

Product Management: Building AI-Powered Products

Transformative Power of AI

- AI is driving **transformational shifts** across automation, resource optimization, personalization, data insights, market trend identification, and business growth.
 - It enables organizations to become more **innovative**, **efficient**, and **scalable**.
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♦ Real-World AI Applications

- **AI-powered digital assistants** (e.g., Alexa, Siri) are improving home management and enhancing users' quality of life.
 - **AI-enabled products** automate repetitive tasks, allowing teams to reallocate human resources toward strategic priorities.
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♦ AI in Marketing & Strategy

- AI helps businesses **identify ideal product segments**.
 - It supports the development of **targeted marketing strategies** and **successful marketing campaigns** based on user data and trends.
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♦ Customer-Centric AI Considerations

- Customers have **diverse backgrounds and expectations**.
 - It's important to **address fears and misunderstandings** about AI, such as privacy concerns or fear of job replacement.
 - **Sharing real-world testimonials and success stories** builds trust and credibility with potential buyers.
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♦ Product Manager Responsibilities in the AI Era

- Stay informed about the **latest generative AI applications**.
 - Prepare for wider **non-technical user adoption** of AI tools.
 - Address critical issues such as:
 - **Data management**
 - **Privacy and bias risks**
 - **Ethical implications**
 - Foster a **data-driven decision-making culture** within the team.
 - Ensure **data quality, integrity, and accuracy** throughout the product lifecycle.
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Glossary①:

Term	Definition
AI Advocacy	Ability to promote AI initiatives, foster understanding, consensus, and alignment.
AI Algorithms	A set of rules that enables computers to learn, analyze data, perform tasks, and make decisions.
AI Bias	Bias in AI due to human-prejudiced training data, resulting in skewed outcomes.
AI Engineer	Develops and trains AI algorithms, combining skills in programming, data science, and engineering.
AI Product Manager	A PM with product experience and understanding of AI development workflows.
AI Prompt	A text input used to guide AI to generate content like text, images, or audio.
AI Strategic Vision	Understand how AI aligns with business goals and user needs.

AI Translation	Explains technical AI concepts in plain language to stakeholders.
AI User-Centric Mindset	Ensures AI products solve real user problems and deliver value.
Artificial Intelligence (AI)	Computer systems that simulate human intelligence like vision, speech, and translation.
Artificial Intelligence Understanding	Ability to understand how AI works and where it applies.
Business Acumen	Ability to understand and respond effectively to various business contexts.
Business Analyst	Performs needs assessments and identifies product opportunities.
Business Case	A justification document outlining cost-benefit analysis for a product.
ChatGPT	A chatbot by OpenAI capable of generating text with controllable length and style.
Collaboration	The process of group problem-solving and idea generation.
Communications	Clear and purposeful exchange of thoughts, data, and ideas.
Conceive	The initial phase of product management where new ideas are evaluated.
Continuous Learning	Staying up-to-date with AI trends and technologies.
Copilot	A conversational AI assistant developed by Microsoft.
Customer Empathy	Understanding the needs and pain points of customers.
Customer Segmentation	Dividing a market into groups most likely to use your product.

Data Engineer	Collects, manages, and transforms raw data into usable formats.
Data Pipelines	Processes for collecting, transforming, and delivering data.
Data Quality	Measures of data accuracy, completeness, consistency, and timeliness.
Data Scientist	Uses data to explain patterns and support business decisions.
Data-Driven Decision-Making	Using KPIs and analytics to generate actionable insights.
Deep Learning	A type of machine learning that uses multi-layer neural networks for feature extraction.
Delegation	Assigning tasks to the right people and managing their outcomes.
Development Teams	Teams that build products based on stakeholder needs.
DevOps Engineer	Implements automated tools for deploying AI models efficiently.
Experimentation	Testing and refining AI models and algorithms.
Generative AI	AI that generates original content (text, images, code) based on learned patterns.
Key Performance Indicators (KPIs)	Quantifiable metrics to assess business or operational success.
Machine Learning	A field of AI focused on simulating human learning via data and algorithms.
Minimally Viable Product (MVP)	The simplest version of a product that still delivers core value to users.
Persona	A fictional user profile that represents a target audience.

Product Concept	An early document describing how a product solves a market need.
Product Management	Managing the entire product lifecycle from ideation to retirement.
Product Owners	Writes user stories and manages the product backlog in Scrum.
Product Roadmap	A visual plan that outlines product direction and milestones.
Product Vision	The aspirational future state that aligns product outcomes with business goals.
Programmatic Morality Bias	Cultural values that influence AI responses, causing biased behavior.
Retrospective	Review meeting to reflect on past work and improve future performance.
Return on Investment (ROI)	Financial metric comparing value gained to investment cost.
Risk	Potential events that could affect a product positively or negatively.
Risk Mitigation	Actions taken to reduce the likelihood or impact of risks.
Sample Bias	When data samples don't represent the entire target population.
Scrum Masters	Coaches that ensure teams follow Scrum practices effectively.
Silo	Organizational unit (e.g., finance, marketing) that may operate in isolation.
SMART Goals	Goals that are Specific, Measurable, Achievable, Relevant, and Time-bound.
Strategic Thinking (Planning)	Planning market-driven product launches with long-term impact.

Strong AI	Theoretical AI capable of performing any human task independently.
Subject Matter Expert (SME)	An individual with specialized domain knowledge or technical skill.
Super AI	Hypothetical AI surpassing human capabilities in all aspects.
System Architect	Designs the overall system and recommends the best-fit AI technologies.
Tuckman Ladder	A team development model (Form, Storm, Norm, Perform).
Use Case	A specific scenario where a product or service is applied.
Weak AI	The only current form of AI that performs narrow tasks efficiently.

Glossary②:

Term	English Definition
Agile	A flexible project management approach that uses user stories and a product backlog, building the product through iterative development.
AI Model	A program trained on specific datasets to identify patterns or make decisions without human intervention.
Alpha Testing	Internal testing conducted before product launch to identify and fix bugs or defects.
Beta Testing	A pre-launch test phase where potential users try the product and provide feedback.

Business Case	A document that justifies product development by presenting a clear cost-benefit analysis.
Canva	An AI-powered tool that offers a free image generation feature.
Chatbot	A software application that simulates human conversation, commonly used in online services.
ClickUp	An AI tool that supports project management, team collaboration, and productivity enhancement.
Commercialize	To manage or develop a product with the goal of generating profit.
Conservatives	In Roger's Diffusion of Innovation model, these are risk-averse customers who require thorough evaluation before making a purchase decision.
Data	A collection of values or symbols that represent quantities, qualities, statistics, or facts, used for further interpretation and analysis.
Data Management Stage	An AI product development phase focused on identifying required data, its usage, and expected outcomes.
Decline	The final phase of the product lifecycle when maintaining the product is no longer viable, leading to retirement planning.
Delivery Phase	The sixth phase in the product management lifecycle where the product is launched and enters the growth, maturity, and decline stages.
Deployment Stage	A stage in AI product development where infrastructure is built to implement AI models for user-facing features and functions.
Develop Phase	The third phase in the product management lifecycle, involving major investment in product design, creation, and testing.

Digital Assistant	Also known as a predictive chatbot; an advanced program that interacts with users through simulated conversation.
Early Adopters	In Roger's model, customers who are open to trying new products and willing to take risks.
Firewalls	Security systems designed to block unauthorized access while allowing permitted communication.
Functionality	A key aspect of customer satisfaction referring to the features and capabilities provided by a product.
Fuzzy Front End	The initial "conceive" phase of product management where product ideas are still unclear and evolving.
Growth	The first stage of the product lifecycle, where the product enters the market and sales begin to rise.
Ideation or Innovation Stage	The initial stage of AI product development focused on defining the product, its benefits, and associated costs.
Innovators	The earliest customer group in Roger's model, willing to try unproven products.
Jam GPT	An AI tool that assists product managers by detecting bugs and offering solutions.
Launch Phase	The fifth phase in the product management lifecycle, covering activities before and after the product launch.
Lean	A mindset focused on delivering needed value using fewer resources and minimizing waste.
Market Requirements Document (MRD)	A document defining market-specific needs and identifying a market problem or gap.
Maturity	The second stage of the product lifecycle, where the product generates peak profitability and requires maintenance.
Mock-up	A non-functional representation of a product used to demonstrate appearance or design concepts.

Notion	An AI note-taking tool that helps product managers summarize tasks and reduce time spent on routine documentation.
Performance	A measure of how efficiently a product delivers its intended functions and response time.
Plan Phase	The second phase in the product management lifecycle where delivery, marketing strategy, and business case details are developed.
Pragmatists	In Roger's model, customers who require a justified cost-benefit analysis before adopting a new product.
Product Lifecycle	The full journey of a product from market introduction through growth, maturity, and eventual decline.
Product Requirements Document (PRD)	A document that outlines the proposed solution to a market problem, including intended features and functionalities.
Production-Grade AI Model	An AI model suitable for use in real-world business scenarios with consistent and sustainable performance.
Product Management Lifecycle	The end-to-end process of managing a product from conception through retirement.
Prototype	A working model built for demonstration and feedback collection to validate business needs.
Qualify Phase	The fourth phase in the product management lifecycle focused on market validation and launch preparation.
Reliability	A component of customer satisfaction referring to a product's ability to perform consistently without failure.
Research and Development Stage	A phase in AI product development involving experiments to determine the most effective model.
Retire Phase	The final phase in the product management lifecycle, during which the product is removed from the market.

Robotics	A field of technology focused on the design, construction, and application of robots.
Scrum	The most widely used Agile methodology for iterative project management.
Sentiment Analysis Algorithms	Algorithms that detect the emotional tone of text by analyzing words and their context.
Soft Launch	A limited release of a product to a small user group to gather feedback before a full launch.
Soft Skills	Non-technical skills such as communication, persuasion, problem-solving, and decision-making.
Supportability	Refers to the level of customer support and assistance available for a product.
Usability	A measure of how easy a product is to learn and use.
Value Proposition	A concise explanation of the value a product offers compared to competitors.
Wireframe	A visual guide that represents the skeletal layout and structure of a product's interface.