

Can **GenAI** really transform **Product** **Development** and **Market** **Research?**





The Crowdless Future? GenAI is shaping the future of crowdsourcing.

A collaborative future where human creativity and AI efficiency combine to solve complex organizational challenges.

Leonard Boussieux, Jacqueline N. Lane, Miaomiao Zhang, Vladimir Jacimovic, Karim R. Lakhani

August, 2023

[Source](#)

Researchers compared generative AI's capability for innovation against human crowdsourcing, focusing on sustainable and circular economy solutions.

The study featured a diverse range of global participants alongside AI-generated solutions, with GPT-4 programmed to simulate various levels of human expertise.

A group of 145 experts reviewed 234 solutions, both human and AI-generated. Human ideas excelled in novelty, while AI solutions were superior in environmental and financial impact.



The Cybernetic Teammate: A Field Experiment on Generative AI Reshaping Teamwork and Expertise

AI enhances individual performance to team levels, reshaping collaboration dynamics in knowledge work.

Fabrizio Dell'Acqua, Charles Ayoubi, Hila Lifshitz-Assaf, Raffaella Sadun, Ethan R. Mollick, Lilach Mollick, Yi Han, Jeff Goldman, Hari Nair, Stew Taub, Karim R. Lakhani

March, 2025

[Source](#)

Harvard researchers studied 776 professionals at Procter & Gamble to examine AI's impact on teamwork and innovation.

AI-enabled individuals matched team performance without AI, bridging expertise silos by producing integrated solutions across professional backgrounds.

AI also enhanced emotional engagement, suggesting it can replicate both collaborative benefits and the motivational roles of human teammates.

These findings urge reevaluating collaboration models to unlock AI's potential in accelerating innovation and redefining team dynamics.



Using LLMs for Market Research

AI tools will play a crucial role in understanding consumer behavior and preferences.

*James Brand, Ayelet Israeli,
Donald Ngwe*

March, 2023

[Source](#)

Researchers queried GPT-3.5 with hundreds of survey prompts about products like toothpaste and laptops.

GPT competently simulated consumer responses in market research. Responses aligned with established economic theories, such as higher income correlating with greater price tolerance, and with consumer behavior patterns.

AI can replace or supplement traditional market research methods and is capable of providing bias-free insights into consumer behavior.





Learning to use the bicycle for the mind: solving the knowing-doing gap with Generative AI.

Just as learning to ride a bike can be a challenging and sometimes painful process, so is adapting to GenAI.

Karim Lakhani

October, 2022

[Source](#)

Why do smart people bounce off of Generative AI tools? GenAI systems often disappoint users in practical applications. A majority acknowledge the transformative impact of GenAI on their careers and industries, but less than 10% utilize these tools regularly.

This disparity is called the "Generative AI Knowing-Doing Gap": it's difficult to effectively integrate new technologies like GenAI into everyday practices.

The process involves overcoming embarrassment, enduring physical and ego bruises, and requiring instruction and practice. These learning experiences, while difficult, are essential for mastering new skills and technologies.

Active engagement and continuous learning is necessary to harness the full potential of GenAI in various fields.



Navigating the Jagged technological frontier AI boosts **knowledge worker productivity.**

GenAI boosts knowledge workers' productivity and quality.

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September, 2023

[Source](#)

Harvard and BCG collaborated on a study evaluating 758 consultants to understand AI's effect on their performance.

ChatGPT-4 significantly enhanced task performance, with a 25% increase in speed, 40% improvement in human-rated performance, and 12% rise in task completion.

Users are divided into "Centaur" (who divide tasks between themselves and AI) and "Cyborgs" (who integrate AI into their workflow).

AI's efficacy varies across different tasks. Must assess the value of diverse human-AI configurations for specific tasks within knowledge workflows.



Out of One, Many: Using language models to **simulate** **human samples.**

Introducing the
concept of
'algorithmic
fidelity:' AI can
accurately
emulate diverse
human attitudes
and behaviors.

*Lisa P. Argyle, Ethan C. Busby,
Nancy Fulda, Joshua Gubler,
Christopher Rytting, David
Wingate*

September, 2022

[Source](#)

Researchers used GPT-3 to simulate human groups for social science research and understand human behavior.

GPT-3 created 'silicon samples' to compare against human response patterns.

GPT-3 can mirror the complex interplay of ideas, contexts, and attitudes found in human responses.

A significant shift in social science research methodology: using AI for a more comprehensive and efficient study of human social and political behaviors.



Towards the “Digital Me”: A Vision of Authentic Conversational Agents Powered by Personal Human Digital Twins

By integrating dynamically updated personal data with LLMs, GenAI Personas can mirror an individual's conversational style, memories, and behaviors.

Lluís C. Coll, Martin W. Lauer-Schmaltz, Philip Cash, John P. Hansen, Anja Maier

June, 2025

[Source](#)

Human Digital Twins (HDTs) have evolved beyond static, data-driven models.

This work presents a novel HDT system architecture that combines LLMs with dynamic personal data to create interactive, evolving digital personas. Key components include context-aware memory retrieval, neural plasticity-inspired consolidation, and adaptive learning.

Our system mirrors an individual's conversational style, memories, and behaviors—adapting to different interlocutors and incorporating lived experiences.

While enabling more lifelike digital counterparts, this also raises ethical concerns around privacy, accountability, and digital identity. We showcase the architecture, highlight its capabilities, and outline paths for responsible HDT development.