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AI in Marketing Analytics - 5 Levers for Data-Driven Business Growth

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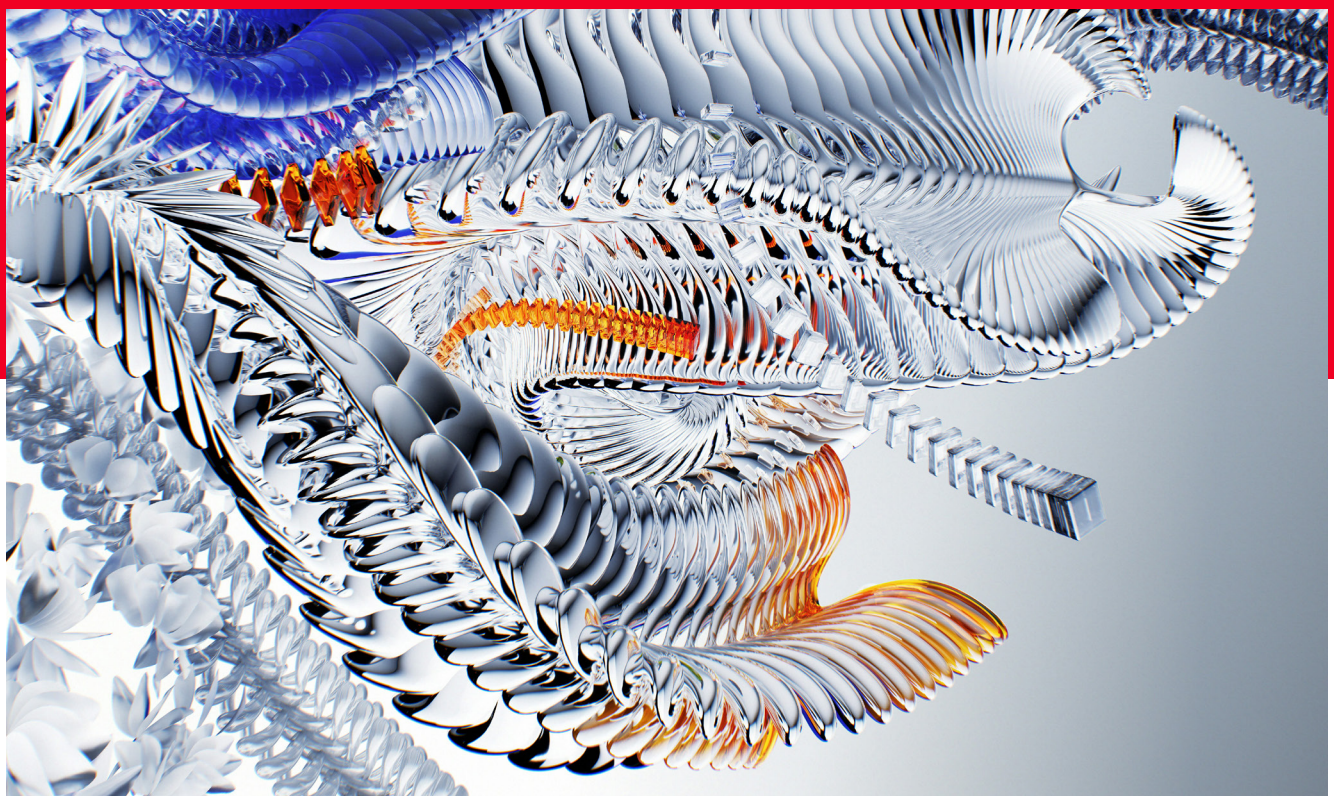
Commerzbank reduced the processing times of client interactions by approximately 90% (Bastürk & Nawalgaria, 2024), Xometry increased its median order value significantly, and Bayer saw a 360% year-over-year increase in website traffic (Boltuch & Donew, 2022). These three cases have one thing in common: They were all enabled by AI marketing analytics capabilities.

This article outlines five process steps of an AI-supported decision process in the context of marketing analytics. Each process step provides a specific lever and relevant AI use cases that can drive improvements in effectiveness, efficiency, or establish new products or services. Furthermore, the article offers a checklist to guide companies in implementing AI in their marketing analytics setup.

AI's Fundamental Transformation of Marketing Analytics

First, the good news: as with many marketing disciplines, AI is fundamentally transforming marketing analytics to the advantage of practitioners. Rather than manually analyzing data, AI enables marketers to put more time into strategic questions (Kumar et al., 2024) such as, «How can we improve next quarter?», «What is driving customer churn?» or «Which markets hold untapped growth opportunities?» (Hancock, 2024). AI supports marketers in automated data processing, provides predictive models to rapidly extract actionable insights from vast datasets on market trends, or offers GenAI capabilities for efficient data analysis. This allows marketers to craft highly personalized, real-time strategies that optimize campaign performance and enhance customer engagement (Duarte et al., 2022; Nwabekee et al., 2024), which can lead to more efficiency, more effective decision-making. and new products and services (Arora & Thota, 2024) as well as a competitive advantage through gaining critical business insights (Mahi & Hasan, 2025).

However, although data analysis and market research top the list of AI use cases (Wood, 2024), some brands are increasingly left behind in AI adoption as they struggle with data quality, tool fragmentation, and governance gaps (Eng, 2025). This is a pity, not only as successful companies utilize AI marketing tools 23% more intensively (Bünte, 2025), but especially for the discipline of marketing analytics, where data mature



companies report twice as much revenue growth as data laggards (Mathur & Jarris, 2023) and where AI tools can positively transform marketing analytics (Sajili et al., 2024).

Five dimensions for AI utilization in Marketing Analytics

The question then arises: How can AI support marketing analytics? Answering these questions, it is beneficial to first understand the five process steps of the marketing decision process in the context of marketing analytics: (i) information gathering, (ii) will formation, (iii) enforcement of will, (iv) control and (v) learning (see figure 1).

Although full automation of marketing decisions is not yet common, AI can outperform humans by processing data at high speed and learning continuously, leading to better and more frequent decision-making. This enables systems like programmatic advertising and data mining to deliver faster and more accurate outcomes than traditional intuition-based approaches by marketing executives (Reinecke & Tombach, 2025). The subsequent table (Table 1) lists examples of AI use cases and their benefits.

Subsequently, research and specific AI use cases of these five decision process steps are outlined.

Lever 1: AI Supports the Acceleration of Information Supply

Before a decision is made, it is important to provide an adequate information base (Reinecke & Tombach, 2025). AI can make data more accessible by minimizing the need for manually consolidating data or navigating complex data sources (Kihlstrom, 2025). Machine learning algorithms can support data gathering by constructing customer profiles from structured data (demographics, purchase histories) as well as unstructured data (social media postings, search searches) (Nizamuddin et al., 2020). This is especially beneficial since marketers often have difficulties in gathering reliable and objective data (Stewart, 2009).

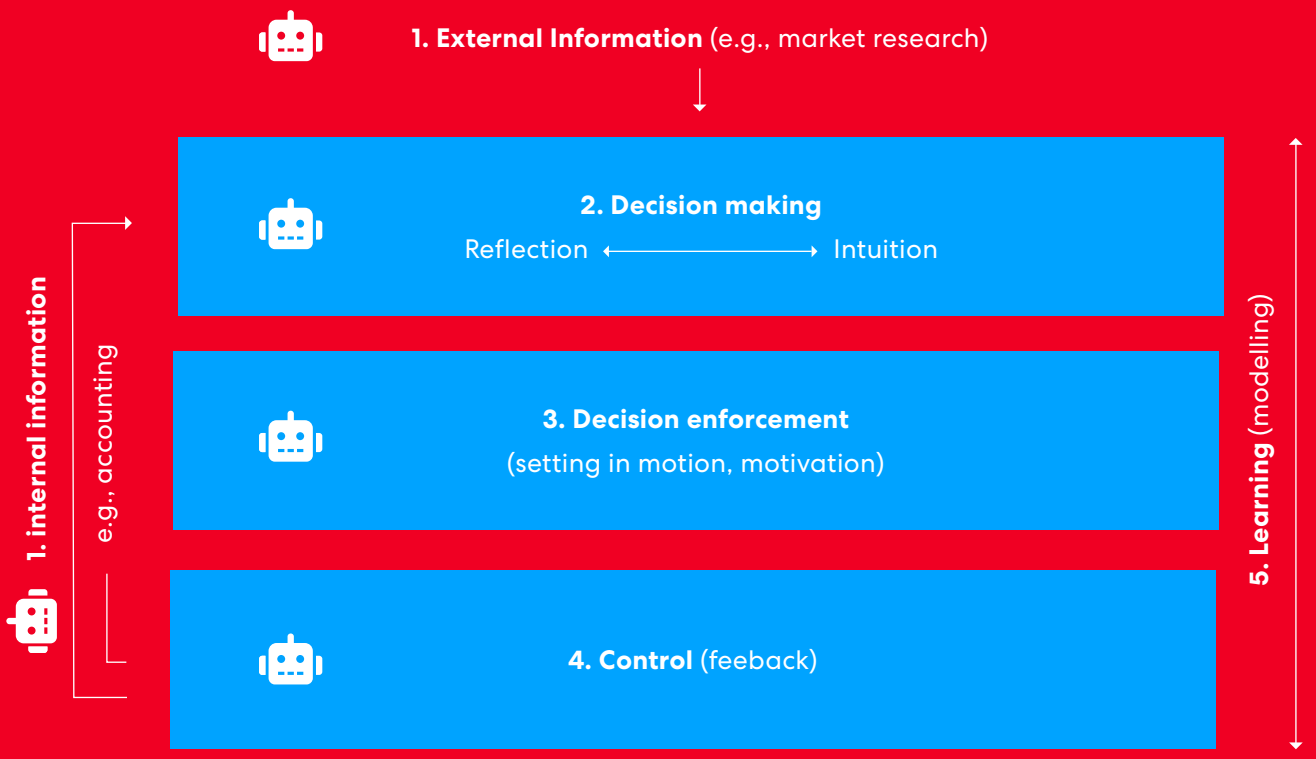


Figure 1: Fully automated marketing decision process (Reinecke, 2020)

Process step	Core task	AI use cases	AI benefit
Information supply	Ensuring that a comprehensive base of both external and internal information is gathered.	Social Media Monitoring & Sentiment Analysis	More efficient data gathering
Decision making	Developing well-informed marketing strategies by systematically planning and combining data-driven decision-making with managerial intuition.	Predictive Analytics & Forecasting	Faster response to market changes, improved agility, reduction of pure gut feeling
Decision enforcement	Ensuring the effective execution of decisions through clearly defined processes and incentives	Automated Campaign Execution	More accurate targeting, improved personalization
Control	Comparing performance against set targets to identify discrepancies and guide corrective actions.	Real-Time Analytics & Performance Tracking	More accurate ROI measurement, better budget allocation
Learning	Analyzing data to refine decision-making methodologies and enhance future strategic actions.	Continuous Campaign Improvement	Faster optimization, higher engagement rates

Table 1: AI use cases (Kotha, 2024; Reinecke, 2020)

For example, Commerzbank partnered with Google Cloud to automate its labor-intensive financial advisory documentation process by developing a sophisticated gen-AI system. The solution leverages a multi-stage architecture, including transcription, diarisation, fact extraction, and summary generation to convert recorded client calls into compliant, concise advisory documents (see Figure 2). This automation not only significantly reduces processing time of the financial advisory documentation by approximately 90% as well as reduces errors but also boosts sales advisor productivity, enabling them to focus on high-value client interactions (Bastürk & Nawalgaria, 2024).

Another example is Pets at Home, which offers pet insurance. It connects Copilot with its existing data ecosystem. When a potential fraud is identified by a case agent, the Copilot can autonomously gather relevant information from the system, perform an analysis, and provide that analysis back to the fraud agent (still ensuring that a human is in the loop). A working prototype was built within a week and it enables the fraud investigators to operate efficiently and accurately (Microsoft 365, 2024).

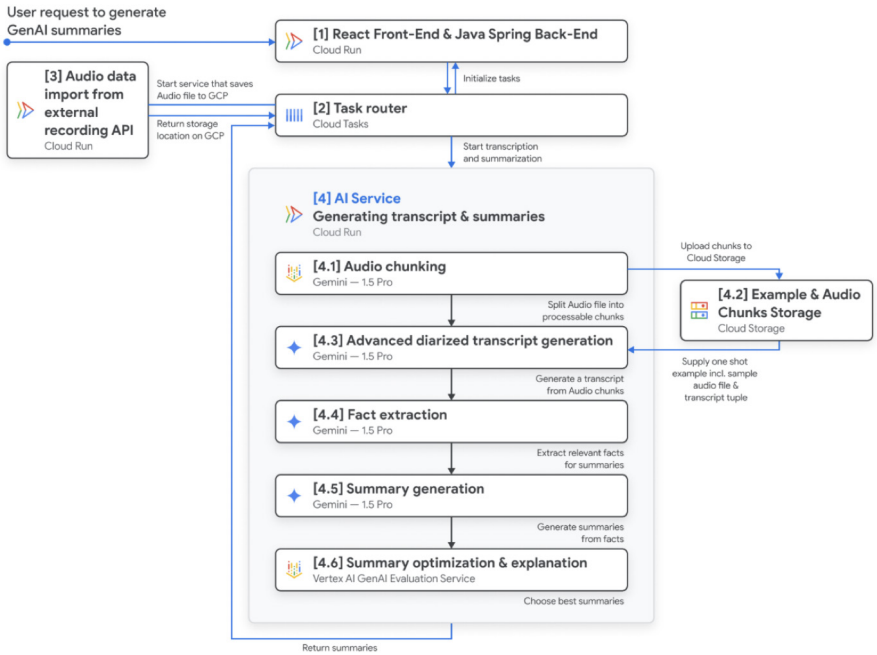


Figure 2: Architecture of AI automated advisory documentation (Bastürk & Nawalgaria, 2024)

Lever 2: AI Enables Predictive Decision-Making For Marketing Planning

Decision-making is the most crutial management task (Reinecke & Tombach, 2025) and is increasingly supported by advanced predictive analytics tools (Fehrenbacher et al., 2022). Predictive analytics is one of the most relevant big data trends (Amman et al., 2020) and can be used to detect market trends, which then can be used for adjusting marketing plans.

Managers should beware of managerial biases when utilizing predictive analytics, as a study has shown that predictive analytics utilization depends on the data type and trend consistency: Predictions based on social media data are less utilized when they indicate an unexpected downward trend (Fehrenbacher et al., 2022). Furthermore, when making decisions, marketers must balance intuition or «gut feeling» (which is especially advantageous for dynamic, complex situations) and data-based models (which can quantify uncertainties and risks based on historical data and create a fact-based forecast as well as refuting hasty management decisions) (Hanssens & Pauwels, 2016; Reinecke & Tombach, 2025). In addition, managers must find a balance between predictive model accuracy and timely insights.

One example of AI-enabled predictive analytics decision-making is flu prediction. Bayer wanted to predict cold and flu search trends around the world to help reach people with the right products to reduce flu symptoms. Predictive insights, based on a number of data sources (see figure 3), helped Bayer's team become more proactive with their marketing planning and strategy. For example, the model showed that the cold and flu season began in early May in Australia, with higher cases than usual for this period, and indicated a 50% surge in flu cases across the country. This ensured that the most effective, engaging, and personalized ads got in front of the right people at the right time, increasing website traffic and budget efficiency (Boltuch & Donew, 2022).

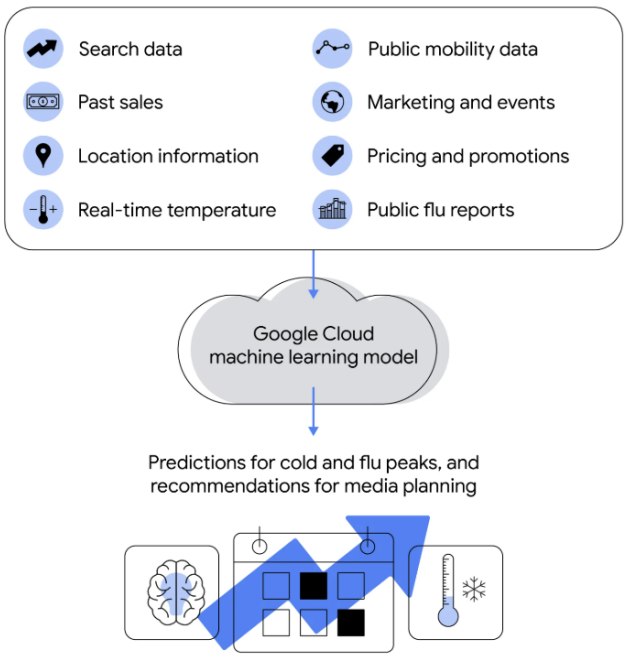


Figure 3: Data sets for flu prediction (Boltuch & Donew, 2022)

Lever 3: AI Automates Decision-Enforcement, which Positively Impacts Customer Acquisition & Retention

Marketers have to ensure that marketing processes are effective and efficient. In marketing analytics, one of the most important applications is customer segmentation (Badmus et al., 2024; Tyan & Drayton, 1987), which can be utilized for personalized user journeys. Personalization is crucial as it meets the growing consumer expectation for tailored experiences, with over 80% of surveyed consumers desiring such interactions. Companies that excel in personalization drive higher engagement, customer loyalty, and revenue growth (Abraham & Edelman, 2024), and AI can enable these personalization efforts.

An example of personalization is Netflix, which leverages customer behavior data (such as viewing history, ratings, viewing times, preferred devices, and viewing durations), movie details (like titles, genres, categories, actors, and release years), and membership data from users with similar tastes and preferences to deliver highly contextualized email and push notifications. This automated, machine-learning powered personalization is crucial for Netflix's success since its recommendation engine is critical for customer retention, with 80 percent of users following a recommendation and only 20 percent actively searching for content (Netflix Research, 2025).

Another automated decision-enforcement process is lead scoring. According to the analysis of more than 44 studies, lead scoring models, especially those based on predictive analytics using data machine learning techniques, significantly enhance sales performance by increasing lead conversion rates, reducing costs, and boosting revenue (Wu et al., 2023). Moreover, lead scoring models consistently outperform traditional methods, offering more efficient resource allocation and improved internal collaboration between marketing and sales functions (Al Khaldy et al., 2023; Wu et al., 2023).

An example of AI-powered lead scoring is GRAPHISOFT, a design software company, which used Hubspot to automate lead nurturing and scoring, effectively qualifying leads based on their engagement. It created automated workflows that send targeted email sequences based on specific actions, such as downloading e-books, signing up for webinars, or starting a free trial. These workflows are also designed to queue content if a lead engages with multiple assets simultaneously, ensuring a non-intrusive, personalized communication flow. Additionally, their lead scoring system assigns points for various activities (like email opens, clicks, and website visits), and when a lead exceeds a set threshold, an internal alert is triggered to notify the appropriate salesperson for a follow-up (Hubspot, 2025).

Lever 4: GenAI Capabilities Enable Efficient Marketing Control

In most cases, targets only make sense if they are controlled - planning without control is pointless (Reinecke & Tombach, 2025). Dashboards can aid marketing control by transforming complex data into actionable insights through effective visualizations and interactivity (Zingde & Shroff, 2020). However, constructing, maintaining, and updating dashboards to incorporate new metrics while preserving a clear overall view can be labor intensive. As a solution approach, gen-AI supported tools can be considered.

For example, Looker delivers conversational analytics that enable marketers to generate graphs and tables while also enabling follow-up inquiries. It also proactively suggests relevant questions and can automatically create presentation slides based on a data set (Wright & Bailis, 2024). Looker also provides transparency into both data sources and calculation logic. This is crucial, as managers increasingly expect AI-based reasoning to be explainable (Volkmar et al., 2022). These capabilities enable ParkMobile to use Looker not only for its internal data analysis but also to offer B2B clients data as a service, providing real-time analytics via a dashboard in their account management tool instead of static PDF or Excel downloads (Looker, 2020).

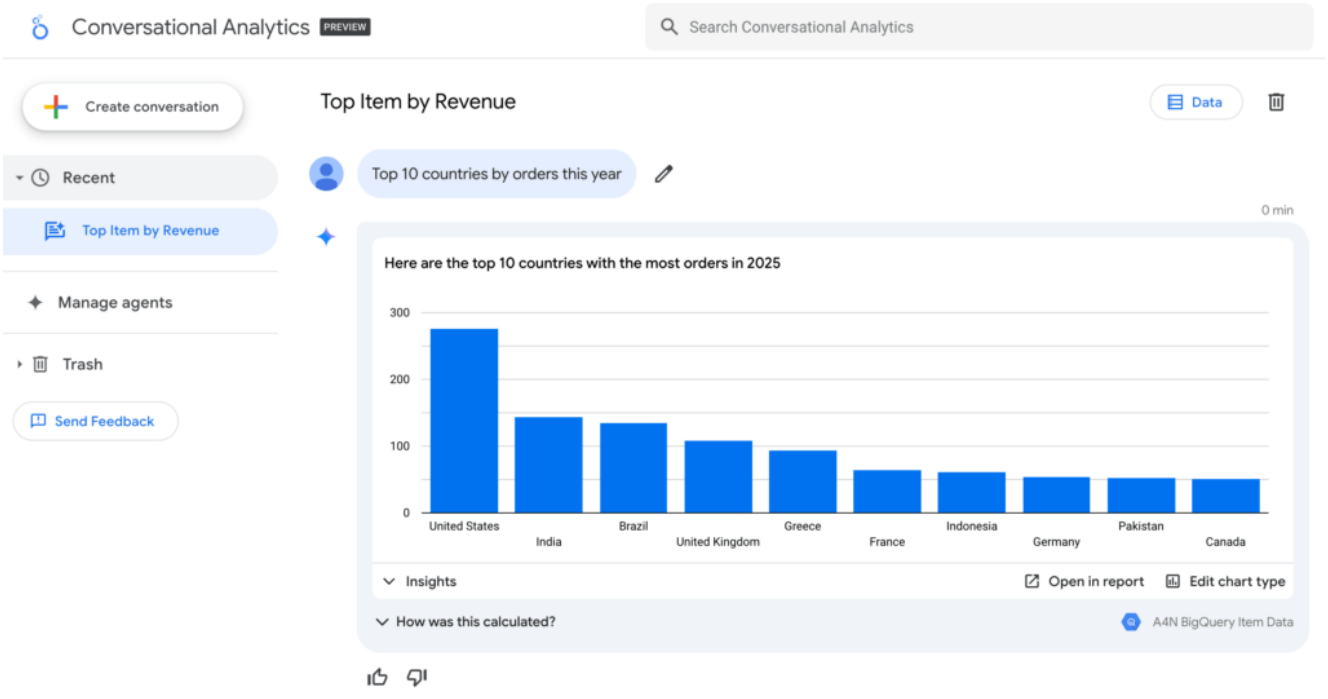


Figure 4: GenAI capabilities for marketing control with Looker (Wright & Bailis, 2024)

Lever 5: AI Automated Learning Capabilities Increase Digital Marketing Effectiveness

The learning process step is often where the greatest deficit of traditional marketing management lies (Reinecke & Tombach, 2025). AI can automate some of the learning process. Understanding how to increase advertising effectiveness is a critical component of any digital marketing activity (Bai et al. 2019; Ngai & Wu, 2022) and by continuously learning from existing data, AI can automatically improve performance.

For example, automated bidding is one of the most enabling technologies for online advertising (Tang & Yu, 2025) and can - even if not in every case (Jiang, 2023) offer a more streamlined, efficient, and targeted purchasing process for most advertisers (Tang & Yu, 2025), leading to more effective and efficient digital marketing activities.

For example, Xometry uses Google Ads' automated value-based bidding. By transferring the conversion amount of its signed contracts, Xometry enables Google to dynamically adjust bid strategies based on the actual value of each lead, ensuring that advertising spend targets the most profitable opportunities and thereby increasing order value by 250%.

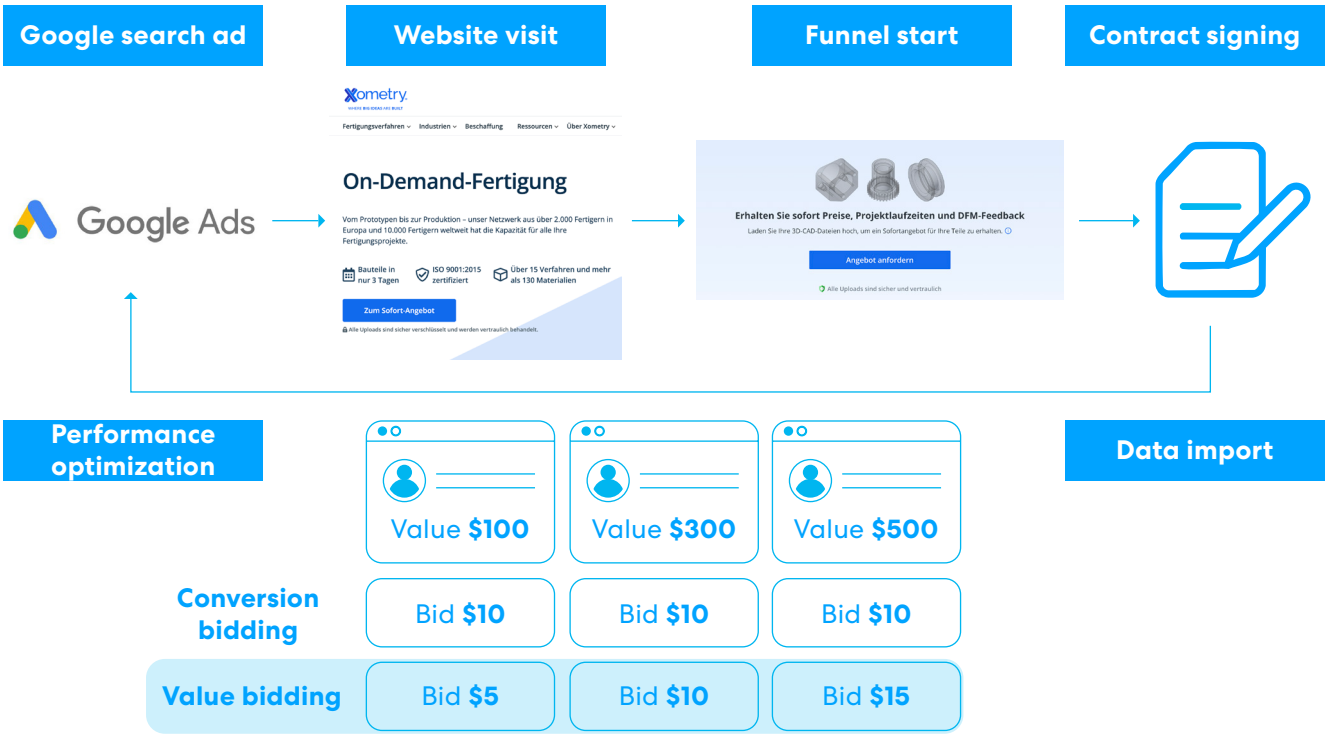


Figure 5: Value-based bidding - Xometry example (own illustration based on Misnikov, 2024)

«Understanding how to increase advertising effectiveness is a critical component of any digital marketing activity.»

(Bai et al. 2019; Ngai & Wu, 2022)

Quo Vadis: Where to Start (or Continue) with an AI Marketing Analytics Roadmap

Besides the many advantages of AI utilization in marketing analytics, as outlined in literature and with the illustrated cases, there are common obstacles to AI implementation. Limited resources and capabilities, data protection concerns, and a lack of clarity on how to get started are some of the most mentioned ones (Zumstein et al., 2024). To address the last one, a checklist is provided in the subsequent table.

During the implementation of AI use cases, marketers have to be aware of the very foundation of (AI) marketing analytics success: data quality. This can be a significant challenge, especially considering that only 5% of marketers indicate that their current state of data quality meets their business needs (Campell & Bates, 2021). A lack of data quality can have negative consequences. For instance, in 2016, Microsoft launched its AI chatbot Tay, but toxic inputs quickly led Tay to generate offensive content, highlighting the critical need for high-quality training data and robust filtering mechanisms to prevent harmful AI behavior (Wolf et al., 2017). This learning about the criticality of data quality and observation also holds for other AI marketing analytics use cases, e.g., when using gen-AI to visualize existing data or using it for predictive analytics. In the end, the insights and actions are only as useful as the quality and accuracy of the input data.

Another common obstacle or even pitfall is data governance. With consumer data being the central pillar of data-driven marketing, companies have significantly accelerated their data-gathering tactics, which can lead to exposing consumers to higher risks (Rosário & Dias, 2023). For example, DeepSeek had a data leak that exposed sensitive data that could be misused for corporate espionage (Daniel, 2025), highlighting the importance of prioritizing data security when selecting and utilizing AI tools. Marketers should also be aware of regulation;

Defining a use case	• Familiarize yourself with AI marketing analytics use cases, e.g., using Google's AI use case database or Microsoft AI use case database • Choose an AI marketing analytics use cases that best fit your marketing analytics strategy and goals • Justify the expense by showing benchmarks and expected gains
Building capabilities	• Gain the required technical expertise (also consider outsourcing expertise if advantageous) • Ensure data readiness (quality, security, and governance)
Implementation and reporting	• Ensure compliance with data protection and security regulation • Assess the impact of AI use case on predefined goal (e.g., effectiveness, efficiency, product/service creation goal)
Scale AI efforts across marketing analytics strategy	• Scale the existing use case(s) for additional products, services or business entities

Table 2: Checklist for Creating an AI Marketing Analytics Roadmap (based on Greitzer, 2025; Guiness et al., 2025)

a study predicts that by 2027, over 40% of AI-related data breaches will stem from cross-border misuse of generative AI due to inconsistent global standards (Gartner, 2025). Therefore, organisations must adopt stringent data governance practices to mitigate privacy risks and ensure that the benefits of AI utilization are realised legally and ethically.

Furthermore, companies have to keep in mind that in most cases AI performs best with human collaboration, especially in marketing analytics. It is helpful to consider both the complexity of an application case and its relevance to the core business and subsequently decide which tasks should be fully automated, which should be augmented by AI, and which require primarily human judgment.

Research suggests that combining human creativity with AI's computational power can improve marketing strategies by enhancing customer experience, enabling personalized marketing, and optimizing campaign management (Petrescu & Krishen, 2023). While doing so, marketers should also actively address ethical concerns (Petrescu & Krishen, 2023) since there is widespread evidence that discriminatory marketing models exist that could negatively impact customers and customer relationships (Akter et al., 2023).

Better done than perfect

Ultimately, hands-on experience often proves to be the best way to learn what works. Companies that take action now will shape the benchmarks for AI marketing analytics, those who wait may soon find themselves following instead of leading.

If the outlined potential pitfalls are considered, companies embarking on the AI marketing analytics journey will find numerous use cases that can boost effectiveness and efficiency, as well as enable new products or services. Rather than striving for the perfect setup from the beginning, it is often more effective to take a pragmatic approach and gain momentum through action.

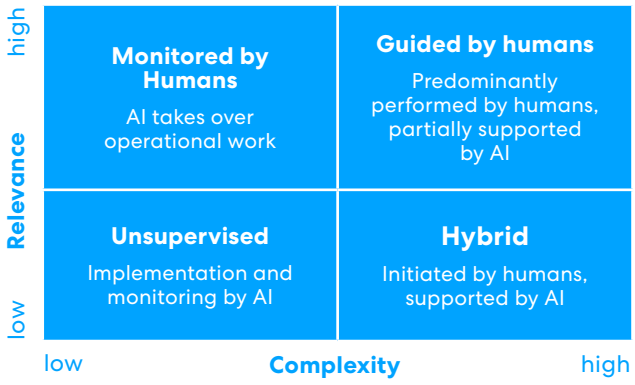


Figure 6: Human-AI framework (based on Sophie Hundertmark, 2024)

«I think people tend to overthink the initial approach. I would get pilot programmes started. Challenge your organization from the top down, where the organization can apply AI and then get a few pilot proposals underway.»

Sundar Pichai, CEO Google (Ignatius, 2025)

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