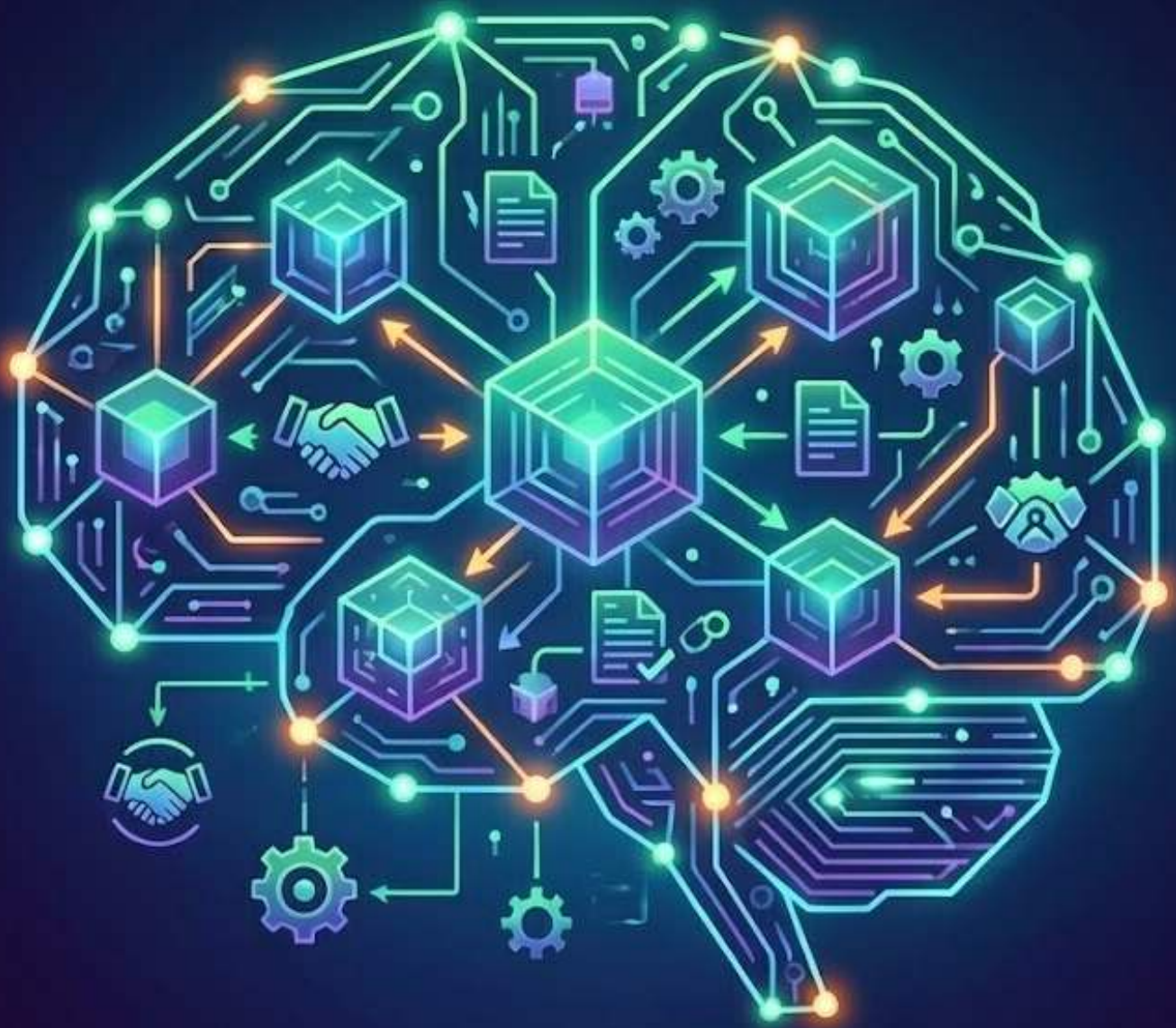


AGENTIC COMMERCE

Digital Business Models in the Era of
the Agent to Agent Autonomic Web



AI's Next Giant Leap - The Dawn of Agentic Ai

Imagine a world where your business doesn't just react to the market—it anticipates it.

A world where tireless, intelligent agents work around the clock, not as mere tools, but as autonomous partners, making decisions, optimizing strategies, and unlocking opportunities you didn't even know existed.

This isn't science fiction; it's the reality unfolding before us, driven by the rise of Agentic AI. In the digital age, businesses have evolved from static entities to dynamic ecosystems, fuelled by data, connectivity, and innovation. Yet, the true revolution is only just beginning.

Agentic AI—artificial intelligence with the power to act independently, reason proactively, and adapt in real time—is redefining the rules of the game. Unlike traditional AI, which follows rigid scripts, Agentic AI is a collaborator, a strategist, and a trailblazer, capable of navigating complexity with human-like intuition and machine-like precision.

From reshaping customer experiences to streamlining operations, from predicting trends to rewriting marketing playbooks, Agentic AI is the invisible force propelling digital businesses into uncharted territory. It's not just transforming how we work—it's transforming what's possible. In these pages, we'll embark on a journey through this brave new frontier, exploring the technology, the visionaries behind it, and the real-world stories of companies thriving in its wake.

Welcome to the era of Agentic AI, where the future isn't predicted—it's created.

From Chat to Checkout: How E-Commerce is Evolving into 'Conversational Commerce'

The traditional e-commerce journey—searching Google, browsing category pages, filtering results, and navigating to checkout—is rapidly becoming outdated.

Consumers now expect natural, conversational interactions that handle discovery, personalization, comparison, and even purchasing in one seamless flow.

This shift, known as **conversational commerce**, leverages AI chatbots, agents, and embedded integrations to meet customers where they already are: in chat interfaces like ChatGPT, messaging apps, voice assistants, and brand websites.

The Rise of Agentic Chatbots in Retail

Early retail chatbots were rule-based tools limited to FAQs, order tracking, and basic recommendations. Today's AI-powered agents, driven by large language models (LLMs) from providers like OpenAI, use generative AI and agentic capabilities—autonomous reasoning, planning, and action—to transform the experience.

Key advancements include:

- **Hyper-personalization:** Agents analyze past behavior, current context, preferences, and external data for tailored suggestions.
- **Multimodal support:** Integration of text, voice, images (e.g., virtual try-ons), and real-time inventory checks.
- **End-to-end autonomy:** From product discovery to price comparison, cart management, and checkout.

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These tools are no longer add-ons but core retail infrastructure. The global conversational AI market was valued at around \$8.8 billion in 2025 and is projected to grow significantly, with consumer spending through conversational channels reaching \$290 billion in 2025 (up from \$41 billion in 2021).

Revolutionizing Product Discovery and Personalization

Traditional search involves scrolling through links and filters. Conversational interfaces let shoppers describe needs naturally—for example, “I need a durable winter coat under \$200 for commuting in cold weather”—and receive curated options, comparisons, and refinements.

This reduces friction and accelerates decisions. In fashion and beauty, virtual try-ons via uploaded photos boost confidence. Personalization drives revenue: strong implementations can increase it by up to 40%, with AI chat boosting conversions dramatically (e.g., 4x higher rates, such as 12.3% vs. 3.1% without AI).

Shoppers complete purchases 47% faster, return customers spend 25% more, and abandoned carts see recovery rates around 35% through proactive interventions.

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Virgin Atlantic's Pioneering Integration: Embedding Services in ChatGPT

A landmark example is Virgin Atlantic's launch of the first airline app [directly inside ChatGPT](#). Users query naturally ("Show me flights in Premium to Los Angeles next month" or "What are some good flights to the Caribbean in February?"), and the integration pulls **live inventory**, pricing, and availability. It provides clear summaries for comparison and seamlessly hands off to Virgin's site or app for secure booking.

This "agentic commerce" approach captures intent early (e.g., during inspiration phases like "Where is warm in February?"), bypasses OTAs and their high commissions (20-30%), and lowers acquisition costs. Virgin complements this with its own website's multimodal AI Concierge (powered by OpenAI via Tomoro) for planning, loyalty questions, and booking management.

ChatGPT as a Shopping Platform: Instant Checkout and Agentic Commerce

OpenAI has accelerated this evolution with shopping features in ChatGPT.

Users can discover products conversationally, and with **Instant Checkout** (powered by the open-sourced Agentic Commerce Protocol, co-developed with Stripe), complete purchases directly in-chat for supported merchants. It started with Etsy sellers in the US and expanded toward millions of Shopify merchants (e.g., Glossier, SKIMS, Spanx, Vuori).

Merchants integrate catalogs without rebuilding them, making products discoverable in AI responses. This positions general-purpose AI platforms (ChatGPT, Gemini, etc.) as new commerce channels, shifting power from traditional search and retailer sites. Brands that embed effectively bypass middlemen while providing frictionless experiences.

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Broader Channels and Dynamics

Conversational commerce spans multiple touchpoints:

- **Brand-owned channels:** Website chatbots, mobile apps, WhatsApp, Messenger.
- **Voice commerce:** Alexa, Google Assistant, and in-app voice for multitasking (projected strong growth to hundreds of billions by 2035).
- **Platform-native AI:** Amazon's Rufus and Walmart's tools offer conversational shopping within their ecosystems.
- **Social and messaging:** Embedded commerce in conversations for real-time engagement.

AI agents handle complex queries, proactive support (resolving 70-80% of routine issues), and even negotiation in high-ticket categories. This cuts costs (e.g., 30-39% savings reported), improves satisfaction (higher NPS), and enables 24/7 service.

Benefits and Strategic Implications for Brands

For retailers:

- Higher conversions, larger baskets, and lower abandonment.
- Cost efficiencies in support and marketing.
- Direct customer relationships and data for better personalization.
- Competitive edge by being present in AI platforms where discovery starts.

Challenges include data structuring for AI visibility, reliance on third-party algorithms, secure payments, and balancing automation with human escalation for complex needs. Brands must invest in high-quality data feeds, agentic integrations, and testing to avoid hallucinations or poor recommendations.

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The Future: Agentic and Ambient Commerce

By 2026 and beyond, the divide will be between brands with accessible, accurate, conversational data in AI ecosystems and those clinging to traditional websites. Expect deeper agentic capabilities (autonomous multi-step tasks), predictive replenishment, voice/vision convergence, and seamless omnichannel continuity.

Virgin Atlantic, OpenAI's integrations, and innovators like Rezolve AI illustrate the path: from reactive chat to proactive, personalized agents that turn conversations into checkouts. E-commerce is no longer about destinations (websites) but intelligent, ongoing dialogues. Brands that embrace this—optimizing for AI discovery, building robust integrations, and prioritizing customer-centric agent experiences—will lead the next era of retail.

The conversation has already begun. The question is whether your brand is part of it.

Web 4.0: The Emergence of the Autonomous Agent to Agent Internet

The internet is undergoing its most profound transformation yet.

Web 1.0 delivered static pages. Web 2.0 connected people and created social platforms. Web 3.0 introduced semantics, intelligence, and generative AI.

Web 4.0, often called the **Agent Web**, shifts to autonomous AI agents that negotiate, transact, broker data, and execute complex tasks 24/7 on behalf of users—removing the human from the loop for most routine and even sophisticated digital activities.

In this new era, your personal AI agent will handle travel bookings by negotiating with airline and hotel agents, update your address across services seamlessly, shop for optimal deals within your preferences and budget, or even monetize your data and content through micro-transactions.

This creates a global marketplace of intent, where agents trade value directly with one another. The transition promises radical efficiency and time abundance but requires new infrastructure for trust, identity, security, payments, and governance.

Major Players and Their Initiatives in Agentic Commerce

Payment networks and tech giants are racing to build the rails for this agent-driven economy:

Visa's Leadership in Agentic Commerce

Visa has aggressively pioneered **Visa Intelligent Commerce** (VIC), enabling AI agents to autonomously browse, select, purchase, and manage transactions (e.g., groceries, travel, gifts) within user-defined rules. Partnerships with OpenAI, Microsoft, Anthropic, IBM, Mistral AI, Perplexity, Samsung, Stripe, AWS, Akamai, and Fiserv integrate payment capabilities deeply into AI platforms.

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Key innovations include:

- **Trusted Agent Protocol (TAP):** An open cryptographic framework using HTTP Message Signatures for authenticating agents, verifying intent, and enabling secure transactions. It distinguishes legitimate agents from bots amid surging AI traffic.
- **AI-Ready Cards with tokenization, “Know Your Agent” (KYA),** spending limits, and biometric Passkeys.
- **Pilots with partners** like Skyfire, Nekuda, PayOS, and Ramp; projections that 25% of digital storefront interactions will be agent-initiated by 2028. Full rollout targeted for 2026.

Visa positions this as a seismic shift comparable to moving from physical to online shopping, emphasizing security, personalization (with consent), and fraud prevention.

Mastercard Agent Pay

Mastercard launched [Agent Pay](#) in April 2025 as a dedicated infrastructure for agentic commerce. It enables verified AI agents to discover, decide, and execute secure payments on behalf of consumers and businesses while maintaining strong user control, transparency, and compatibility with existing card rails.

AI agents must be registered and verified through Mastercard’s system before they can transact. This creates a clear distinction between trusted agents and malicious actors or uncontrolled bots. Merchants benefit from the Mastercard Agent Pay Acceptance Framework, a no-code or low-code integration that allows them to accept agent-initiated payments at scale with minimal changes to existing systems.

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Google's Universal Commerce Protocol (UCP)

Announced in January 2026, **UCP** is an open-source standard developed with retailers (Shopify, Etsy, Wayfair, Target, Walmart) and payments players (Visa, Stripe, PayPal). It standardizes interactions between AI agents and merchant systems for product discovery, cart assembly, and checkout.

UCP addresses the “N x N integration problem” by defining commerce primitives (Cart, Line Item, Checkout, etc.) and roles (Agent Platform, Merchant, PSP, Credential Provider).

Features include manifests for discovery, state-machine checkouts, OAuth identity linking, and support for multiple transports (REST, MCP, A2A). It promotes “Agent Engine Optimization (AEO)” and keeps merchants as the Merchant of Record, countering data-scraping concerns.

Major Technology Advances Enabling Web 4.0

To build a bustling, global marketplace of intent, you first need infrastructure. Before agents can seamlessly negotiate your travel plans, broker micro-licenses for your content, or pay for API access, the internet needs new roads, traffic lights, verifiable identities, and a native financial layer.

Agentic Identity and Trust

Autonomous agents require robust digital identities distinct from traditional IAM. In the human web, we rely on domain names (DNS) and SSL certificates to know that a website is legitimate. But how do you verify an autonomous piece of code?

Key developments include:

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- **Decentralized Identifiers (DIDs)**, **Verifiable Credentials (VCs)**, and **Zero-Knowledge Proofs (ZKPs)** for persistent, cryptographically verifiable identities linked to human principals.
- **Standards like IETF's Agent Identity Protocol (AIP)**, **DNSid** (as a "birth certificate"), and **SCIM/NGAC** for provisioning and access control.
- **Agent Name Service (ANS)** from [GoDaddy](#) and [Cloudflare's Web Bot Auth / Signature Agent Card](#) for verifiable naming, intent declaration, and authentication. Built on proven public key infrastructure (PKI) and DNS, ANS allows website owners to distinguish a legitimate, verified agent acting on behalf of a human or business from an unidentified, potentially malicious bot.

These enable traceability, delegation, reputation systems, and economic autonomy (e.g., agents holding wallets via standards like ERC-8126).

Agentic Data Web and Personal Data Brokers

AI agents act as personal data brokers on a semantic **Agentic Data Web**, inspired by XDI protocols. Your sovereign personal agent maintains a unified, privacy-first repository and provides minimal, verifiable disclosures under user policies.

Examples include instant address updates across services, health record brokering, financial negotiations, and compliance—turning fragmented data into orchestrated, user-controlled flows. This shifts from data serfdom to stewardship, with semantic linking, zero-knowledge techniques, and audit trails.

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Payments and Economic Infrastructure

Once an agent's identity is verified and a site signals that "payment is required" for access, how does the agent actually pay? The old internet relied on human behaviors—filling out credit card forms, completing KYC checks, and managing subscriptions or API keys. These friction points simply do not scale in a machine-to-machine economy.

To solve this, the industry is turning to [x402](#), an open, neutral standard for internet-native payments. It revitalizes the historic, previously unfulfilled HTTP 402 ("Payment Required") status code. With x402, a server can natively reject an unpaid request and prompt the AI agent to pay instantly and retry.

Taming the Agent Web: Governance, Security, and Challenges

The infrastructure being deployed today isn't just about cybersecurity; it's about economics. By combining granular audit logs with transparent agent identity (ANS), access control, and frictionless micro-payments (x402), we are forging a new economic framework. It ensures that when an autonomous agent makes a request, it happens within a secure, accountable, and monetizable system.

By the early 2030s, the Agent Web could become as ubiquitous as electricity. Agents will create a ceaseless marketplace of minds—trading value, optimizing lives, and amplifying human agency—while we focus on creativity, relationships, and discovery. Success depends on building it with sovereignty, transparency, and fairness at the core.

Web 4.0: The Emergence of the Autonomous Agent to Agent Internet

The internet will no longer be something we browse. It will be an ecosystem that works for us—intelligently, autonomously, and tirelessly. The foundations are being laid today by Visa, Google, Cloudflare, GoDaddy, and the open standards community. The Agent Web is coming; the question is how thoughtfully we shape it.