Agentic AI and the new dynamics of retail

More mundane and more important than you think

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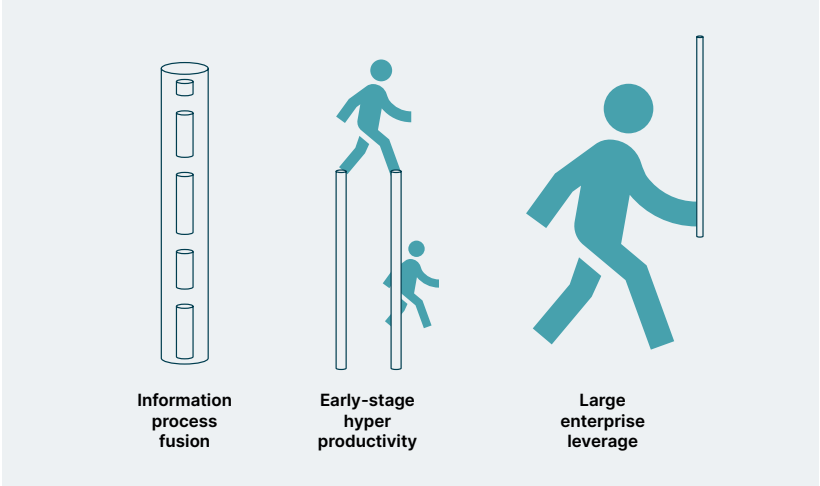
Design. Engineering. AI.

The futurist Roy Amara famously observed that “we tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run”. [1] Almost 50 years later, you can still see Amara’s Law in action. Scan LinkedIn, and you’ll find numerous posts that both overestimate the capabilities of agentic AI and underestimate its potential to restructure consumer-facing industries. In this paper, we disentangle hype from enduring change by considering how the unique characteristics of agentic AI affect the relationships between players in the retail ecosystem.

We have identified three significant structural changes that agentic AI will drive:

- Information process fusion will accelerate automation in processes that have stubbornly resisted it until now.
- Small emerging brands will disproportionately benefit from hyperproductivity.
- Large retailers will disproportionately benefit from leveraging agentic technology in their extensive customer and supplier ecosystems.

These effects are not deterministic, and will play out in the context of the strategic sharpness and digital fitness of the retailers involved.



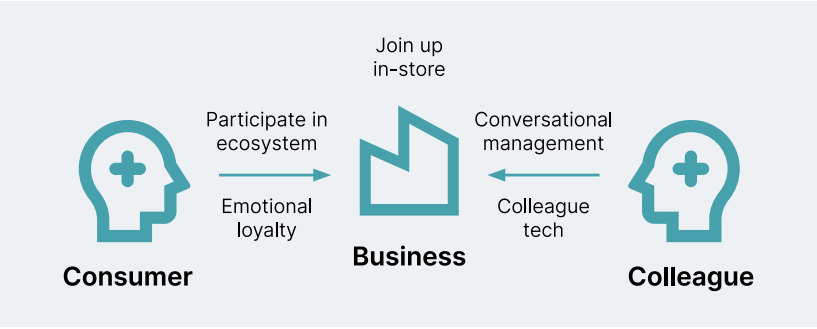
A standout example of how agentic AI is reshaping the retail ecosystem is agentic commerce. In September 2025, two significant developments occurred almost simultaneously. On September 16th, Google announced the Agents Payment Protocol (AP2),[2] which provides a way to securely delegate a consumer's intent to purchase to an agent. Two weeks later on September 29th, Open AI announced their own Agentic Commerce Protocol,[3] which allows users to purchase directly inside ChatGPT. These tackle head-on concerns about agents making payments and enable a new channel for purchasing goods and services.

The size of the prize is great. According to some estimates, spending on agentic AI will rise from $5 billion in 2024 to $47 billion by 2030.[4] Few sectors will feel the impact of this agentic spending boom as much as retail. The US investment firm Ark Invest predicts that the integration of agentic AI into digital wallets such as Shop Pay, Cash App and Apple Pay could create purchasing agents that transform e-commerce. Ark estimates

that such agent-powered digital wallets could account for nearly three-quarters of e-commerce purchases by 2030.[5]

In response to the structural changes introduced by agentic AI, we have a series of recommendations that you can act on today, which we explore later in this paper:

- Elevate colleague tech using agentic interfaces.
- Enable conversational management.
- Use emotional loyalty to secure customer relationships.
- Join up your in-store digital experience with the rest of your digital estate.
- Intentionally participate in agentic commerce ecosystems.



Navigating retail disruption

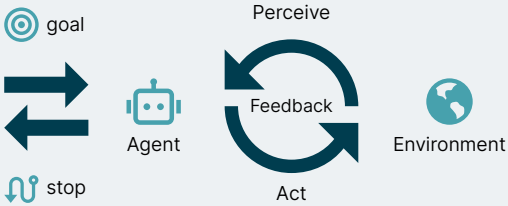
Agentic AI technology is maturing exponentially. The task length that AI agents can complete is doubling every seven months,[6] suggesting a new Moore's Law for AI. This rapid increase in attention span suggests that AI agents' ability to handle different families of tasks will suddenly break through inflection points. Also, the rapid expansion of the agent ecosystem via contributions like Anthropic's Model Context Protocol (MCP), Google's Agent2Agent (A2A) and Agent Payments Protocol (AP2) and OpenAI's Agentic Commerce Protocol (ACP), give agents a growing set of options for interacting with consumers and retailers.

These sudden transitions in the technological environment will hit retailers at the same time as rising costs (such as tariffs) and penny-counting customers, forcing them to seek new ways to increase efficiency, cut costs and engage with customers.

In this paper, we also explain how they can prepare their technology organization to exploit the opportunities of this disruption.

The nuts and bolts of agents

Agentic AI is based on two novel abilities that IT systems have lacked until now: natural language understanding and autonomous action. Together, these capabilities allow us to build systems that take requests directly from the customer, independently navigate the world and act to fulfill the customer's wishes.



Agents are goal-oriented entities that can dynamically perceive and act upon an environment, with agency to decide to stop when the goal has been achieved.

In a retail context, this lets us build interfaces shoppers can use even if they don't know exactly what they want. A good example of this is Zalando's LLM-powered fashion assistant[7] that takes requests like, "I'm going to a wedding in Barcelona — what should I wear?" and offers suggestions for outfits. The conversation continues with the customer adding more context like, "It's in January," and the agent refining its recommendations.

We're just at the cusp of retailers enabling full agentic commerce, where agents make purchases on the customer's behalf. To take one early example, Amazon is trialing a Buy for Me feature[8] that makes purchases directly on brand sites. We're also seeing third-party agents, such as Perplexity's Comet browser,[9] that are capable of completing the checkout process without human intervention. The recent progress in secure agent payments will enable agentic commerce to become mainstream by providing secure means for agents to pay without human supervision.

Agents can also be used to great effect to automate internal processes. For example, an agentic system can be given a high-level objective such as, "Maintain a 95% in-stock rate for this product sub-class." The agent can break down that goal into smaller sub-tasks, decide the best course of action to achieve it, and respond to events as they happen.

Three structural changes driven by agentic AI

Information technology has radically improved the productivity of knowledge workers over decades. The internet radically expanded the reach of programming to automate business processes by joining up the world's computers into a single networked system. Mobile devices further expanded programming's reach by taking computation from the desktop out into the world.

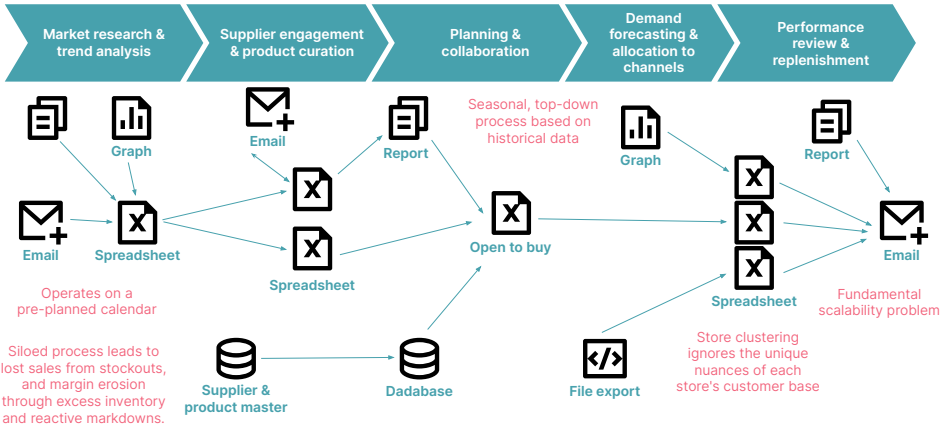
With each wave of technical innovation, the structure of the information economy shifted. Things that were impossible became possible. Things that were expensive became cheap. Certain kinds of business rose. Others fell. Agentic AI is a continuation of this process.

Information process fusion

The natural language facility and autonomy of AI agents will create unified, automated processes where previously there was a manual and labor-intensive chain.

The internet has eliminated interruption in information processes taking place on different machines. Mobile computing has eliminated interruption in processes taking place away from the desktop. But there is still a major source of process interruption that limits automation — human-centric activities. Information-

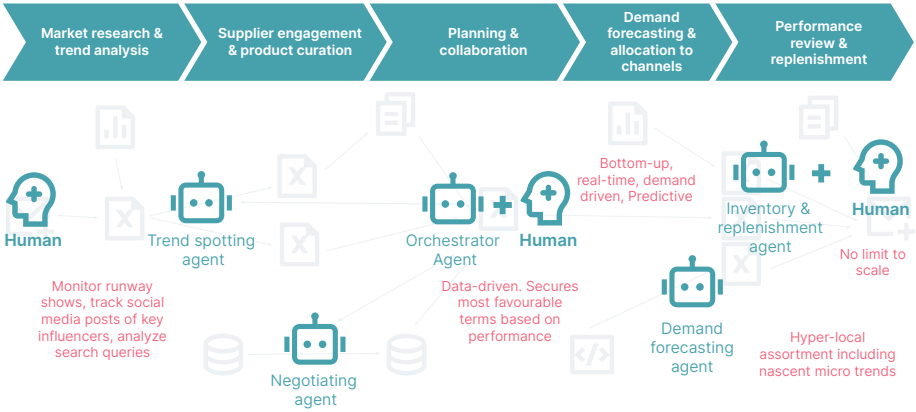
rich value chains require people to understand, translate and transfer data between one part of a process and another, often using unstructured channels like emails or word documents.



Assortment creation has high information density and low insight density, making it a prime candidate for delegation to agents.

For example, product assortment creation and allocation to channels is a process that relies on a combination of structured and unstructured data. Some steps are automated, others require human interpretation and transformation — not to provide insight, but to map from one informational stage to another.

Chains of transformational, mapping and aggregation steps are candidates for complete delegation to agents, which can complete them in an unbroken flow without human intervention. Steps that require human insight embedded in informational transformation are candidates for human-agent collaboration, with agents providing interpretation and decision support.



Human insight is critical to some decisions, but the part that is aggregating and transforming information from one format to another can be automated by agents.

Steps in a process where a human needs to intervene cause a natural seam that can correspond to a business boundary. If that human intervention is not required, the process can be automated end-to-end. This will lead to dramatically shortened lead times for some processes, and will allow companies that can engineer these fused information chains to disrupt those that have a human handoff in the middle. This will also apply to a lesser extent to processes where a person is required to input or supervise, but who is not a blocking participant in progress.

Early-stage hyperproductivity

The fusion of information-rich activities will cause a second-order effect — hyperproductivity in early-stage businesses.

The limiting factor on keeping a startup team small for longer is that many administrative tasks require human involvement to operate effectively, but they add little business value. As agent-based tooling improves, skilled founders will be able to create viable businesses without expanding their team. This will

make it more feasible for innovative companies to compete with established ones.

Cloud computing made the first big inroad here. Instagram had 13 employees at the time of its $1 billion acquisition. Agentic AI promises to take this an order of magnitude further. Anthropic's CEO, Dario Amodei, predicts we'll see the first $1 billion 'solopreneur' in 2026.[10]

Even if we don't see a billionaire solopreneur in retail in 2026, we'll see retail businesses with fewer than 100 employees harnessing agentic technologies and competing effectively with much larger peers.

Large enterprise leverage

Agentic technologies are fundamentally about interaction and integration, so large enterprises with richer ecosystems will be able to apply them to greater effect.

Retailers with significant customer bases and large numbers of physical stores have more interactions to enhance at similar technology costs. Those with richer customer engagement have more context to fuel agentic experiences. Those with strong supply chain ecosystems can use agentic technologies to holistically optimize their supply chains, adapt to new market conditions, or put themselves in stronger bargaining positions with suppliers.

We anticipate this effect will most strongly apply to retailers with $5 billion revenue and above, which, according to Deloitte's Global Powers of Retailing 2025 report,[11] would apply to the world's top 232 retailers.

The combination of agent-based tooling magnifying the productivity of very small companies and scale effects

magnifying the agentic payoff of very large companies will lead to a relative disadvantage for medium-sized companies. They will need to be digitally nimble to compete with their smaller and larger peers.

Signals of change

It's easy to be wise with hindsight. To demonstrate that our analysis has bite, we make three predictions that will show the structural changes we anticipate are occurring.

From SEO to GEO

After decades focused on SEO, retailers will adopt the equivalent for agentic AI: generative engine optimization, or GEO.

Search engines, especially Google, forced businesses to prioritize making their online presence readable to crawlers — search engine optimization. Software upgrades like the notorious Panda 4.0 algorithm update became existential events for niche players that depended on exploiting quirks of the search algorithm.

LLMs' ability to parse large amounts of text shifts the balance between concision and verbosity. It will be very important to explicitly describe the relationship between concepts that retailers want agents to interact with, rather than just mention them in a cloud of keywords. The aim is not simply to come to the attention of a consumer searching for a topic, but to explain the nature of the products well enough that an agent can propose them to solve a consumer's problem or satisfy their desire.

The other factor is that agents need machine-discoverable APIs and data integrations to efficiently interact with retailers. Powerful, well-structured APIs are vital. Having APIs that conform to emerging protocols such as Model Context Protocol (MCP) is currently important for GEO. This may not persist in the future, as agents become more mature in harvesting context themselves. The protocol space will continue to experience significant change as new capabilities are required and lessons are learned on how to facilitate agentic interactions securely and efficiently.

The lesson for retailers is clear: they must pay attention to tech companies that influence whether their customers even encounter them in the first place. If the hottest new agentic app for luxury goods doesn't know about a retailer's range of expensive timepieces, then the brand won't be part of the conversation when a prospective customer asks for recommendations for a new watch.

GEO applies to internal use cases, too. For example, to create a hyper-local assortment at scale, an agent would need to be told to ingest a rich, multi-dimensional data set for each store location. This includes not only POS data but also local demographic data, real-time foot traffic patterns, historical customer segmentation data, regional weather forecasts, calendars of local events, and even analysis of social media posts geotagged to the store's vicinity. Agents' decisions can only be as good as the context retailers feed them.

More new, small businesses, absorbed quickly

New retailers, brands and retail tech startups will be created and reach relevance faster.

We discussed earlier that agents make it feasible to exploit a great idea with no or few employees. We also discussed how

large businesses will have data and distribution effects that give them more economic power. The combination of these complementary forces will result in acquisition pressure, because many good ideas will be proven that will generate significant extra value when deployed in the ecosystem of a giant.

Coding agents such as Anthropic's Claude Code[12] will also lower the cost of technology integration of acquisitions. Integrating an acquisition has many steps where coding agents can help: unifying customer records, rebranding, integrating digital presence, joining up analytics, reworking supply chain processes and deploying proprietary technology for the benefit of the acquirer. These activities are exactly the kind of information transformation task coding agents excel at, and they will cease to act as a limiting factor on acquisition.

We also expect to see a greater presence from ephemeral businesses, small in time as well as scope. The hyperproductivity agents give very early-stage businesses enables pop-up business to be constituted with the help of agents and become competitive very quickly.

For example, the social commerce phenomenon shows how a low barrier to entry results in an explosion of diverse and short-lived businesses. Agentic AI will accelerate this further. We predict that this will facilitate one-off businesses that are created to exploit a temporary fad or situation. They don't need to last a long time to make a return on their investment if their initial investment is small.

Disintermediation and intermediation of marketplaces

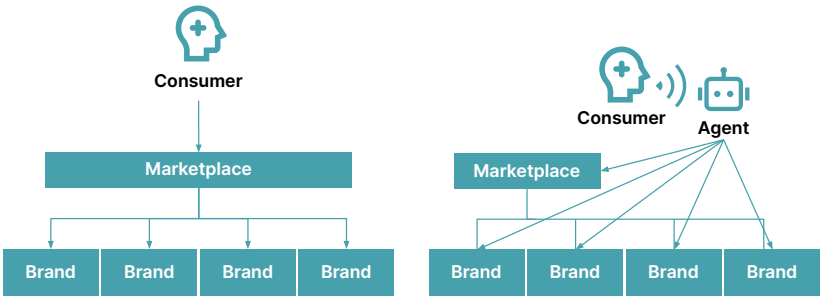
Marketplaces will be put under pressure by agentic apps trying to route around them or get between them and their customers.

The business model that's under greatest threat in an agentic environment is virtual marketplaces. Marketplaces are essentially a subsection of an information chain that generates value by aggregating and making discoverable the individual items in the marketplace. This makes them a prime target for the information chain fusion enabled by agents.

Imagine an agentic mobile app that discusses users' exact problems and preferences, explores the available options on marketplaces and brand websites, offers a recommendation and executes the requested purchase — all without leaving the app.

In the short term, agentic AI offers a path to aggregating the aggregators. This is a pure technology play and builds on top of existing supply chains. In the medium term, it offers a path to disintermediate them altogether and go direct-to-consumer (D2C), or rather agent-to-consumer (A2C) or even agent-to-agent (A2A). This will take longer, as it requires supplier management prowess and direct access to supply chains. The value proposition for consumers and the disruption potential for marketplaces is strongest in sectors where the customer experience is fragmented or confusing, such as travel retail.

Whether agents stand between the customer or between a brand and the customer, expect margins to be compressed, especially as agentic AI offers opportunities for substitution and playing marketplaces and brands off against one another. Commodification of every company below a trusted agent in the supply chain is a real possibility.



A marketplace aggregates information and access to brands for a consumer's benefit – agents can too.

Agentic interfaces that capture sufficient consumer attention are likely to extract economic rent from their privileged position, as Google did through advertising revenue from search and OpenAI is looking to do for referrals in ChatGPT's responses.[13]

Marketplaces with sufficient market share will resist this by attempting to position themselves as the agentic aggregator, like Amazon's Buy for Me functionality. This is a good example of the business wisdom that if you don't disrupt yourself, someone else will.

Recommendations for retailers

We see several concrete steps retailers can take to respond to the industry's structural changes. Agentic ecosystems build on top of relationships between participants, so our advice is oriented around reinforcing those relationships.

Elevate colleague tech

Invest in colleague experiences that give them data-driven insights as they do their jobs.

We've focused on points where humans might not be needed in retail processes. However, there are many processes remaining where your colleagues are vital to your organization's success and deserve your support.

For example, your colleagues on the shop floor will still play an active role in supporting your customers. Act to put the information and insight your business has gained through improved data and analytics into their hands. That could be real-time insight into customer demographics visiting the store as they change over the day. Or it could be augmented reality mapping of the store so they can answer inquiries instantly and precisely. Agentic interfaces make these capabilities possible in a way that weekly updates never could.

For example, in Walmart's foray into agentic AI, one of its four 'super agents' is for supporting colleagues with information from schedules to sales data.[14]

The lowered costs of wearables such as smart glasses will make this more effective and affordable over time, especially with the anticipated development of heads-up displays (HUDs).

Enable conversational management

Move from a report-and-inspect management paradigm to having an active conversation with your data.

Many retail management activities involve a lot of wading through data, such as category management, for example. This involves data such as structured information from BI dashboards, semi-structured information from reports and unstructured information from conversations with staff. Agentic AI promises to elevate management attention and productivity, with the right tooling. Done well, an agentic experience with retrieval-augmented generation (RAG) to supply context feels like having a conversation with your data.

An attractive feature of these use cases is that giving managers an increased ability to consume and put into context large amounts of data is high-benefit and low-risk. The manager is still the human-in-the-loop and can apply their judgment in case of any teething problems. You don't need to give agents the ability to affect the world — such as making purchases — to put this into action, which makes it an ideal early initiative.

An example of a startup exploring this area is Quorso, which aims to transform managerial store visits that require painstaking observation and concentration to separate relevant from irrelevant detail. If Quorso is successful, the store visit of the future will be conducted as a conversation with a pocket AI that draws the visiting manager's attention to relevant detail. The tool

will also use the autonomous and natural language abilities of agentic AI to proactively draw a category manager's attention to anomalies, so they can apply their expertise more efficiently.[15]

Create emotional loyalty

Give your customers an emotional payoff as well as an economic incentive to remain loyal to you.

Loyalty schemes are a powerful tool to retain contact with your customers in an environment where you risk disintermediation. The basic requirement of a loyalty program is that it must be economically attractive for customers to participate. But increasingly, that's no longer enough.

Exploit opportunities for exclusivity — such as offers released to members first — to create connections beyond collecting points. Use loyalty program data to get to know your customers better, but be careful to ensure that the data collected is part of a fair value exchange and has transparent consent.

For example, Sephora creates emotional loyalty through its Beauty Insider program.[16] It uses various techniques to offer its customers more than a transactional points-based relationship:

- Rewards are segment-specific and curated for the member's beauty needs.
- Gamification awards points not just for purchases but for engagement tasks such as app usage or signing up for notifications.
- Higher-tier members gain access to events such as product launches, makeovers and influencer meetups.
- AI recommendations are blended with in-store beauty workshops to foster emotional connections with customers.

- The program maintains GDPR compliance, ensuring transparent data practices, such as using explicit opt-in for facial recognition data.
- In a scenario where an AI agent intermediates between Sephora and a customer, the loyalty program incentivizes customers to maintain direct brand contact.

Join up your in-store with your online

Follow through on your good omnichannel intentions and close the gaps in your unified digital experience.

Your customers will be visiting your stores in perpetual conversation with always-on agents. This is already the case, as your customers check their mobile devices to read reviews and discover more details about your products (and your competitors' products) as they browse your store. Wearables powered by agent-based technology, such as Meta Ray-Bans and its peers, promise to make this even more pervasive.

Lean into this phenomenon. If someone visits your store and then completes the purchase online, this should be a triumph, not a loss, to the store. Decathlon, for example, has QR codes in-store to facilitate this process.[17]

Intentionally participate in the agent ecosystem

Develop the capability to interact with others' agents and offer customers your own —while remaining intentional about who you do business with.

In the same way that CPG companies consider which retailers to partner with for distribution, you should consider which agentic distribution pathways you want to support. That might mean a GEO strategy of maximal distribution to enable as many agentic interactions with your e-commerce as possible. Or, you

might take a selective strategy where you encourage some integrations and block others.

Considerations might include your brand positioning, any fees agents charge to promote your stock, and your ability to access data about your customers from certain agentic interactions. You should be able to facilitate high-quality agentic interactions, but you don't have to exercise that ability with every third party on the internet.

This suggests two key responses. Firstly, use GEO to optimize your product data and digital content for machine consumption to ensure brand visibility in third-party agent ecosystems. Secondly, strategically evaluate the development of your own agentic user experience (with guardrails) embedded in your online presence to encourage customers to maintain a direct relationship with you.

The objective is to ensure your brand remains relevant and desirable in a world where many purchasing decisions may be partially or fully automated. We recommend the first place to focus is your API strategy, which underpins any meaningful GEO. Without that, you'll be unable to muster the context to offer a high-quality agentic experience. Counterintuitively, the shortest line to participating in agent commerce is to make your digital presence accessible to agents, for example via an MCP server, rather than to develop your own agent.

Early adopters are split between presenting their own agent to customers (such as Zalando's fashion assistant and Walmart's Sparky[18]) and offering their own agent-friendly APIs. It's not clear yet which strategy will dominate or if they will coexist. Our advice is to be ready to respond to both the expectation to host your own agent and the possibility of agent convergence external to your business.

Embrace AI within boundaries

Put in place the support and guardrails that let your organization experiment without fear.

Apply engineering discipline to avoid old failure modes reasserting themselves in an agentic context. Reinventing old issues is an unfortunate trend. For example, naively implemented MCP APIs are prone to disregard the hard-won lessons of 20 years of distributed system development,[19] and the first generation of browser-based agents are gullible and vulnerable to phishing.[20]

Agentic AI, even with the productivity dividend of AI coding assistants, is not an excuse to lower engineering standards. Think big, move in small steps and maintain architectural discipline. The better your digital fitness, the easier you'll find this.

You also need to establish governance boundaries for characteristics unique to agentic systems. Especially given our advice on promoting emotional brand loyalty, it's important to safeguard social responsibility concerns to avoid reputational risk. Bias against particular demographics was not a common issue in a world of webforms, but it's easy to cause such problems with probabilistic and natural language systems.

Surprising new problems, such as an agent becoming too sycophantic,[21] can only be caught through careful statistical testing known as evals. Guardrails are important to enable your teams to innovate while remaining good citizens of your technology landscape.

Work on your digital fitness and experimentation culture

Pay down technical debt and get good at technology, so you can adapt to the unexpected.

The digital disruption from AI agents is foreseeable in its broad strokes but unpredictable in its detail. As well as our previous advice on how to respond to disruption, the most important thing is to prepare yourself for disruption in general.

It's important that you increase your digital fitness, build organizational skills, reduce technical debt, modernize systems and use architectures made from composable, loosely coupled components. That way, you'll be able to respond to the threats and opportunities you don't see coming, as well as the ones you do.

Technology health by itself won't help you if you don't also get good at using it to create value. You must nurture a culture of value-driven initiatives, preparedness to fail (and learn from failure), measurement and experimentation. The high level of uncertainty in agentic technologies means you must cast your net widely to find the use cases, strategies and experiments that will really pay off for your business.

Turn structural change into strategic advantage

Agentic AI is both like and unlike previous waves of technical innovation. It's like previous waves, such as the internet and the rise of mobile devices, in that it deploys automation to domains that previously could only be handled by humans. It's unlike previous waves in that LLMs' ability to handle ambiguity lets us delegate to agentic systems more completely than with previous technology.

Look out for the three major restructuring forces we've described: fusion of informational processes, a productivity advantage to very small retailers and leverage advantage to very large retailers. There will be more indirect effects from agentic innovation over time, but you can safely predict and respond to these changes to the modern retail economy.

Work with those structural changes rather than against them by adopting our recommendations. Boost your colleagues' productivity with technology that delivers insight to them on the shop floor, and elevate your managers' impact with conversational management. Meet your customers where they are by joining up your in-store and digital experiences, and enhance your loyalty offering with emotional heft.

Good luck!

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