



NAWA-DIGIT Report on

AI Collaboration Competencies in Marketing

November 2025



Collaboration with AI refers to people and algorithms working together so each contributes complementary strengths. This report examines the human competencies needed to translate insight from AI into responsible actions across research, segmentation, content, customer experience. It draws attention to marketing managers' concerns about collaborating with AI.

Introduction

The transformation driven by AI is not just technical—it causes a real shift in expected skills. Employees now require more than traditional marketing skills; they must also manage advanced AI tools, work in hybrid (human–AI) teams, prioritize security and privacy, and make responsible, ethical decisions based on complex AI outputs.

This report introduces an AI-Driven Marketing Competency Framework that can be used to design roles, identify competency gaps, and guide upskilling efforts for any agency engaged in AI-driven marketing projects. It provides essential insights for navigating the rapid technological and social changes driven by AI.

The report focuses on identifying future AI trends, results from a survey of marketing managers, and the authors' conceptual work. It begins by highlighting the need for AI-related skills in marketing, then introduces an AI-driven competency framework and examines its application in two marketing organizations.



1. New, AI-affected marketing landscape

Artificial Intelligence (AI) is reshaping the marketing profession. The convergence of technological innovation and evolving consumer expectations compels marketers to build new competencies to remain effective and relevant in this rapidly changing landscape. Key developments include the rise of AI-generated content (algorithmic reality), growing concerns around data privacy and cybersecurity (cyber threat analysis), persistent digital inequalities, a decline in critical literacy skills, and the democratization of digital intelligence—making advanced tools widely accessible. Simultaneously, the tendency to increase regulation (the fight for power, digital rebellion) and advancements in generative AI (creativity reimaged) are redefining the competitive environment and the skillsets required for success (Antczak et al., 2025). These trends directly reshape three core marketing areas: data analysis and research, operations and strategies.

As the marketing profession evolves, organizations and individuals must proactively embrace a culture of continuous learning and ethical AI adoption (Chowdhury et al., 2024). This report explores the core competencies required to leverage AI's potential—across data analysis, operations, and strategy—and to provide practical guidance for thriving amid digital disruption. It focuses on the identified competency gaps, such as the ability to apply AI tools for

analyzing and forecasting trends and to integrate AI-supported analysis to enhance insights into customer expectations, needs, emotions, and behaviors. It also addresses the primary concern of assessing potential risks associated with AI implementation and establishing appropriate safeguards to protect individuals and data.

The results of our survey among 178 marketing managers across the US and UK, drawn from both the B2B and B2C sectors, in April 2025 reveal compelling insights about the most pressing AI competency gaps in contemporary marketing organizations. The managers were asked to rate the extent to which their teams need to improve particular competencies—using a scale from 1 (not at all) to 5 (very much). As a result, they identify the most common areas requiring development.

- Assessing potential risks of AI implementation in marketing and establishing safeguards to protect individuals and data – 70,2% respondents.
- Applying AI tools to analyze data and forecast trends – 69,7% respondents.
- Enhancing insights into customer expectations, needs, emotions, and behaviors through AI-supported analysis – 66,9% respondents.

These findings indicate that data analysis and security considerations are of greater concern to managers than technical capabilities. This pragmatic stance is justified considering the potential reputational and regulatory risks associated with AI misuse.



Marketing managers operating in B2B contexts face high levels of uncertainty and market unpredictability. As customer expectations evolve alongside shifting business environments, firms are often required to repackage their value propositions while relationships themselves are being redefined. Under these conditions, marketing effectiveness depends less on isolated transactions and more on the relational assets that bind organizations together over time. Artificial Intelligence (AI) can play a pivotal role in this context—enhancing relational awareness and supporting the complex interaction processes that marketing managers must navigate. When managing long-term relationships, AI can detect subtle shifts in sentiment, performance, or value perception, helping managers anticipate needs for renewal or adaptation. Ultimately, collaboration with AI should mirror collaboration within business networks: iterative, context-sensitive, and grounded in mutual learning. The key challenge for B2B marketing managers is to integrate AI with their own managerial purpose—enhancing their capabilities to mobilize resources, clearly articulate and test the value of proposed solutions, and mediate or resolve potential issues.



Andrea Perna

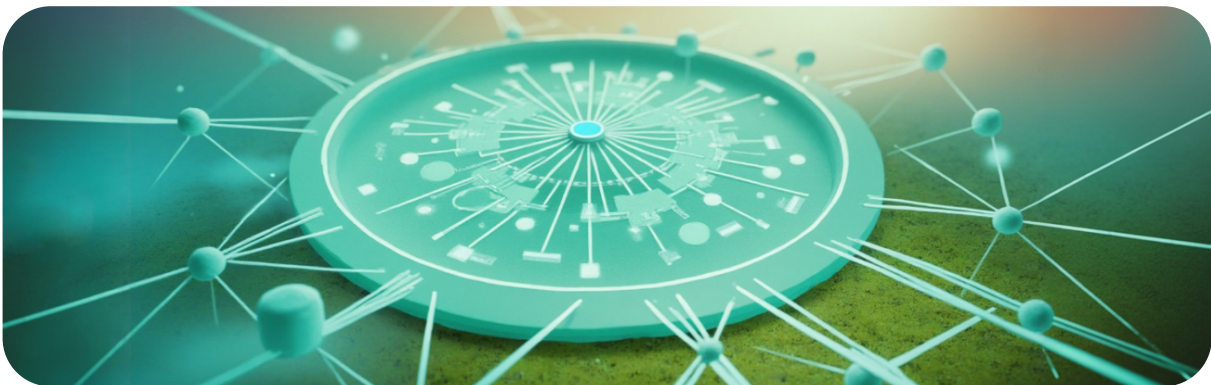
Full Professor
Director of the
Management
Department
Marche Politechnic
University, Ancona,
Italy



2. Digital competencies frameworks

Various competency frameworks have been developed to guide efficient work in digital environments. The EU's DigComp 2.2 frameworks identify core digital competencies across areas such as information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. However, these frameworks include limited explicit reference to AI-specific skills (European Commission, 2022). Similarly, UNESCO's Media and Information Literacy and Digital Competencies framework addresses general skills needed to combat the proliferation of misinformation, disinformation, and hate speech, as well as the decline of trust in media and digital innovations, particularly AI.

The competency models developed by leading marketing associations, including the American Marketing Association (AMA) and the Chartered Institute of Marketing's Global Professional Marketing Framework (CIM), primarily describe core competencies required for effective marketing practice. AMA's framework encompasses six core domains covering the full marketing lifecycle: ethics, essential capabilities, strategy and planning, content and branding, channels and technology, and data and analytics. Within this framework, AI is treated both as a specialized toolset (particularly within channels, technology, and analytics) and as a cross-cutting ethical and strategic concern. Conversely, CIM focuses on direction (strategy), capability (knowledge and abilities), professionalism, and impact. This model is comprehensive and forward-thinking, explicitly linking digital agility—including AI—to strategic, operational, and ethical dimensions of marketing. Its strength lies in defining proficiency levels from entry to expert, developed through extensive industry consultation to ensure real-world relevance. However, AI expertise remains insufficiently explored.



AMA's approach embeds AI within general skills and ethics, while CIM offers an explicit roadmap for acquiring and updating targeted AI expertise alongside traditional marketing competencies. Although contemporary digital and marketing competency models acknowledge the importance of AI-related skills, the scope and depth of their coverage in competency frameworks remain inadequate. Most agendas position AI as an embedded dimension within broader digital literacy and problem-solving areas, failing to provide the detailed competencies necessary for effective human-AI collaboration.

3. AI-Driven Marketing Competency Framework

We offer an AI collaboration competencies model dedicated to marketers. This framework is structured around thirteen core competencies organized into five distinct domains: Data and Research, Strategy, Branding, Customer Experience, and General/Managerial (Table 1). These competencies include areas such as data collection for AI, AI-based customer insights, integrating AI in product development, content generation with AI, AI-powered communication, and digital safety and security, among others. Each competency is described in terms of required knowledge, skills, and attitudes (KSA), structured by progressive proficiency levels. The exemplary application of such competency matrix is presented in case studies (4.1. and 4.2). The principal advantage of this tool is that it facilitates targeted and effective capacity building at both the individual and organizational levels, thereby supporting ongoing professional growth, strengthening organizational flexibility, and encouraging the responsible adoption of innovative AI solutions within marketing.

Table 1. The AI-driven marketing competency framework

Category	No.	Competency	Description
Data and Research	1	Data collection for AI	Gathers and prepares relevant data on customers, markets, and marketing activities for AI applications.
	2	AI-based customer insights	The engagement with AI tools to explore customer and market data, interpret patterns and trends, and communicate insights that guide ethical and strategic marketing actions
Strategy	3	Developing AI-based product/service	Designs products or services that are based on or incorporate AI technologies.
	4	Managing AI-based value	Facilitates value creation, delivery, and capture through AI-enabled systems while clearly articulating this value to stakeholders.
Branding	5	Content generation with AI	Produces written, visual, or multimedia content with the AI tailored to specific audiences and formats.
	6	AI-based communication	Optimizes and automates brand communication by integrating AI tools for audience targeting and personalization.
Customer experience	7	AI-based customer relationship management	Builds and maintains strong customer relations with AI support.
	8	Sales intelligence	Influences performance by leveraging AI to identify prospects, tailor offerings, and support negotiations.
	9	User experience	Streamlines service delivery and product interactions through AI technologies that address both standardized and personalized needs.
General/managerial	10	Working with agents	Develops and implements autonomous applications, service robots or virtual agents capable of executing marketing-related tasks.
	11	Responsibility for AI generated content and decisions	Evaluates the ethical implications of AI-assisted actions and decisions and assumes accountability for their outcomes.
	12	Teamwork with AI	Manages teams, projects, and decision-making to ensure ethical and effective use of AI in marketing campaigns.
	13	Digital safety and security in the context of AI	Assesses potential risks of AI implementation in marketing and establishes safeguards to protect individuals and data integrity.

Source: Ławrynowicz, M., Koperska, A., Leszczyński, G., Ziętek, A., & Piasecki, P. (2025). AI-Driven Marketing Competency Framework. <https://doi.org/10.17605/OSF.IO/VDSR3>



This framework was developed through rigorous academic research and consultations with business communities. It progressed in a three-phase process designed to address the rapid evolution of AI in marketing. In the first phase, we conducted a critical review of academic and professional literature and identified future trends. In the second phase, a panel of academic experts from leading European universities participated in collaborative discussions to evaluate, refine, and structure the competencies, ensuring relevance and clarity at multiple developmental levels. In the third phase, we validated the framework through empirical testing with 178 marketing professionals, who assessed the practical applicability and urgency of each competency for AI-driven marketing teams.



The competencies alone are insufficient—they must be orchestrated through complementary HR practices that act as intermediary mechanisms that transform individual competencies into organizational capabilities (Apascariței & Elvira, 2021). Strategically focused HR practices enhance competency development through: selective staffing and retention, extensive training and development, supportive work design, and performance management systems (Nishii et al., 2008).



As an HR professional, I find the imperative to integrate AI collaboration competencies into marketing roles is a pivotal challenge. Beyond the technical AI proficiency, our most significant task is cultivating a culture of ethical AI stewardship, particularly in assessing risks and ensuring data security. This means HR must lead in developing skills, critical thinking, and accountability necessary for our teams to responsibly navigate the complexities of AI-generated content and hyper-personalization. Prioritizing these human-centric aspects will be key to fostering trust and sustainable growth in the AI-driven marketing era.



Kinga Przepiórka
People Director
VML Enterprise Solutions,
Poznań, Polska



4. Application of AI-Driven Marketing Competency Framework

Below are presented two cases of the exemplary application of the AI-Driven Marketing Competency Framework. The first case presents the perspective of the Customer Relationship Manager position. Based on the new description of responsibilities, the key competencies were identified that cover the requirements for performing in this role. In the second case, the process perspective, divided into research, strategy, and operations, is included. In each process, tasks were delineated and used to identify the core competencies essential for effective execution. Consequently, managers gain a practical instrument for competency management across the organization. On this basis, they can select and align targeted HR practices to develop specific competencies, including recruitment and selection, training and development, performance appraisal, and incentive systems.

4.1. InifiBrand: Development of customer relations manager competencies in a marketing agency

InifiBrand is a mid-sized full-service digital marketing agency based in Warsaw, Poland, specializing in comprehensive brand building, performance marketing, and omnichannel campaigns for consumer-facing brands. The agency serves clients in retail, lifestyle, and tech sectors. InifiBrand's mission is to combine creativity, data, and advanced AI to deliver measurable business value while keeping ethics and inclusivity at the forefront.

Following trends identified in the NAWA-DIGIT Report (Antczak et al., 2025), the agency leverages AI-powered cybersecurity tools to detect fake reviews, filter malicious bot activity in advertising campaigns, and monitor brand mentions for signs of coordinated disinformation. InifiBrand also employs generative AI to create campaign assets, with content formats tailored for varied user literacy levels and digital access capabilities. This includes utilizing infographics, audio content, and platform-specific materials, while incorporating AI to assess and optimize accessibility standards.

Furthermore, the agency empowers account managers and junior strategists with no-code and low-code AI analytics and content tools, making advanced marketing intelligence accessible to all staff regardless of technical background. Teams utilize AI-generated prompts to ideate and test new campaign angles while maintaining rigorous human oversight and creative refinement. This approach ensures that AI enhances rather than replaces human creativity and strategic judgment.

However, the agency encounters challenges and concerns related to AI adoption. One of the most pressing concerns involves ethical responsibility and data security. There is also growing anxiety about the potential misuse of AI-generated content, algorithmic bias, and the long-term consequences of overreliance on automation.

Table 2 illustrates how core marketing tasks in the digital agency are supported by a tailored set of AI-enabled competencies, practical toolsets, and employees' responsibilities—offering a holistic blueprint for AI adoption and human–AI collaboration in modern marketing operations.

Table 2. Key AI-Driven Marketing Competencies required in InfiniBrand agency’s areas of responsibility

Main tasks of the agency	Description of agency tasks	Employees involvement	AI tools used	How AI is adopted	Key competencies required
Market and Consumer Insights	Gathering, analyzing, and interpreting customer/ market data to inform strategies and campaign planning.	Analysts perform no-code analytics, prepare dashboards/visualizations; managers interpret results for planning.	MonkeyLearn, Windsor.ai, HubSpot AI	AI is used to segment/ analyze data, run sentiment/predictive analytics, and safeguard trust/privacy.	Data collection for AI; AI-based customer insights; Responsibility for AI-generated content/decisions; Digital safety/security in the context of AI
Brand Communication	Generating and distributing brand content and narratives across digital platforms to engage target audiences.	Copywriters/designers use Jasper/Canva to create and refine assets; digital managers schedule and monitor campaigns.	Jasper, Canva AI, Brandwatch, Google Ads	Generative AI personalizes and automates brand content creation, supports campaign deployment and monitoring.	Content generation with AI; AI-based communication; Social responsibility for AI-generated content/decisions; Digital safety/ security in the context of AI
Customer Experience Optimization	Designing and delivering seamless, personalized customer journeys across multiple touchpoints.	CRM users deploy bots/ engines, analyze feedback, optimize journeys, and manage cyber risk protocols.	Salesforce AI, Dynamic Yield, HubSpot AI, Intercom	AI chatbots, recommendation engines personalize interactions and support secure, dynamic customer engagement.	AI-based customer relationship management; Sales Intelligence, AI-based user experience; Teamwork with AI; Digital safety/security in context of AI engagement.
Performance Analytics	Tracking real-time campaign data, reporting on KPIs, and providing actionable insights to maximize marketing ROI and efficiency.	Analytics team automates reporting, deep-dives into flagged anomalies, and advises on optimization strategies.	Windsor.ai, MonkeyLearn, Google Analytics, Salesforce	AI automates dashboard updates, runs attribution models, detects anomalies and forecasts trends.	Data collection for AI; AI-based customer insights; Sales intelligence; Digital safety/security in context of AI
Digital Safety and Reputation	Protecting the brand and campaigns from threats like fake reviews, bots, deepfakes, and coordinating response to potential reputation risks.	Digital safety officers configure alerts, analyze root causes, coordinate responses, and update safety protocols.	Brandwatch, Google Ads, Meta Business Suite	AI monitors for threats, automates detection of abnormal activities, and escalates alerts for rapid response.	Social responsibility for AI-generated content/decisions; Digital safety/security in the context of AI; Teamwork with AI

Source: own elaboration on NAWA DIGIT Competency Framework basis



In response to the new challenges, the role of Customer Relations Manager has been redefined based on the AI-Driven Marketing Competency Framework.

Position Overview:

The aim of the Customer Relations Manager position is to lead the design, delivery, and continuous improvement of seamless, AI-powered client experiences. This role combines strategic customer management with hands-on oversight of AI systems, ensuring personalization, efficiency, and ethical standards in all client interactions across digital touchpoints.



Key Responsibilities:

Customer Experience Optimization:

- Design and implement multi-touchpoint customer journeys using AI-driven personalization to increase satisfaction and engagement.
- Deploy and manage AI chatbots and recommendation engines (e.g., Salesforce AI, Dynamic Yield, HubSpot AI, Intercom) to provide responsive, secure, and tailored customer support.
- Collect, monitor, and interpret client feedback using AI analytics tools to identify trends, resolve issues, and improve service delivery.
- Uphold company protocols and regulatory standards for digital safety, ensuring client data integrity and the security of AI-assisted interactions.

Relationship building & communication:

- Maintain clear, empathetic communication with key customers, leveraging insights from AI systems to anticipate needs and personalize messaging.
- Coordinate and execute rapid response protocols for digital safety or reputational issues, utilizing AI monitoring tools.
- Partner with analytics, marketing, and digital safety teams to ensure that customer experience strategies align with organizational goals and campaign objectives.

Continuous improvement:

- Evaluate and refine AI-powered CRM processes based on performance metrics and client input.
- Stay current with emerging customer engagement technologies; support team learning on new AI-driven tools and customer service best practices.

Required Competencies:

The core competencies required for this position, based on the AI-Driven Marketing Competency Framework, are presented in Table 3.

Table 3. The competency profile of Customer Relation Manager in InfiniBrand

Competency	KSA	KSA description	Level	Level description
AI-based Customer Relationship Management	Knowledge	Understanding of AI tools (chatbots, predictive analytics), and AI-CRM systems.	Proficient	Sets industry standards for ethical AI-CRM integration, pioneers solutions for algorithmic fairness and cyber-resilience.
	Skills	Using AI tools for customer interaction.		Spearheads industry-wide AI-CRM security standards, mentors teams in cutting-edge AI innovation.
		AI-driven customer segmentation and targeting.		Sets organizational standards for ethical, bias-free segmentation, mentors others in innovative targeting strategies.
		AI-powered customer feedback interpretation.		Uses insights to inform product/service improvements and marketing strategies.
	Attitudes	Critical thinking to innovate AI solutions and ensured trust.		Shapes global best practices for AI-driven customer trust, inspires cross-industry collaboration on cyber-secure AI.
Sales Intelligence	Knowledge	Understanding of AI-driven sales intelligence tools, data sources, and their impact on sales processes.	Experienced	Has deep knowledge of advanced AI tools (conversation intelligence, real-time news APIs), understands data power dynamics and risks.
	Skills	Ability to leverage AI to identify prospects, personalize offers, and support negotiations.		Designs and refines AI-driven sales processes and data-driven sales strategies.
		Ability to analyze and act on AI-generated sales insights.		Drives industry-wide adoption of advanced sales intelligence.
		Ability to ensure data quality and security in the sales process.		Develops and enforces robust data policies, leads on compliance and risk management in sales intelligence.
	Attitudes	Innovating in the use of AI for sales advantage and adapts to changing trends.		Drives creative integration of AI across sales channels; pioneers new models for digital engagement.
AI-based User Experience	Knowledge	Knowledge of the potential of AI technology to improve customer experience.	Experienced	Possesses expertise in AI support for customer service enabling full use of standardization and personalization.
	Skills	Ability to efficiently deliver products to customers using AI.		Is an expert in using AI to make services more efficient.



		Ability to offer tailored products to customers based on AI suggestions.		Based on the recommendations of AI, develops a personalized offer that exactly matches the customer's expectations.
		Ability to employ AI to generate personalized recommendations for customers.		Creates rules for AI offering personalized recommendations to customers.
	Attitudes	Orientation towards improving customer experience with AI and critical evaluation of recommendations proposed by AI.		Is strongly committed to improving customer service processes using AI while manifesting high sensitivity to the needs and AI knowledge of diverse customer groups.
Responsibility for AI-generated content and decisions	Knowledge	Knowledge of the various implications of AI use affecting organizational stakeholders.	Experienced	Is an expert on the short- and long-term implications of applying AI to diverse organizational stakeholders.
	Skills	Ability to assess the ethical implications of AI-related actions and decisions.		Assesses the multiple ethical implications of complex processes and individual decisions facilitated by AI and identifies opportunities for change to address ethical challenges.
		Ability to critically analyze recommendations created by AI in the light of social responsibility.		Is an expert in the critical analysis of AI-made recommendations in terms of the well-being of the various groups associated with the organization and explains their causes.
		Ability to predict the risks of unintended interpretation of AI-generated content and propose remedial solutions.		Examines in detail the risks associated with interpreting AI-generated content and proposes a variety of remedies.
	Attitudes	Sensitivity to ethical issues in the context of AI use and a sense of responsibility for AI-related decisions.		Is characterized by particular attention to ethical issues and responsibility in working with AI.
Teamwork with AI	Knowledge	Understanding of AI's role in teamwork, basic AI concepts, and ethical considerations in group settings.	Advanced	Explains how AI augments team processes (e.g., coordination, communication, workflow optimization).
	Skills	Ability to collaborate with AI and humans, leverage AI for project management, and foster inclusive teamwork.		Integrates advanced AI tools for project management, decision support, and cross-functional collaboration.
		Ability to interpret and act on AI-generated insights in a team context.		Validates AI recommendations, facilitates group reflection on AI-driven decisions.
		Ability to manage digital tools and address digital inequalities in teamwork.		Drives initiatives to eliminate digital inequalities in AI-enabled teams.

	Attitudes	Openness, inclusivity and ethical responsibility in human-AI teamwork.		Actively promotes inclusive, transparent, and ethical AI collaboration, supports team learning.
Digital safety and security in the context of AI	Knowledge	Knowledge about the risks of using AI in marketing and methods of protecting against them.	Experienced	Is an expert in protecting people and data from the adverse effects of AI use in various areas of marketing.
	Skills	Ability to obtain information about the methods of processing organizational data (including customer data) by AI and the associated risks.		Compares information on how different AI tools process data and identifies those associated with the least risk.
		Ability to apply and improve procedures and tools to protect data from external threats (e.g. unlawful use of data submitted to an AI. tool) in the context of AI-supported processes.		Applies, proposes improvements and development of new procedures and tools to maintain data integrity in work with AI.
		Ability to apply and improve procedures and tools to protect data from internal threats (e.g. disclosure of passwords securing access to an AI tool used by the organization) in the context of AI-supported processes.		Applies, proposes improvements and develops new procedures and tools to mitigate the risk of AI-related internal threats.
	Attitudes	Caution and prudence in submitting organizational data for processing by AI and interpreting recommendations formulated by AI.		Is sensible and cautious in using AI, and tends to choose AI tools based on both safety and efficiency.

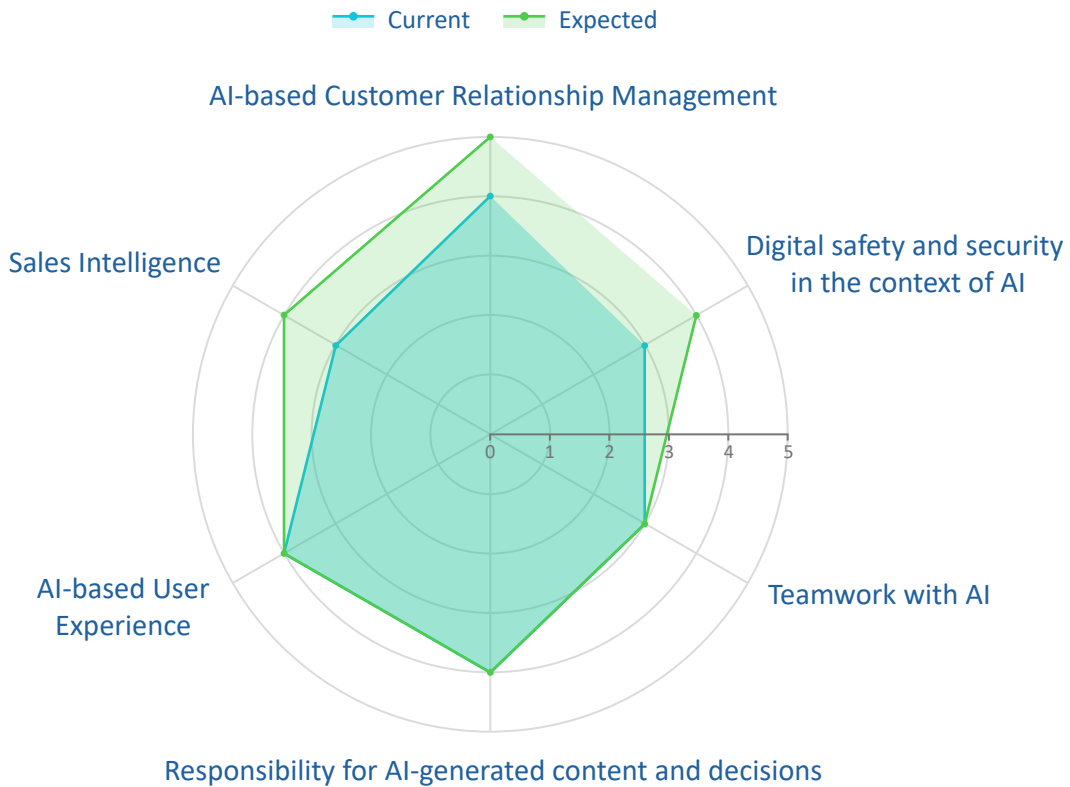
Source: own elaboration on AI-Driven Marketing Competency Framework basis



Based on such a prepared competency profile, InfiniBrand can identify competency gaps by comparing the actual competency levels demonstrated by employees or job candidates with the required levels for specific positions.

Competency diagrams serve as the most effective visual tools for presenting and analyzing these gaps.

Competency Gap – Customer Relationship Manager



Source: own elaboration

Table 4. Customer relations manager competency gaps

Competency	Expected level	Current level	Competency gap
AI-based Customer Relationship Management	Proficient - 5	Experienced - 4	-1
Sales Intelligence	Experienced - 4	Advanced - 3	-1
AI-based User Experience	Experienced - 4	Experienced - 4	0
Responsibility for AI-generated content and decisions	Experienced - 4	Experienced - 4	0
Teamwork with AI	Advanced - 3	Advanced - 3	0
Digital safety and security in the context of AI	Experienced - 4	Advanced - 3	-1

Source: own elaboration

Such an identified competency gap enables the organization to design and implement targeted actions to address and develop the missing competencies. These actions may include tailored training programs, mentoring, job rotation, cross-functional project assignments, or the recruitment of specialists with the required skills.

4.2. Competencies needed to find a way in AI-dominated business landscape: a study of mochi with matcha project

The interactive agency is tasked with designing and executing a creative social media campaign to promote mochi with matcha. Key responsibilities include harnessing social listening to identify trends, producing tailored visual and written content, and coordinating AI-powered community interactions. The project aims to maximize reach, generate buzz, and drive targeted engagement while ensuring brand authenticity.

The analysis of this project is structured into three competency areas: Data Analysis, Strategy, and Operations. Each area is presented in a unified format consisting of two aspects of marketing task: work transformation, which explains how AI changes the execution of this task, and illustrative example of its practical application. This structure ensures clarity and provides a systematic view of how AI-driven competencies support the implementation of the campaign.



Data Analysis

- 1. Marketing task:** Monitoring of consumer opinions and identification of early signals of emerging trends or potential reputational risks
 - **AI work transformation:** Automated Social Listening - AI tools crawl thousands of posts, comments, and hashtags about “mochi” and “matcha” across platforms (Instagram, TikTok, Facebook) and instantly analyze sentiment.
 - **Example:** Instead of manually searching for customer feedback, an analyst uses Monkey Learn or Brand24 to produce a dashboard with trending topics (“best mochi flavor,” “matcha health benefits”) and detects spikes in positive/negative mentions within minutes.
- 2. Marketing task:** Creation of precise target groups and adaptation of campaign content to audience preferences
 - **AI work transformation:** Audience Micro-segmentation: AI segments followers by age, location, preferred flavors, and engagement patterns - automatically clustering “matcha fans,” “vegan mochi lovers,” etc.
 - **Example:** The tool identifies that Gen Z users in urban areas are especially responsive to IG reels showing creative mocha recipes, leading to tailored content.
- 3. Marketing task:** Forecasting of future trends and planning of campaigns that stay ahead of audience expectations
 - **AI work transformation:** Predictive Insights: Machine learning predicts the next trend (e.g., rising popularity of “vegan mochi with matcha” among food bloggers).
 - **Example:** Jasper AI forecasts a week in advance that posts featuring hand-rolled mocha videos will drive engagement due to a surge in matcha DIY searching.

Table 5. The key competencies required to perform data analysis

Competency	KSA	KSA description	Level	Level description
Data Collection for AI	Knowledge	Understanding of data types, sources, collection methods, and AI requirements.	Advanced	Has knowledge of advanced AI model requirements and data integration methods.
	Skills	Identifying relevant data types (demographic, behavioral, psychographic, transactional) and sources (web analytics, CRM, social media, third-party datasets).		Strategically selects and prioritises data types and sources for complex marketing questions.
		Collecting and preparing data for AI applications.		Integrates multiple data sources and designs automated data pipelines using APIs.
		Ensuring the quality and reliability of collected data.		Develops robust quality assurance workflows for large-scale datasets used in AI models.
	Attitudes	Critical thinking toward tasks related to data collection and preparation.		Critically assesses complex datasets and processes by AI models.
AI-based Customer Insights	Knowledge	Understands and applies AI tools and methods to generate integrated insights from customer and market data.	Experienced	Understands ethical, legal, and technical limitations of AI-based customer analysis.
	Skills	Uses and adapts AI tools to collect, analyze, and interpret customer and market data.		Leads cross-functional initiatives using AI for customer and market understanding.
		Integrates segmentation, sentiment, and behavioral predictions for insight generation.		Customizes AI systems for continuous insight generation and testing.
		Designs and communicates actionable insights through visualization and strategic reporting tools.		Oversees validation of AI-derived insights in strategic marketing contexts.
	Attitudes	Values responsible, data-informed decision-making and champions the ethical, inclusive use of AI in understanding and serving customer needs.		Promotes data-driven empathy in customer engagement using AI insights.



Digital Safety and Security in AI Context	Knowledge	Knowledge about the risks of using AI in marketing and methods of protecting against them.	Experienced	Is an expert in protecting people and data from the adverse effects of AI use in various areas of marketing.
	Skills	Ability to obtain information about the methods of processing organizational data (including customer data) by AI and the associated risks.		Compares information on how different AI tools process data and identifies those associated with the least risk.
		Ability to apply and improve procedures and tools to protect data from external threats (e.g. unlawful use of data submitted to an AI. tool) in the context of AI-supported processes.		Applies, proposes improvements and development of new procedures and tools to maintain data integrity in work with AI.
		Ability to apply and improve procedures and tools to protect data from internal threats (e.g. disclosure of passwords securing access to an AI tool used by the organization) in the context of AI-supported processes.		Applies, proposes improvements and develops new procedures and tools to mitigate the risk of AI-related internal threats.
	Attitudes	Caution and prudence in submitting organizational data for processing by AI and interpreting recommendations formulated by AI.		Is sensible and cautious in using AI, and tends to choose AI tools based on both safety and efficiency.

Source: own elaboration on AI-Driven Marketing Competency Framework basis



Strategy

1. Marketing task: Identification of strategic directions for campaigns and optimization of creative concepts

- **AI work transformation:** AI-Driven Campaign Planning — Generative AI recommends strategic moves, such as highlighting trending “user-generated mochi creations” or collaborating with a micro-influencer noticed by the AI as fast-growing (e.g., a food vlogger who recently had viral matcha content).
- **Example:** The strategy team lets the AI propose several campaigns “story arcs” based on last month’s best-performing themes, then selects and refines the top ideas.

2. Marketing task: Personalization of offers and customer experiences based on live behavioral data

- **AI work transformation:** Real-Time Personalization — AI systems (such as Dynamic Yield) analyze live data and automatically personalize offers to online followers, sending a “special discount” on matcha mochi to fans who engage with Instagram polls.
- **Example:** AI detects that users who watch short-form matcha recipe videos on TikTok are more likely to purchase desserts in the evening, so the system automatically delivers time-sensitive discount codes for matcha mochi during peak activity hours.

3. Marketing task: Detection of reputational risks and initiation of rapid response protocols

- **AI work transformation:** Ethical/Emergency Response — AI monitors for potential PR issues, like if there’s a sudden spike in negative sentiment due to a recall, alerting the team immediately.
- **Example:** The manager is notified in real time and can trigger rapid, human-led crisis communications.

Table 6. The key competencies required to perform strategic tasks

Competency	KSA	KSA description	Level	Level description
Developing AI-based product/service	Knowledge	Knowledge of AI technologies and their application in product/service development.	Experienced	Has thorough knowledge of advanced AI technologies, ethical considerations, and cybersecurity implications in product/service development.
	Skills	Ability to design and develop AI-based products or services.		Designs comprehensive AI-based products/services with advanced security features.
		Ability to implement AI-driven cybersecurity and reputation protection features.		Identifies patterns of behavior and strategies used by attackers and implements countermeasure mechanisms.
		Ability to design pricing and monetization models for AI-based products and services.		Creates value-capture systems that balance AI automation benefits with transparent value exchange.
Attitudes	Creative enhancement and refinement of AI-generated content.	Implements creative product concepts combining traditional functions and AI into working product/service functionality.		
Managing AI-based value	Knowledge	Knowledge of AI monetization strategies and methods for translating technological capabilities into measurable business value in the context of increasing technological democratization and new privacy expectations.	Experienced	Has thorough knowledge of strategic value creation through AI, integrating hybrid decision-making models and privacy as a brand value.
	Skills	Ability to create business value generated by AI, considering democratic access to technology and growing awareness of data privacy.		Designs models employing no-code AI solutions and contextual personalization.
		Ability to present AI-based products/services to clients and increase their technological awareness.		Designs client product/service implementations that allow customers to fully understand the value of innovative product features.
		Ability to measure and demonstrate return on AI investments to various stakeholders.		Develops frameworks for measuring strategic value creation through AI while accounting for privacy considerations and accessibility.

	Attitudes	Orientation toward innovative monetization models respecting paradigms of privacy and transparency.		Cultivates a holistic view of AI-based value that treats privacy as a fundamental business asset and technological accessibility as a strategic priority.
Sales Intelligence	Knowledge	Understanding of AI-driven sales intelligence tools, data sources, and their impact on sales processes.	Proficient	Has comprehensive knowledge of AI-driven sales and future trends (e.g., digital rebellion, data sovereignty).
	Skills	Ability to leverage AI to identify prospects, personalize offers, and support negotiations.		Leads innovation in AI sales intelligence, sets standards for ethical, creative, and strategic AI use in sales.
		Ability to analyze and act on AI-generated sales insights.		Mentors others in advanced sales analytics, ensures AI insights align with business and ethical goals
		Ability to ensure data quality and security in the sales process.		Champions secure, transparent, and fair use of data in sales, influences policy and regulation.
Attitudes	Innovating in the use of AI for sales advantage and adapts to changing trends.		Inspires industry-wide innovation in AI sales intelligence, redefines best practices in the face of digital rebellion.	

Source: own elaboration on AI-Driven Marketing Competency Framework basis



Operations

- 1. Marketing task:** Optimization of content publishing times to maximize audience engagement
 - **AI work transformation:** AI-Driven Scheduling — instead of manually planning posts, AI (like Hootsuite’s AI engine) schedules content at the exact times followers are most active.
 - **Example:** The system detects that short-form matcha tutorial videos achieve 30% higher engagement on Sunday evenings and automatically reschedules content to those time slots.
- 2. Marketing task:** Adjustment of campaign content to multiple platforms, languages, and cultural contexts
 - **AI work transformation:** Automated Content Adaptation — AI rewrites captions for different platforms or suggests hashtags (e.g., “#mochimonday,” “#matchalove”). It can also localize content — generating Japanese captions or adapting posts to Polish holidays for targeted campaigns.
 - **Example:** A single promotional post is automatically transformed into platform-specific formats: an Instagram reel with playful captions, a TikTok short with trending hashtags, and a localized Facebook post in Polish featuring holiday references.
- 3. Marketing task:** Provision of instant customer support and facilitation of interactive engagement
 - **AI work transformation:** AI Chatbots — powered by tools like Intercom, chatbots answer common questions (“Where to buy this matcha mochi?”), resolve complaints, or direct users to recipes, 24/7.
 - **Example:** A customer asking about the nearest store selling matcha mochi is guided by a chatbot that instantly shares geolocated shop addresses and links to online purchase options.

Table 7. The key competencies required to perform operations

Competency	KSA	KSA description	Level	Level description
AI-based Customer Relationship Management	Knowledge	Understands and applies AI tools and methods to generate integrated insights from customer and market data.	Experienced	Understands ethical, legal, and technical limitations of AI-based customer analysis.
	Skills	Uses and adapts AI tools to collect, analyze, and interpret customer and market data.		Leads cross-functional initiatives using AI for customer and market understanding.
		Integrates segmentation, sentiment, and behavioral predictions for insight generation.		Customizes AI systems for continuous insight generation and testing.
		Designs and communicates actionable insights through visualization and strategic reporting tools.		Oversees validation of AI-derived insights in strategic marketing contexts.
Attitudes	Values responsible, data-informed decision-making and champions the ethical, inclusive use of AI in understanding and serving customer needs.	Promotes data-driven empathy in customer engagement using AI insights.		
Working with agents	Knowledge	Theoretical and practical understanding of autonomous systems, virtual agents, robotics, and their applications within marketing contexts.	Experienced	Comprehensive strategic understanding of cutting-edge developments, ethical implications, and best practices related to autonomous marketing agents and their deployment.
	Skills	Ability to conceptualize, design, and develop autonomous systems, robots, or virtual agents specifically tailored for marketing-related tasks.		Strategically leads complex projects to design and develop highly advanced and autonomous agents or robotic solutions for sophisticated marketing scenarios.
		Capability to successfully deploy, integrate, manage, and oversee autonomous marketing agents within operational environments.		Oversees large-scale deployment and strategic integration of marketing agents within comprehensive marketing ecosystems, managing cross-functional teams and resources.
		Competence in continuously tracking, assessing, and refining the performance and effectiveness of autonomous agents to optimize marketing outcomes.		Leads advanced monitoring, evaluation, and optimization initiatives for marketing agents, driving significant improvement in organizational marketing effectiveness.

	Attitudes	Mindset towards innovation, experimentation, collaboration, adaptability, ethical responsibility, and proactive exploration of new agent-based marketing solutions.		Assumes accountability for strategic decision-making in autonomous agent development, advocating for innovation, ethical responsibility, and long-term effectiveness in agent use.
Digital Safety and Security in AI Context	Knowledge	Knowledge about the risks of using AI in marketing and methods of protecting against them.	Advanced	Has in-depth knowledge of AI-related risks and methods to protect against them.
	Skills	Ability to obtain information about the methods of processing organizational data (including customer data) by AI and the associated risks.		Collects information about AI data processing and related risks from various sources.
		Ability to apply and improve procedures and tools to protect data from external threats (e.g. unlawful use of data submitted to an AI tool) in the context of AI-supported processes.		Applies and proposes improvements to the procedures and tools adopted in the company to protect data integrity from external threats related to AI-enhanced operations.
		Ability to apply and improve procedures and tools to protect data from internal threats (e.g. disclosure of passwords securing access to an AI tool used by the organization) in the context of AI-supported processes.		Applies and proposes improvements to the data integrity procedures and tools regarding own and co-workers' work with AI.
	Attitudes	Caution and prudence in submitting organizational data for processing by AI and interpreting recommendations formulated by AI.		Maintains a sensible balance in the use of AI, being oriented towards gaining the benefits of its capabilities while maximizing the security of data and individuals.

Source: own elaboration on AI-Driven Marketing Competency Framework basis

To successfully launch a social media campaign (e.g., for mochi with matcha), teams must master new hybrid human–AI competencies across analysis, operations, and strategy. Potential competency gaps in data or AI literacy, ethical oversight, or collaboration with algorithms constrain campaign effectiveness, so they need to be addressed to enable rapid trend detection, tailored audience engagement, and high-impact content strategy.





5. Recommendations

While our recommendations adopt a comprehensive approach that is suitable for managers to incorporate AI competencies into organizational practices, the preceding sections focus on individual development and team competence acquisition. The new competencies required of marketers extend significantly beyond conventional digital and social marketing skills, necessitating advanced analytical thinking, ethical responsibility, security awareness, and collaborative agility in working effectively with AI-powered tools and systems. Organizations should prioritize developing AI-driven skills while simultaneously transforming routines and processes.



Clear, role-specific AI competencies enhance information management, planning, and implementation capabilities, which in turn correlate with higher organizational performance in marketing contexts. By focusing on competencies that translate AI insights into execution (e.g., personalization, predictive retention), organizations improve customer engagement and customer lifetime value through faster, data-driven decisions.



The competency model establishes a common language for hiring, upskilling, and assessment, aligning training investments with key AI use cases in marketing. It provides a roadmap for AI upskilling initiatives and change management, accelerating adoption and fostering employee confidence in human–AI collaboration. Clear expectations enhance career development and retention by connecting demonstrated AI teamwork skills to advancement in marketing roles.

Below, we provide recommendations on systematically disseminating, codifying, and integrating these competencies into organizational routines to establish a collective knowledge resource that can serve as a sustainable competitive advantage.

5.1. Developing advanced competencies

The following practical recommendations are for collaborative methods to develop advanced competencies:

- Form cross-functional teams including marketing analysts, strategists, creative leads, IT/data experts, and customer support. Collaborative learning promotes knowledge sharing, diverse problem-solving, and practical, hands-on upskilling.
- Identify “change agents” or internal early adopters who excel at using AI tools (such as automated analytics or AI chatbots). Have them mentor other team members.
- Collaborate with HR or L&D to incorporate AI-Driven Marketing competency requirements into recruitment, onboarding, and ongoing employee development programs.
- Join professional marketing groups and specialized online communities or forums to access current content, competency frameworks, and peer support.
- Collaborate with top academic institutions and training companies that provide specialized AI marketing programs.
- Work directly with technology partners (e.g., providers of BI tools, social listening platforms, CRM systems) to schedule in-depth, hands-on training. Technology vendors often offer “train-the-trainer” programs and ongoing support for advanced platform use.
- Engage with peer companies or agencies that excel in AI-driven marketing; participate in knowledge exchanges, site visits, or joint competency projects.

5.2. Transforming organizational routines and processes

By transforming organizational routines and processes, marketers can foster an adaptive, resilient, and high-trust environment where people can leverage AI for innovation, speed, and responsible growth in the marketplace. The practices supporting such routines include:

- Shift from long planning cycles to agile marketing sprints. Empower teams to make rapid, iterative decisions driven by real-time analytics and AI insights.
- Automate repetitive tasks such as data gathering, lead sorting, and customer queries with AI tools, allowing humans to focus on interpretation, creativity, and strategy.
- Redesign team structures and daily routines so humans and AI systems co-create value. Schedule regular check-ins to review and fine-tune AI performance.
- Incorporate data privacy, security measures, and ethical reviews into every process – from campaign launches to customer segmentation.
- Move beyond ad-hoc training by building learning organizations. Make regular upskilling, knowledge sharing, and cross-functional collaboration part of your workweek.
- Integrate “test and learn” routines into campaign operations. Use AI to conduct live A/B tests, rapidly scale successful tactics, and phase out underperforming approaches.
- Clearly define team and individual responsibilities for AI-assisted actions. Make transparent decision-making routines and documentation central to project management.

Project Overview

DIGIT (People and algorithms in organizations: competencies for working in the digital environment) is the NAWA Strategic Partnership project focused on understanding and developing the competencies needed to work with AI and manage AI-enabled work in marketing environments.

The primary objective is to identify and develop the competencies to work with AI in marketing contexts, manage AI-enabled work processes, and adapt to Marketing 5.0 environments.

Authors of the NAWA Report

Anna Ziętek, Doris Antczak, Marcin Gurtatowski, Grzegorz Leszczyński, Maciej Ławrynowicz, all from Poznań University of Economics and Business.

Acknowledgment

NAWA project Number BNJ/PST/2023/1/00082

The report is based on primary and secondary sources, including reports, scholarly articles, and analytical publications that provide additional context and validation of findings. The selection of secondary sources was guided by the following criteria: information quality, broad and diverse coverage across the research, business, and educational sectors, a global perspective on digital trends and their implications, and publication dates between 2020 and 2024 to ensure relevance and up-to-date information.

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Contact:

nawa-digit@projekty.ue.poznan.pl

Cite the report:

Ziętek A., Leszczyński G., Ławrynowicz M., Antczak D., Gurtatowski M., (2025, November). Report on AI Collaboration Competencies in Marketing, <https://doi.org/10.17605/OSF.IO/6NC3B>,