

The Practical Future of Food Tech

A Deep Dive into AI Opportunities



The next frontier in food tech innovation isn't what you think

The modern food landscape is designed to inspire exploration. Thanks to the rapid evolution of social media and digital tools, consumers today have access to more ideas about what to buy, eat and cook than at any other point in history.

Social feeds are filled with viral recipes and restaurant recommendations. Retail shelves feature an ever-expanding stream of new product launches. Recommendations tailored to dietary goals, flavor preferences, and culinary curiosity are just a few clicks away.



But beneath this culture of discovery lies another, often forgotten reality: **food is ultimately grounded in deeply routine tasks**, where meal planning, grocery shopping and cooking are squeezed between work, family responsibilities, health needs and financial pressures.



Daily food decisions are driven by far more than digital discovery

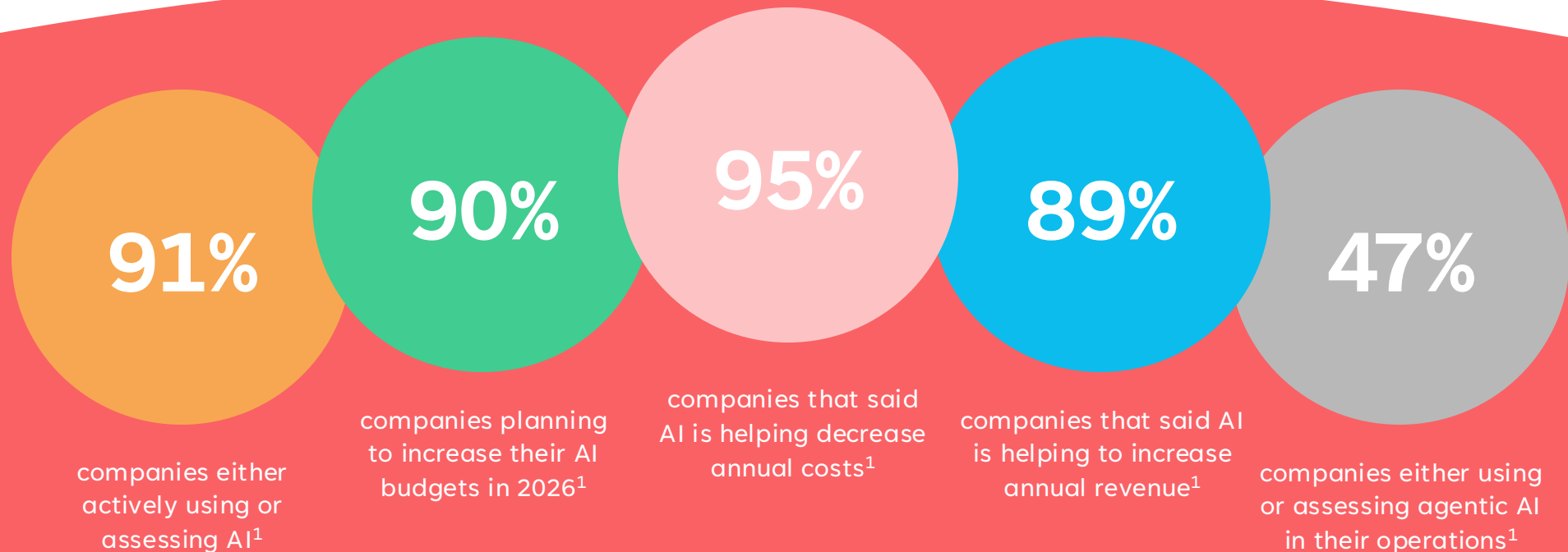
Although consumers enjoy exploring food culture—and leveraging technology to do so—their aspirational desires ultimately collide with the everyday reality of feeding themselves and their families.

For most consumers, food choices are shaped by a series of practical constraints: affordability, availability, busy schedules, health priorities and competing household preferences.

This tension—between aspiration and practicality—defines the modern food experience for consumers.

Meanwhile, the industry is racing to adopt new technologies—especially AI—for operational benefits

AI is transforming retail and CPG operations, influencing everything from consumer analysis and segmentation to research and development, marketing and advertising to supply chain management.



The real opportunity? Technology that solves everyday consumer challenges.

While it's true that consumers *want* technology that inspires, they also *need* practical relief.

And this is exactly where AI has the opportunity to shine: **supporting innovations that help consumers navigate the realities of their daily food lives.**



The potential is significant

But realizing that potential requires looking beyond the novelty of emerging technologies to focus on the everyday problems consumers are actually trying to solve.



A critical question for food companies

As AI rapidly reshapes retail, food service and CPG, how can your business leverage these tools in ways that **meaningfully and practically** improve the experience of finding, buying, preparing and eating food?

The frictions in today's food experience are largely pragmatic



ECONOMIC CONSIDERATIONS

Price comparison
Deal hunting
Budget trade-offs



COGNITIVE LOAD

Meal planning
Dietary preferences/restrictions
Family needs



LOGISTICAL COMPLEXITY

Multiple store trips
Out-of-stock items
Long checkout lines
Suboptimal delivery experience



DECISION FATIGUE

Too many product options
Conflicting health advice
Inspiration overload

Consumers want tech that alleviates common pain points

Our research shows consumers are not only increasingly using technology to support these needs, but are also interested in it playing a more active role in solving practical challenges.

Consumers using technology for **trip planning**¹

80%

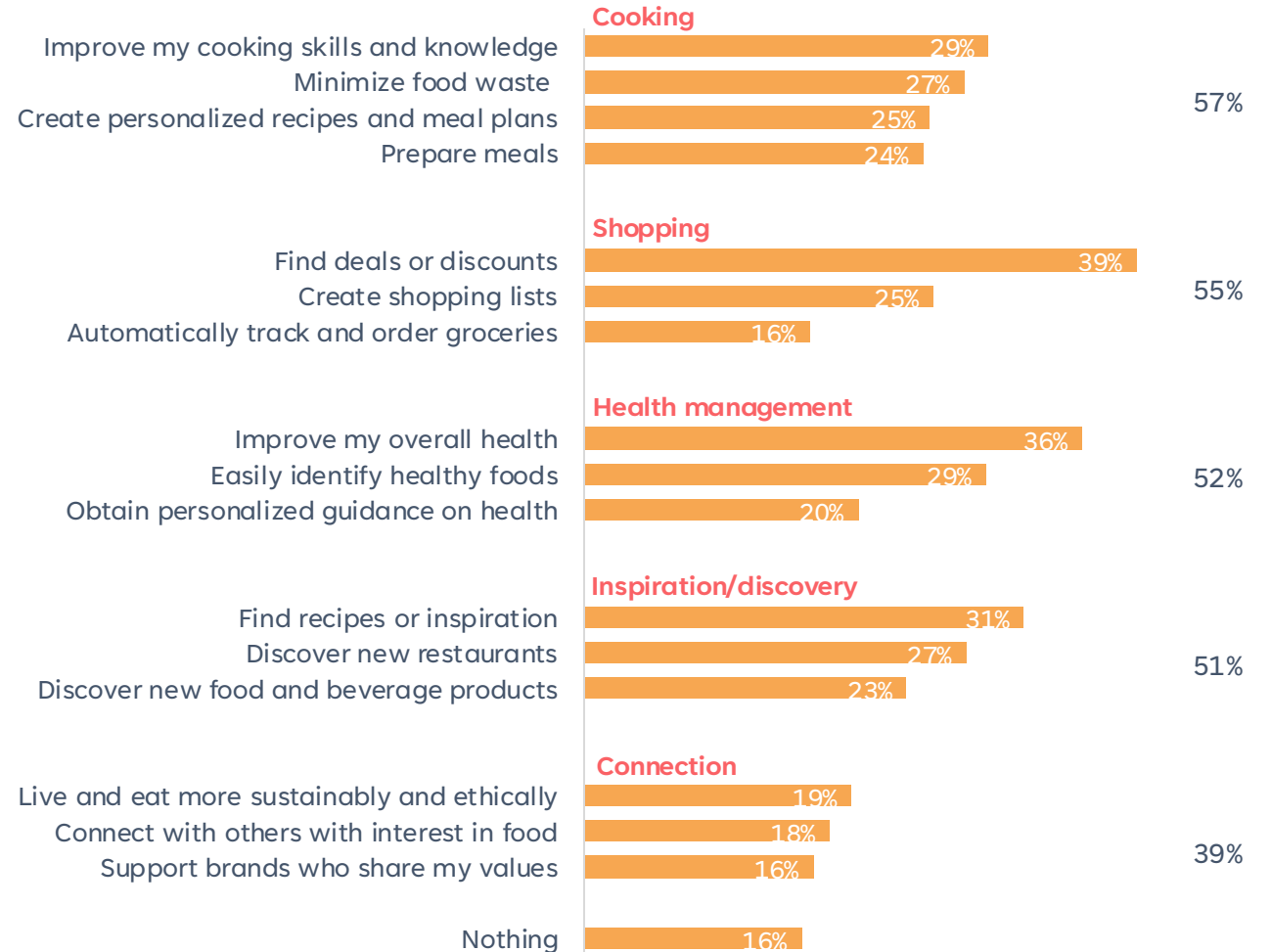
Consumers using technology for **price comparisons** while shopping (+29pts since 2014)¹

36%

How technology can play a bigger role¹

Among total

NET

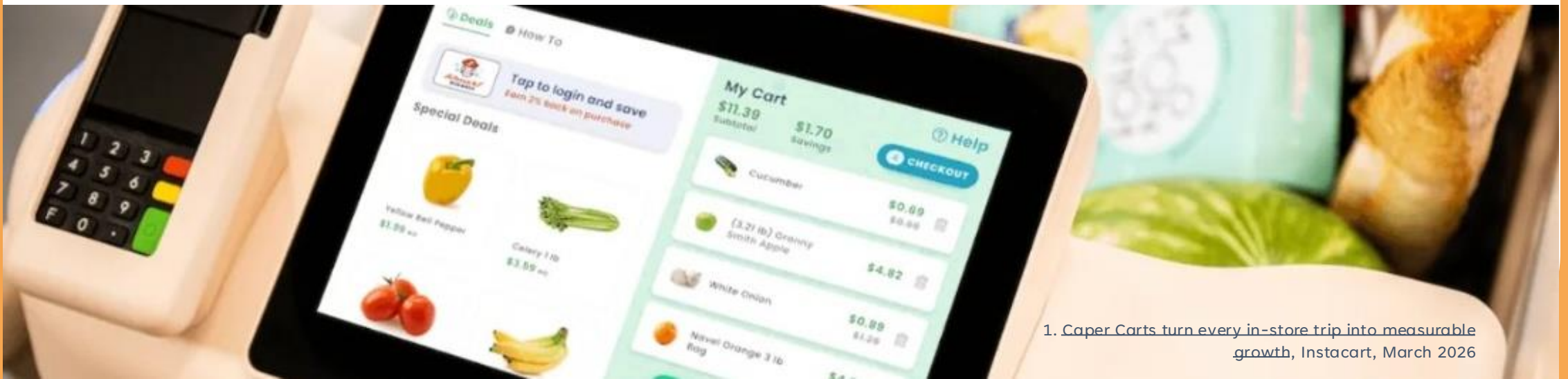


Supporting smarter, frictionless shopping

Instacart Caper Cart

Equipped with AI-powered cameras, sensors and a built-in scale, this smart cart automatically scans items as the shopper places them in the cart. It also integrates with retailer loyalty programs and point-of-sale systems, allowing shoppers to access personalized digital coupons and check out directly from the cart without visiting a traditional checkout lane. Multiple retailers—including Kroger, Schnuck's, Shop Rite and Soelberg's—have implemented the technology in select locations. According to Instacart, the smart carts have a Net Promoter Score (NPS) of 70+ and drive a 10% increase in basket size on average.¹

The takeaway: By significantly reducing checkout bottlenecks while also creating a more personalized shopping experience, AI could improve previous smart cart technologies for potential greater adoption. However, some consumers may be wary of being sold to while simply trying to check items off their shopping list.



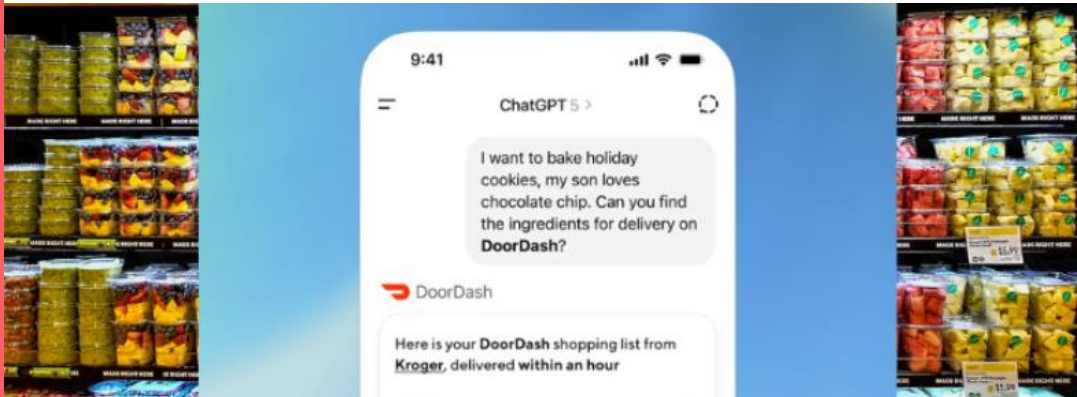
1. [Caper Carts turn every in-store trip into measurable growth](#), Instacart, March 2026

Closing the gap between inspiration and execution

DoorDash ChatGPT app

Hosted within ChatGPT, this integration aims to help shoppers move directly from meal inspiration to grocery delivery. Users can ask ChatGPT for recipe or meal ideas and instantly generate a shopping list based on the recommended dishes. That list can then be transferred to the DoorDash platform, where consumers can review their cart and order ingredients for delivery from participating grocery retailers.

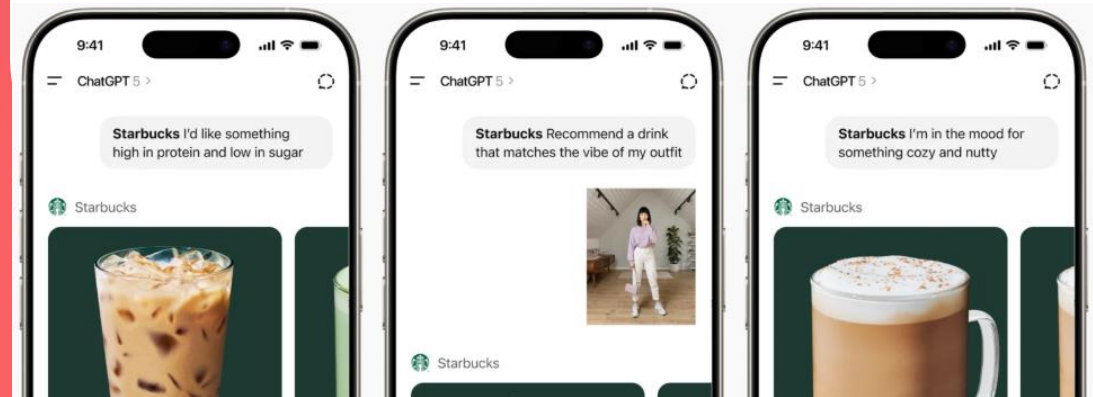
The takeaway: By eliminating several steps that typically exist between discovering a recipe and obtaining the necessary ingredients, DoorDash could be solving a key pain point here. As with other AI app integrations, the inconsistent experience across AI platforms and retailers is currently a barrier to further adoption and usage.



Starbucks ChatGPT app

Seeing a theme here? Starbucks' ChatGPT integration helps customers find the perfect beverage to fit their mood, flavor preferences or "vibe of the day." Users can interact with the AI assistant using conversational prompts or upload photos to help guide recommendations. Once a beverage is selected, customers can customize their order and choose a nearby location for mobile pickup through the regular Starbucks app.

The takeaway: The tool reflects Starbucks' ongoing effort to connect with younger, digitally native consumers while reinforcing its identity as a highly customizable beverage experience. The marketing around this offering has largely focused on inspiration, so the brand would be wise to also consider the practical needs of its more "habitual" customers.



Improving service and reliability

McDonald's big digital push

McDonald's is investing heavily in AI as part of a multi-year partnership with Google Cloud to modernize operations across its restaurants worldwide. Many of the company's AI initiatives are designed to solve operational challenges that directly affect the customer experience.

One major focus is improving equipment reliability and order accuracy. Through internet-connected kitchen equipment and edge computing technology, restaurants can monitor machines in real time and predict potential malfunctions before they disrupt service—such as the notoriously unreliable McFlurry machines. The company is also testing AI-powered accuracy scales that measure completed order weights against expected benchmarks, flagging potential errors before the order reaches the customer. McDonald's also plans to continue experimenting with AI-enabled voice ordering in drive-thrus, an initiative that has faced mixed consumer reactions across the industry. Its 2021 pilot with IBM was paused due to accuracy and usability challenges, highlighting the difficulty of deploying AI in fast-paced service environments where mistakes are immediately visible to customers.

The takeaway: One of AI's most valuable applications is leveraging data to solve operational frictions that consumers experience—both directly and indirectly. AI-assisted ordering programs continue to be a hot-button issue among consumers for being challenging to use, frequently getting orders wrong and upselling—but McDonald's appears committed to ironing the wrinkles out.



Implications and thought starters: **food retail**



Retail is the testing ground for AI in food.

Opportunities:

- Frictionless in-store shopping
- Personalized deals
- Inventory transparency
- Checkout elimination

Retailers control the data and environment, making experimentation easier.

Implications and thought starters: **food service**

AI is most powerful when it...

- Reduces wait times
- Improves order accuracy
- Enhances personalization
- Supports staff productivity

However, operators must avoid over-automation that removes **human hospitality**.



Implications and thought starters: **brand**



There has yet to be significant activity from CPG brands on AI-enabled consumer experience—and that's okay.

The time and cost to develop proprietary, consumer-facing AI that actually works—and isn't frustrating—is currently a much riskier investment for brands than it is for retailers and food service providers that can iterate quickly based on consumer feedback.

For some brands and business models, it works to be the early experimenter. But large, established brands may be best advised to wait and see how all this early chaos shakes out. AI is still in its infancy, and yet we have already seen an astounding amount of trial and even more error. We have yet to determine what consumers really expect from brands when it comes to practical tech innovations.

In the meantime, remember that the consumer's need for food solutions that make their lives easier **transcends technology.**

Helping you navigate the future of emerging technologies

Understanding how consumers will interact with emerging technologies requires more than tracking innovation—it requires deep insight into food culture, decision-making and everyday behaviors.



Our work helps organizations:

- Identify unmet consumer needs
- Evaluate emerging technology through a consumer lens
- Prioritize innovation investments
- Design food experiences that align with real consumer behavior



For immediate, actionable insights:

Purchase our report, ***Food & Technology 2026: The Digital Food Culture Gap.***

For personalized strategic advisory on how your brand can navigate the evolving tech innovation landscape, **reach out to our team about custom consulting engagements.**





Let's connect



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ABOUT HARTMAN GROUP

Our mission is to translate consumer behavior and food culture into strategic growth opportunities for our clients. Since 1989, Hartman Group's anthropologists, social scientists and business analysts have been immersed in the study of American food and beverage culture, using ethnographic observation, quantitative tracking surveys and deeply studying trends. What we have learned and continue to uncover allows us to upend many notions of our traditional American eating and drinking patterns, identifying unique opportunities and winning strategies for our clients.

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