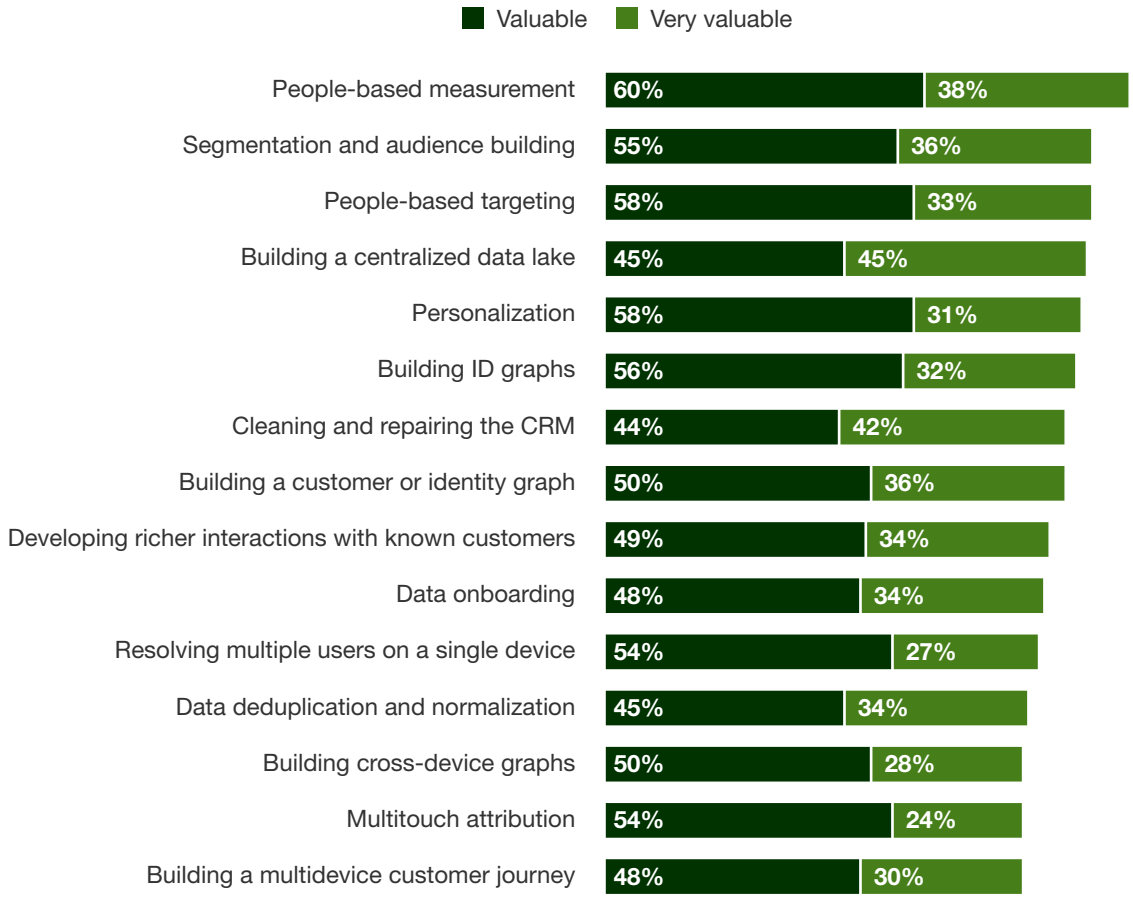
This new synchronous approach to identity resolution is critical because it addresses the limitations of standalone methods and the inaccuracies of a simplistic hybrid approach. By evaluating which linkages are statistically significant, this method can help repair and enrich existing first-party data from a brand's CRM, provide better measurement, and assist in the creation of a single persistent view of identity. Marketers who adopt this approach have the potential to improve the scale and precision of identity resolution, allowing for the development of more robust customer profiles, enhanced customer insights, and improved customer engagement through more relevant messages, personalization, and delivery throughout the customer journey.



The wide range of benefits underlines the importance of effective identity resolution not just for the marketer, but for the organization at large.

Figure 6

"You mentioned that you would like to be leveraging customer identity resolution for the following use cases within the next 18 to 24 months. How valuable would a synchronous method be for each of these use cases?"



Base: 175 customer data and analytics decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Neustar, May 2019

Key Recommendations

Organizations looking to level up their identity resolution capabilities to capitalize on this success should adopt the following recommendations.



Plan the identity resolution capabilities road map. Brands must proactively enhance their identity resolution capabilities over time to meet evolving customer engagement needs. Start with an inventory of current data and activation use cases, then articulate future-state use cases and customer engagement strategies that subsequently define ongoing identity resolution requirements. The road map should be a holistic plan that incorporates data, staffing, supplier, and technology investments, and documents the specific identity resolution methods such as synchronous approaches that will be utilized.



Keep privacy and consent top of mind. All consumer data applications must incorporate consideration of regulatory compliance, consumer privacy, and preference management as primary design principles. Brands must design systems and work with providers that can maintain compliance with existing and upcoming regulations. Additionally, privacy by design and preference management positively impact customer experiences with stronger relevance and consumer participation.

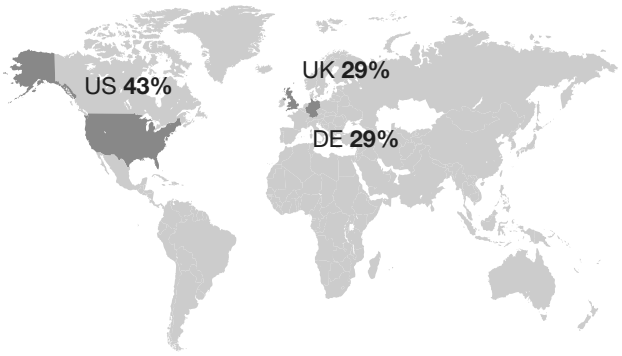


Evaluate emerging identity resolution techniques today. Customer experiences are shifting rapidly to accommodate sophisticated consumers, new technologies, and an ever-increasing number of interaction touchpoints. To keep pace, brands must continuously evaluate new data, identity resolution, and technology capabilities. Don't wait until new identity resolution methods are mainstream. Maintain expertise and knowledge about up-and-coming methods to ensure your brand has access to the most effective techniques to maximize customer engagement.

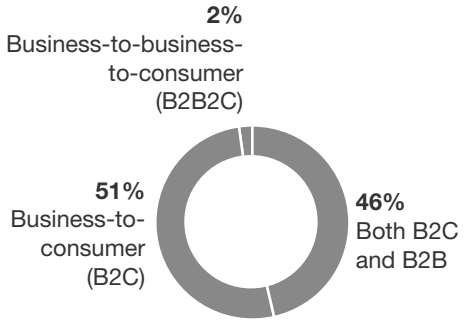
Appendix A: Methodology

In this study, Forrester conducted an online survey of 175 customer data and analytics decision makers from various industries in the US, UK, and Germany to evaluate the state of identity resolution at B2B brands. Survey participants included decision makers in marketing, customer experience, customer intelligence, and eCommerce roles. Respondents were offered an incentive as a thank you for time spent on the survey. The study began in April 2019 and was completed in May 2019.

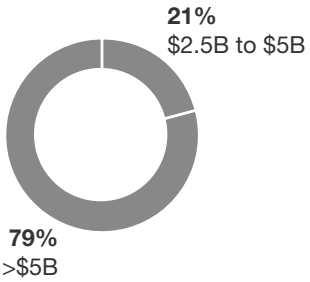
Appendix B: Demographics



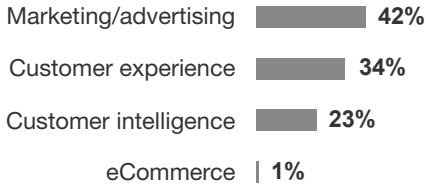
BUSINESS MODEL



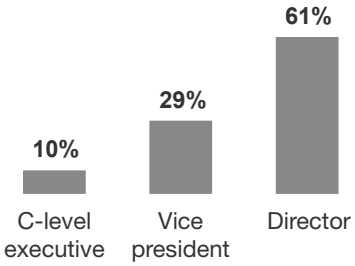
COMPANY SIZE



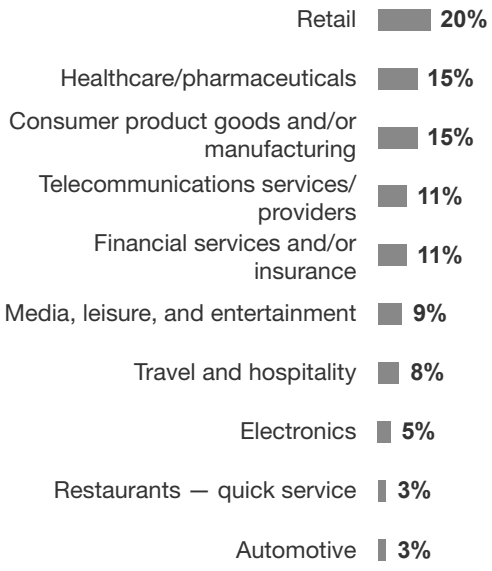
DEPARTMENT



RESPONDENT LEVEL



INDUSTRY



Base: 175 customer data and analytics decision makers
Note: Percentages may not total 100 because of rounding.
Source: A commissioned study conducted by Forrester Consulting on behalf of Neustar, May 2019

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Appendix C: Supplemental Material

RELATED FORRESTER RESEARCH

"Now Tech: Identity Resolution, Q3 2018," Forrester Research, Inc., August 21, 2018

"The Future Of Enterprise Marketing Technology," Forrester Research, Inc., June 6, 2019

"The Strategic Role Of Identity Resolution," Forrester Research, Inc., October 17, 2016

Appendix D: Endnotes

[1] Source: "Now Tech: Identity Resolution, Q3 2018," Forrester Research, Inc., August 21, 2018.