BUILDING THE PARALLEL WEB FOR AI AGENTS

Payments, Identity, and Machine-Readable Commerce

Thorsten Meyer

ThorstenMeyerAI.com

February 2026

Executive Summary

AI agents could mediate **$3–5 trillion** of global consumer commerce by 2030. AI-driven shopping surged **693%** in 2025, accounting for **~20%** of holiday commerce (~$262 billion). Six major agent payment protocols launched between April and October 2025. The parallel web isn't a concept paper. It's under construction.

The API economy: **$16.29 billion** (34% CAGR), **$3+ trillion** in GDP enabled by APIs. **82%** of organizations API-first. But only **8%** of adults are in formal learning (OECD, declining). Capability bottlenecks will slow adoption and widen performance gaps.

Metric	Value
Agent commerce by 2030 (McKinsey)	$3–5 trillion
AI holiday commerce (2025)	~$262B (~20% share)
AI shopping surge (2025 YoY)	+693%
Payment protocols (Apr–Oct 2025)	6 major frameworks
API economy (2026)	$16.29 billion
API economy CAGR	34%
GDP enabled by APIs	$3+ trillion
Organizations: API-first	82%
Revenue from APIs (74% of orgs)	10%+
API demand from AI/LLMs (2026)	30%+ increase
Enterprises: independent agents (2026)	30% (Gartner)
x402 volume growth (1 month)	46K → 930K (20x)
Adults in formal learning (OECD)	8% (declining)
Commerce products published (2025)	5 billion (+46%)

1. Why This Trend Is Accelerating Now

Three conditions converging: agents can execute multi-step tasks, enterprises demand measurable outcomes over chatbot engagement, and payment/identity ecosystems are maturing for machine-mediated transactions.

Protocol	Backers	Function
ACP	OpenAI + Stripe	Programmatic purchase; AI executes in native interface
AP2	Google Cloud + Coinbase	Agent wallets; programmable settlement; auditable proofs
UCP	Shopify + Etsy, Target, Walmart	Agent discovery, negotiation, transaction completion
x402	Coinbase (stablecoin rail)	HTTP 402 for machine-to-machine micropayments
MCP	Anthropic + ecosystem	Agent-to-tool connectivity; structured data access
A2A	Google + ecosystem	Inter-agent negotiation and task delegation

The **Linux Foundation** established the Agentic AI Foundation — Anthropic, Block, Google, Microsoft, OpenAI — for interoperability, identity, and payment building blocks. AP2 launched with Lowe's, ServiceNow, Salesforce, PwC, 1Password, Shopee, and Worldpay.

"Six payment protocols in six months. The parallel web's settlement layer isn't a standards committee's agenda. It's a competitive land grab."

2. The Stack of the Parallel Web

Layer 1: Machine-Readable Interface

Component	Function	Status
Structured metadata	Agents discover and compare	5B products (+46%)
Action schemas	Agents know terms and permissions	Early; protocol-dependent

API-first docs	Agent integration without humans	Maturing; 82% API-first
Pricing endpoints	Programmatic negotiation	Nascent; protocol fragmentation

Layer 2: Trust and Identity

Component	Function	Status
Verifiable agent identity	Proves which agent is acting	Emerging; DIDs + Verifiable Credentials
Delegated authority	Proves human authorization	Standards-phase; ANS at IETF
Reputation attestations	Counterparty trustworthiness	Conceptual; no dominant standard
Compliance certificates	Regulatory standing verification	Early; linked to EU AI Act

30% of enterprises will rely on independent agents by 2026 (Gartner). Without a deployed identity layer, that 30% operates on implicit trust.

Layer 3: Payment and Settlement

Component	Function	Status
Micropayments	Per-call, per-query pricing	Active; x402 volume 20x in one month
Conditional payments	Settlement tied to completion proofs	Protocol-stage; AP2 architecture
Dispute/reversal	Autonomous error correction	Nascent; no standard mechanism
Cross-currency	Agents transact across boundaries	Stablecoin-based; Coinbase/x402

Layer 4: Governance and Legal

Component	Function	Status
Liability assignment	Who's responsible when agent errs?	Unresolved; jurisdiction-dependent

Contractual boundaries	What can agent commit to?	Early corporate experimentation
Audit obligations	Provable record of agent decisions	Linked to OWASP Agentic Top 10
Jurisdictional compliance	Cross-border regulatory adherence	Fragmentary; EU AI Act partial

"The parallel web has four layers: interface, identity, payment, governance. Three are under active construction. The fourth — governance — is where the lawsuits will come from."

3. Strategic Winners and Losers

Category	Why They Win	Examples
Machine-readable inventory platforms	Agents discover and transact	Shopify (UCP), structured-data retailers
Identity + payments + compliance	Solve hardest integration problem	Coinbase, Stripe, Okta
API-first incumbents	Already machine-addressable	Salesforce, ServiceNow
Structured data infrastructure	Enable the machine-readable layer	Salsify (5B products), commerce platforms

Category	Why They Lag	Risk
Fragmented API governance	No coherent machine-readable surface	Invisible to agent discovery
Perimeter-blocking strategies	Assume agents can be excluded	Lose transaction velocity
Human-UI-only presence	No structured data or action schemas	Excluded from agent commerce
Under-invested workforce	Can't build or govern agent systems	Widening performance gap

"Who is machine-addressable will increasingly determine who participates in digital growth. That's not a technology trend. It's a market access question."

4. The Readiness Gap: Skills and Institutional Lag

Indicator	Value
Adults in formal learning (OECD)	8%
Decline between survey cycles	>2 percentage points
Adults in non-formal job learning	37%
Non-formal learning decline	~3 percentage points
Where participation falls →	Literacy proficiency also falls

Enterprise Operating Model Changes

Function	Current Model	Parallel Web Model
Product	Human UX design	Agent experience (AX) alongside UX
Legal	Human-signed contracts	Machine-action boundaries; autonomous procurement limits
Finance	Invoice-based settlement	Programmable settlement; micropayment controls
Security	User-centric IAM	Actor-centric IAM (humans + agents)
Marketing	SEO, ads (human discovery)	Structured data, schemas (agent discovery)
Procurement	Human-negotiated contracts	Agent-negotiated terms within policy constraints

5. Public-Sector and Social-Impact Implications

Policy Question	Why It Matters	Status
Recommendation transparency	Are agent choices in consumer interest?	No regulatory framework
Protocol access	Can SMEs participate on equal terms?	Linux Foundation; early stage
Cross-border commerce	Which jurisdiction's rules apply?	Unresolved
Agent liability	Who pays when agents err?	No clear legal doctrine
Transaction data rights	Who owns the interaction data?	Fragmentary

"The parallel web is where competition policy meets protocol design. Get it right, and agent commerce democratizes market access. Get it wrong, and it's the app store gatekeeping problem — except the gatekeeper is an algorithm."

6. Practical Implications and Actions

For Enterprise Leaders

1. Agent-readiness audit of top revenue journeys. Can your highest-value products be discovered, compared, and transacted by agents? If not, you're invisible to the fastest-growing commerce channel.

2. Publish machine-readable policy and pricing endpoints. Action schemas, usage rights, negotiation parameters. Shopify's UCP merchants are already agent-addressable.

3. Pilot constrained agent-payment workflows. Strict caps, bounded scope, full audit trails. AP2 provides the template: wallet + settlement + proofs.

4. Implement verifiable agent identity. PKI-backed identity mapped to capabilities and permissions. Not shared API keys.

5. Cross-functional governance councils. Product, legal, security, finance — together. Agent commerce crosses every organizational boundary.

For Public-Sector Leaders

6. Ensure open, accessible agent-commerce standards. Linux Foundation's Agentic AI Foundation is a start. "Open" and "accessible to SMEs" aren't the same thing.

7. Agent recommendation transparency frameworks. When agents mediate $3–5T in commerce, recommendation logic becomes a market fairness issue.

8. Invest in workforce capability for the parallel web. Only 8% of adults in formal learning. The skills gap is structural, not cyclical.

What to Watch Next

- Whether ACP, AP2, or UCP emerges dominant — or interoperability prevails
- Growth of agent-native marketplaces where agents are primary buyers
- Regulatory scrutiny of opaque agent recommendation behavior
- Whether Agent Name Service (ANS) reaches deployment
- Whether SMEs gain or lose market access as agent commerce scales

The Bottom Line

The parallel web is the most consequential infrastructure shift since mobile commerce. **$3–5 trillion** in agent-mediated commerce by 2030. **Six protocols** in six months. **693%** growth in AI shopping. **20x** growth in x402 micropayments in a single month.

Firms that make their digital surfaces machine-addressable — structured data, action schemas, verifiable identity, programmable payments — will capture next-generation commerce velocity. Firms that assume human-UI-only is sufficient will become invisible to the agents doing the buying.

The parallel web won't replace the human internet. It will sit beside it — and the firms that aren't addressable on both won't be addressable at all.

The next great commerce platform won't have a homepage. It will have an action schema, a payment endpoint, and a machine-readable policy file — and the agent that finds it first will complete the transaction before the human finishes typing.

Thorsten Meyer is an AI strategy advisor who suspects the most important URL of the next decade won't be one humans ever visit — it'll be the machine-readable endpoint where an agent completes a $50,000 procurement in 400 milliseconds. More at ThorstenMeyerAI.com.

Sources

1. McKinsey — Agentic Commerce: $3–5T by 2030
2. POPcodes — AI Holiday Commerce: +693%, ~$262B
3. Orbilontech — API Economy 2026: $16.29B, 34% CAGR
4. OpenAI + Stripe — Agentic Commerce Protocol (ACP)
5. Google + Coinbase — Agent Payments Protocol (AP2)
6. Shopify Engineering — Universal Commerce Protocol (UCP)
7. Coinbase — x402: HTTP 402 Micropayments
8. Linux Foundation — Agentic AI Foundation
9. TokenMinds/Chainstack — x402 Architecture
10. Orium — Agentic Payments: ACP, AP2, x402
11. Fintech Brain Food — Agentic Payments Map
12. commercetools — AI Trends: Agentic Commerce 2026

13. Indicio — Verifiable Credentials for AI (2026)
14. arXiv — AI Agents with DIDs and VCs
15. arXiv — Authenticated Delegation
16. Strata — IAM for AI Agents 2026
17. HID Global — PKI for AI Agents
18. Dock.io — AI Agent Identity Management
19. OECD — Education at a Glance 2025: 8% in Learning
20. OECD — Trends in Adult Learning
21. Salsify — 5B Products, 768M Tasks Automated
22. Gartner — 30% Enterprises: Independent Agents (2026)
23. Gartner — 40% Apps with Agents by End 2026
24. Opascope — AI Shopping Assistant Guide 2026
25. GC TechAllies — Agentic Payment Overview
