From Data to Action: How AI is Shaping the Future of Customer Interaction

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It's impossible to avoid hearing about AI today: both the consumer and business press carry countless stories of the latest achievements, applications, and business deals. The implicit and explicit message is that companies that don't jump into the AI fray may never catch up with their more aggressive competitors.

Not surprisingly, all this attention has an impact. AI is a crucial focus for the C-suite at 94% of companies reached in one recent survey[1]. The same survey found that most respondents were enthusiastic: 59% felt positive about AI, compared with 37% neutral and only 4% skeptical. Surveys limited to marketers give even more positive results: one found that 66% of marketers say AI is critical or very important to marketing today.[2] Another reported that 76% expect gen AI to impact the marketing/advertising industry[3] positively. An even more significant majority with that same survey -- 88% -- think AI will radically transform digital advertising in the next 3-5 years.

Still, interest and enthusiasm don't necessarily translate into action. AI faces many obstacles, including a lack of knowledgeable staff, limited collaboration across departments, inadequate data, disconnected systems, concerns about security and privacy, and the challenges of AI model building and management. Of all these, effective access to data stands out as the biggest differentiator between AI leaders and others.

Respondents who believe in their ability to access and effectively manage their organization's data to support AI initiatives

61%

11%

Leaders   Learners
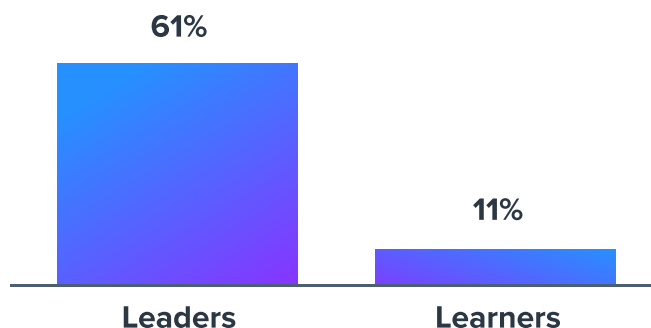
Source: IBM, AI in Action 2024

AI effectiveness depends on having access to a large quantity of relevant data. One of the most effective ways to collect and organize data for use by AI and for marketing purposes is through a Customer Data Platform (CDP). The role of CDPs is to collect and organize customer data, one of the most important and difficult types of data for organizations to manage, and one that is often not available in existing data lake and warehouse systems.

AI Applications

Here's a closer look at how CDPs and cross-channel marketing platforms support common AI applications.

- **Content Creation** - This is by far the most common marketing application for AI. Although few marketers are ready to deploy AI-created content without human intervention, many are successfully using it for research, ideation, and initial drafts. These processes depend in part on tracking customer reactions to existing content, data that is collected in a CDP.

- **Chatbots** - Generative AI tools can easily ingest existing content, such as product information, surveys, and white papers, and then be deployed as chatbots to answer questions about that content. Chatbot applications extend beyond marketing to sales and customer service, but all offer the same fundamental benefits of low cost and quick response. Chatbot training depends heavily on scripts of past conversations and on relating past conversations to other data, such as purchases, service requests, and customer satisfaction ratings. The CDP plays a critical role in finding these relationships by linking different types of data, which originate in different systems, to individual customers.

- **Social Media** - Similar to chatbots, AI can be used to interact with consumers in social media channels, although some human supervision is wise to avoid unintended results. A safer and more common application is using AI to monitor social media messages and route them to humans for appropriate treatment. The CDP can assist by identifying the customers involved and helping to route them based on information such as purchase history, interests, and loyalty status. The CDP's ability to do this in real-time is especially important and often unavailable in other systems with customer data.

- **Insight Generation and Segmentation** - AI can uncover hidden patterns in marketing data and present these as insights about customer behaviors or opportunities for new marketing programs. Similar analytics can identify customer segments based on behaviors, propensities, demographics, or other characteristics. Customer profiles built in the CDP are a primary data source for these processes, and many CDPs also include the analytics tools to execute them.

- **Predictive Analytics and Recommendations** - AI can develop models that predict specific customer behaviors or recommend the best product or offer for a specific customer in a particular situation. Predictive models can be built using conventional statistical methods or machine learning, so they are not a new AI capability. However, traditional predictive systems work almost exclusively with structured data, while generative AI models can also employ unstructured data such as product descriptions and customer comments. The CDP may be the only company system that can

combine structured and unstructured data within customer profiles. Again, many CDPs also incorporate model-building tools with pre-built connectors that can enrich customer profiles with their outputs.

- **Media Buying** - AI systems can replicate a media buyer's workflow by assembling information about the target audience, matching this to available media audiences, selecting appropriate content, placing advertising orders, measuring results, and optimizing future purchases based on those results. The CDP is the primary repository for the audience data at the heart of this process, and many CDP systems have existing connectors to ad platforms such as Google and Meta.

- **Campaign Measurement and Optimization** - AI can analyze the results of marketing programs, combining information about program inputs, such as messages sent and ad purchases, with program results, such as product sales and store foot traffic. If the data permits, the systems can directly tie messages and purchases to specific individuals. In other cases, the analysis will be based on statistical techniques that work with less detailed data to attribute revenue or estimate the incremental impact of particular campaigns. These results can be used to optimize campaign flows, content, audience targeting, and media purchases over time. As with media buying, the CDP will provide the data for these processes. Some CDPs will also provide the necessary analytical tools.

- **Personalization** - AI is widely deployed to support simple personalization, such as populating structured templates with predefined text or images. However, the real goal for many marketers is to deliver high volumes of on-demand messages tailored to single individuals. Practical challenges, including data availability, integration with delivery systems, response speed, content quality, and result measurement, have slowed the realization of this potential. The CDP can remove many of these roadblocks. Some provide tools to generate personalized messages.

- **Campaign Design** - AI-generated segmentations, media buys, content, predictive models, recommendations, and chatbots can all be components of inbound or outbound marketing campaigns. Some CDP systems can use AI to combine these and other elements to create complete campaign designs, estimate results, and execute the plan. These end-to-end campaign systems are still relatively rare and often limited to a single channel. But new ones appear almost daily.

AI within the CDP

AI is also used within many CDPs to improve their operations. Key benefits include reducing the time to add new data sources, optimizing data models, reducing processing costs, managing data quality, matching customer identifiers across systems, ensuring privacy compliance, and building connectors to other systems. Many vendors have added AI-based assistance within their user interfaces to help users complete these and other CDP tasks. While internal AI features are not directly related to a CDP's ability to support external AI applications, they may be a useful indicator of a vendor's overall sophistication and understanding of AI requirements.

What to Look for

CDP features to support AI are mostly the same as CDP features needed for other applications: the system needs to accept all data types, retain full details, keep records as long as necessary, resolve identities across systems, combine the data into unified customer profiles, and make the profiles available to other systems in real-time. However, some capabilities have become especially important in AI systems. These include:

- **Adding Data Sources** - The time and skilled labor needed to identify, assess, and map new data sources into the CDP has always been a bottleneck. Reducing this barrier becomes more important as AI systems can take advantage of more data sources and data types. Fortunately, this is one of the areas where AI shows the greatest promise of making improvements. However, non-AI features, such as no-code process definition, visualization of process flows, predefined standardization and transformation routines, and automated process reporting, can still make a big difference.

- **Unstructured Data Management** - AI systems are much better equipped than conventional methods to use unstructured data such as chat logs, text messages, product descriptions, and social media posts. This makes it more important to process such data effectively. While every CDP has a basic ability to ingest and store unstructured data, making the data readily available for AI creates additional requirements such as indexing contents for rapid access, extracting features such as keywords and entity names to simplify analysis, and identifying subtler information such as concepts. Again, some of these are capabilities that AI can provide, but others, such as formatting unstructured data for fast access, depend on other technologies, such as database management.

- **Anonymous Customers** - The primary role of CDPs has always been to manage data relating to known customers. Some CDPs need an identifier, such as an email address, to create a customer record. But advertising audience selection, campaign measurement and other AI applications often work with website visitors and other anonymous customers. The AI-friendly CDP needs to create profiles for such customers, track them over time, and retain their history when their actual identity is later revealed. Other AI applications, such as revenue attribution or media mix models, may work only with circulation or media spend figures lacking customer-level information. The CDP can be a handy repository for such data, especially when AI-driven analyses combine it with individual-level details, such as product purchases or demographics.

- **Non-customer Data** - Although a CDP might include a purchase transaction record with a product ID or a promotion record with a content ID, additional details about products and contents would traditionally be stored in other systems. However, many AI analyses and applications require combining these details with a customer record, for example, to understand better the types of products and contents a customer prefers. A CDP that can incorporate these types of non-customer data can more easily combine them with the customer profile in a way that the AI system can use efficiently. Although the ability to load and easily access non-customer data is increasingly common among CDPs, buyers

should still check exactly how this data is handled to be sure it's available in the ways that AI applications require.

- **Real-time Updates and Triggers** - The ability to access an individual customer profile in real-time and to react in real-time to new inputs are core CDP requirements, meaning that all true CDPs can do them in some way. (This doesn't mean they do them well and doesn't mean every system calling itself a CDP can do them at all.) But real-time updates are more demanding than access or triggers: they require the CDP to actually process the new data, for example, to recalculate a next-best-action model score, update the purchase history, or reassign segment membership. This capability is essential for the CDP to support real-time AI applications such as personalized content generation during a website interaction. Even CDPs that do real-time updates and triggers vary substantially in their exact capabilities, for example, in whether they rebuild the matches underlying their identity graph every time new identity information is collected. Similarly, they vary in how easily users can set up real-time triggers and connect these to actions such as sending a marketing message.

- **Connector Development** - Pre-built or easily generated connectors have always been one advantage of CDP systems. Connector development is even more critical when AI applications are added because

these connect with a larger number and greater variety of systems. Connector development is another CDP capability that can benefit from AI technology, but there are also non-AI features that help determine its power and usability. It's especially important to assess the skill level needed to create and manage connectors: some CDP systems enable non-technical users to handle all or most of the process, while other systems provide tools aimed primarily at technical users.

- **Privacy and Security** - AI applications raise new issues regarding security and privacy. Particular concerns are preventing data leakage if proprietary information is posted to external AI systems and ensuring that the AI only uses data that is authorized for a specific purpose. The CDP can reduce these concerns by reducing the amount of sensitive information that is shared, by placing limits on the data elements the AI can access, anonymizing and encrypting, and otherwise reducing the harm if any data does get leaked. Similar features can also help to safely share data with other companies via data clean rooms and similar technologies.

Conclusion

- Adequate data is one of the major roadblocks that limit effective AI deployment. Customer Data Platforms can help to remove these roadblocks by capturing more data, formatting it more effectively, and making it more accessible to systems that can activate that data, such as cross-channel marketing platforms.

- Once data is more accessible, leveraging AI to unlock deep insights and personalization at scale will help organizations deliver engaging customer experiences. Given the rapidly evolving digital ecosystem, investing in advanced data strategies and AI capabilities is essential—not just for today but to secure a sustainable edge for the future.

Notes

1. Riverbed, Global AI & Digital Experience Survey, 2024
2. Drift and Marketing AI Institute, 2024 State of Marketing AI Report
3. Basis Technologies, AI and the Future of Marketing, 2024

06

About Blueshift

Blueshift, headquartered in San Francisco, enables brands to automate and personalize engagement across every marketing channel. Our Intelligent Customer Engagement platform leverages patented AI technology to unify, analyze, and activate comprehensive customer data across all channels and applications. With an integrated customer data platform and cross-channel marketing hub, Blueshift equips brands with everything needed to deliver seamless, real-time 1:1 experiences throughout the entire customer journey.

Blueshift has been featured in Gartner's Magic Quadrant for CDPs, named a Leader in GigaOm's Radar for CDPs. It has ranked on the Deloitte Technology Fast 500™ from 2020 to 2023 as one of North America's fastest-growing tech companies. Discover more at blueshift.com.

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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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