

**ARTIFICIAL INTELLIGENCE AND SUSTAINABLE MARKETING- AN OVERVIEW OF
ADOPTION OF AI IN PRODUCT MANAGEMENT****Dr. Pramila S Patil**

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ABSTRACT:

In this era of sustainable development, organisations are thriving for enhancing and improvising existing marketing strategies. With the advent Artificial Intelligence organisations have been in position to foster sustainable marketing. Consumer preferences for eco-friendly products, personalised engagements, innovative products have created challenges for organisations. AI is revolutionising the industries by having automations, streamlining processes, improving decision-making, and delivering valuable customer insights in product management. This study aims to identify the role of AI in sustainable marketing with special reference to product management. Understanding the role of AI in product management and analysing the cases on the use of AI in product management is one of the core objective of this study. The study is an exploratory research, purely based on secondary data viz-corporate reports, journals, publications and case study analysis. The study concluded that use of AI in product management facilitate the organisations to cater to the ever rising diverse needs of customers and helps to create competitive advantage in the industry.

Keywords: Sustainable marketing, Green marketing, Artificial Intelligence, Product Management.

1. INTRODUCTION

Product management is one of the crucial aspect of modern marketing strategies as also to meet the changing customer preferences and choices in this competitive business world. Adoption of AI in product management is bringing paradigm shifts in the industry by improvising decision-making, automotive production processes and offering products as per customer insights (Uyen Chu, 2025).

With the evolving AI technologies in marketing, their integration in green marketing strategies has a widespread approach towards sustainability. The emphasis on adoption of AI in marketing is significantly associated with green marketing by offering enhanced and sustainable customer engagements (Anitta P John, 2024).

Various AI driven tools from ML (Machine learning) algorithms to predictive analytics and chatbots are the strong foundation of modern marketing operations. Through AI, organisations are empowered with personalised customer offerings, forecasting customer needs, and seamless marketing operations. (Savita et.al, 2025).

AI through Machine Learning enables industries to generate energy efficiency in manufacturing and transportation creating carbon credits. ML not only accelerates renewable energy by forecasting demand and optimum utilising resources, but also gains sustainability.

2. REVIEW OF LITERATURE

Subbulakshmi P, 2024, laid emphasis on undertaking training initiatives for marketers in order to reduce the knowledge gap and get acquainted with the skills for adoption of AI tools. The study also suggested that, providing resources and customised training programs can enable digital marketers to adopt and implement of AI-driven marketing practices.

Vikas Garg et.al 2025, in their unique work on AI and sustainable marketing attempted to apply Systematic Literature (SLR) and Antecedents-Decisions-Outcomes (ADO) methods for the analysis of the sources indexed on Scopus so as to throw light on the trends, changing patterns in adoption of AI in marketing mix. The study could identify that AI driven sustainable marketing enables to offer eco-friendly products thereby building customer trust and loyalty. A. Varshini et.al, 2025, attempted to throw light on the impact of AI powered sustainable marketing on consumer behaviour. They opined that use of AI transforms sustainable marketing by enhancing the resource efficiency, developing eco-friendly products, improvise customer engagements and personalized messaging, etc.

Salima A, 2024, attempted to apply AI through ANN at El-Waha factory's food production plant for estimating production quantities, indicating that the model is reliable, accurate, and effective for forecasting production quantities. Sadyojathappa S 2025, opined that the use of AI analytics provides greater insights into consumer behaviour and preferences, enabling companies to take effective marketing mix decisions. The study revealed

that AI's in-depth consumer behaviour analytics may convince companies to realign their marketing strategies with sustainability initiatives, enhancing customer loyalty.

3. RESEARCH GAP

Previous studies on AI in marketing strategies, green marketing, sustainable marketing has tried to throw light on the evolution of AI based marketing operations in general. Very few studies have been undertaken on the adoption of AI in production management specifically with regards to sustainability. This research gap triggered the intent of undertaking a review of AI and sustainable marketing with reference to product management.

4. RATIONALE OF THE STUDY

The study emphasises on the role and significance of adoption of AI in various marketing practices especially product management dimensions like product research, customer insights, product development, resource mobilisation, customer engagements, etc.

5. OBJECTIVES OF THE STUDY

- i. To identify the role of AI in sustainable marketing with special reference to product management.
- ii. To have an overview on the use of AI in product management.

6. RESEARCH METHODOLOGY:

The study is an exploratory research, purely based on secondary data viz-corporate reports, journals, publications, case analysis, etc. The scope of the study is confined to AI and its application in product management throughout the globe. The findings are based on the observations derived from analysing few selected cases with regards to adoption of AI tools in product management.

7. ADOPTION OF AI IN PRODUCT MANAGEMENT

The Mc Kinsey 2024 survey found that the AI adoption in industries has raised to seventy-two percent from fifty percent in 2023. As per the survey in 2023, the AI adoption didn't even manage to reach beyond sixty percent in any of the regions, whereas, the 2024 survey reveals that the organisations using AI are found to be more than 66 percent. The Mc Kinsey 2024 survey indicates that the adoption of AI has found to be increased in professional services. Companies are using AI in more parts of their business, nearly 50 percent of respondent organisations have adopted AI in most of the business functions compared to less than thirty percent of respondent organisations contacted in previous year. Uyen Chu, 2025, in his report on adoption of AI in product management has emphasised on the role of AI based on real examples and cases from the industry, quoting the organisation and client engagements.

8. BENEFITS OF AI ADOPTION IN PRODUCT MANAGEMENT

9.1. Market Research

Understanding the ever changing behaviour is a greatest challenge in this highly competitive market. Also the scope of marketing activities is wide and large, with large data sets for analysing the trends in different markets spread throughout the world. AI helps organisations in collecting and analysing the large sets of data with the use of various data analytics.

9.2. Product Modification and Innovation

AI assists organisations to modify the products as per the needs and wants of the customers. Extensive data analysis helps to identifying market gaps and unmet demands of the customers. AI also facilitates prototyping and product testing by simulating the different product combinations using customer feedback, thereby ensuring that the customers' expectations are met in record time. Innovative approach in product modifications helps in creating competitive advantage in the market.

9.3. Strategic Choices and Decision making

AI helps the organisations to gain accurate insights from large data sets. The changing buying behaviour and buying trends can be proactively forecasted with the use of AI by analysing the historical data. Thus facilitating the product managers to make strategic choices and prompt decision making in designing and offering improvised products as per market trends.

9.4. Smoother Product Development

AI facilitates smooth functioning of routine tasks of product management such as resource mobilisation, coordination with the team, etc, thereby allowing production managers to focus on core responsibilities pertaining to enhancing the processing of product development cycle and faster delivery.

9.5. Customer Delight

AI analyses big data sets through multiple sources to identify the tastes, preferences, likes, dislikes of consumers. This facilitate production manager in efficient product decisions aligned with maximum customer satisfaction. AI also enables product customisation offering product feature in alignment with the recommendations of individual users resulting into higher customer delight and customer loyalty.

9.6. Resource Mobilisation

The adoption of AI tools in analysis of the historical data leads to cost benefit analysis facilitating the budget allocation, resource allocation, project completion timeline, etc. Adoption of AI facilitates optimum utilisation of available resources thereby meeting the targets and goals in stipulated time.

10. Cases on Adoption of AI in Product Management

AI Tools like Natural Language Processing (NLP) and generative AI help in analysing the customer responses, generate creative and innovative ideas, and draft customer experiences, enabling product managers to take timely decisions, timely investments and optimise the resources.

Following are few selected cases on adoption of AI in product management:

10.1. Market Research

Research and development activities pertaining to consumer research, product research, market research, competition can be effectively conducted through the adequate use of various AI tools.

i. Amazon

Amazon applies AI technology like machine learning and predictive analytics to identify tastes and the preferences of customers based on the browsing data and past purchases experiences of the customers.

ii. Coca-Cola

AI tools like NLP and AI-driven analytics helped Coca-Cola with strategy adjustments and new product development research After identifying consumer demand online like Coca-Cola successfully launched its new product Cherry Sprite in the market.

10.2. Customer engagements and loyalty

In this era of information technology, the customer interventions have become smoother and convenient, additionally the use of AI generates maximum customer engagements and satisfaction.

i. Netflix

Maximum content viewed on Netflix comes from AI-driven recommendations based on users' viewing history and preferences, contributing to a more engaged and loyal user base.

ii. Duo lingo

Duo lingo through AI application makes learning experiences more convenient and easier by identifying learning constraints, scheduling the sessions on individual basis. AI ensures personalization leading to reinforcement and smoother language progression.

iii. Spotify:

Spotify's algorithms extract the data feed from its users, giving them playlists like "Discover Weekly," enhancing personalised customer experiences.

10.3. Product Development

AI enhances product development by helping product managers align organisational goals with the customer preferences. By analysing historical data and identifying buying instincts, AI assists organisations to deliver products generating higher values to users.

i. Productboard

Productboard assists their client the Zoom platform to provide customised features in their products with inbuilt scheduling features thereby enhancing customer experiences.

ii. Tech Mahindra

Tech Mahindra initiated in thought leadership through its AI featured next-gen PLM (Product Lifecycle Management) technology platform and cloud-based workflows for effective product lifecycle management.

10.4. Optimize Pricing**i. Airbnb**

Airbnb launched its pioneering hospitality services with advanced features of ML for analysing booking trends creating competitive advantage in terms of pricing, strategic locations, win-win situation to both: the host and the guests.

ii. Tech Mahindra

Tech Mahindra client a leading UK confectionery company was suffering with issues like high cloud costs and inefficient performance across its more than 25 database servers. Tech Mahindra's intervention through Cloud BlazeTech Framework helped its client with improved database performance and also reducing the cloud costs.

10.5. Product Analytics and Data-Driven Decision Making

AI tools in product analytics help product managers to understand the customer insights and customer engagements. Tracking user behaviour, AI can identify areas where users switch on and off, struggle with new product features, or fail to adopt key functionalities allowing teams to act for enhancing the user experience.

Example:

- i. Mixpanel helps companies like Uber and Airbnb to study the user behaviour and optimize their product offerings. According to Mixpanel, their analytics helped Kast improve user retention by 50%.
- ii. Tech Mahindra partnered with AWS to develop an AIOps solution framework incorporating GenAI capabilities.

11. CONCLUSION

The study found that AI in product management facilitate the organisations to cater to the ever rising diverse needs of customers and helps to create competitive advantage in the industry. AI is revolutionising the industries by having automations, streamlining processes, improving decision-making, and delivering valuable customer insights in product management. As AI continues to evolve, product managers must stay informed and adapt to emerging technologies, ensuring they remain competitive and maximize the value AI brings to product development and management.

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