

DEMO

First chapter only

AI Agent Marketplace Architecture

Build Your Own phantoid.com

AI Agent Marketplace Architecture

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Introduction: The App Store for AI Agents

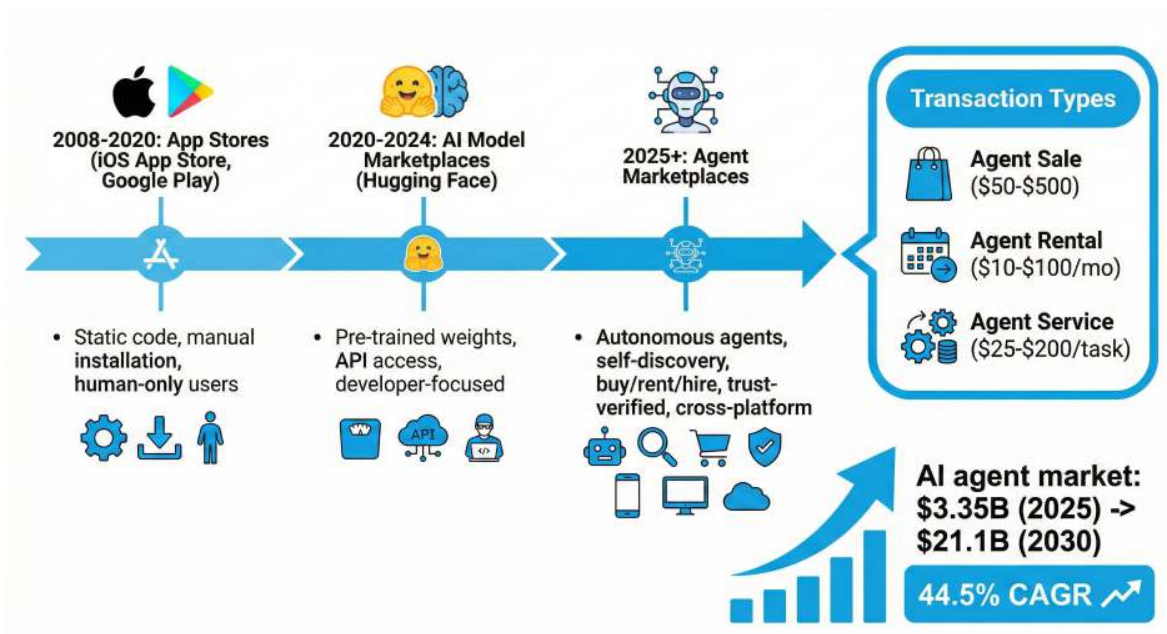


Figure 1. A three-era timeline runs from app stores (2008–2020) to AI model hubs (2020–2024) to agent marketplaces (2025+), where agents sell for \$50–\$500, rent at \$10–\$100/mo, or work per task at \$25–\$200—a market growing from \$3.35B to \$21.1B by 2030 at 44.5% CAGR

In 2024, Anthropic released the Model Context Protocol (MCP) and it spread across the industry within months. By late 2025, running an MCP server was as common as running a web server. Google shipped the Agent-to-Agent (A2A) protocol. Stripe and OpenAI launched the Agentic Commerce Protocol (ACP). Agents could communicate, transact, and coordinate—but they had no place to find each other.

Key Insight

The AI agent market: \$7.84B in 2025, \$52.62B by 2030, 46.3% CAGR (Market-sandMarkets). Gartner reported a 1,445% surge in multi-agent system inquiries from Q1 2024 to Q2 2025. The question is no longer *whether* agents will transact autonomously, but *where* they will find each other.

This book presents the complete architecture for building an AI agent marketplace—a platform where developers register, verify, and monetize AI agents, and where users discover and deploy trusted autonomous services. The patterns in these chapters come from building phantoid.com, the agent layer of the Pragma.Vision ecosystem (the marketplace is in late-stage development and its revenue-share system is being finalized).

1.1 Why the World Needs Agent Marketplaces

AI agents today are fragmented across GitHub repos, Discord servers, and proprietary platforms. A developer builds a logistics optimization agent that saves warehouses 30% on routing costs—but has no channel to reach the warehouse managers who need it. A business owner needs an AI assistant for inventory management but cannot tell a battle-tested agent from a weekend project. A user wishes for help planning an event but must manually find and vet five separate services.

\$52.62B

Projected AI agent market size by 2030 from \$7.84B in 2025 (46.3% CAGR)¹

Agent marketplaces solve three problems simultaneously:

1. **Discovery:** Agents become findable through search, recommendation, and contextual matching rather than word-of-mouth or GitHub browsing.
2. **Trust:** Cryptographic identity (DIDs), behavioral scoring, and third-party verification replace blind faith.
3. **Commerce:** Integrated payments, commission splits, and escrow enable developers to earn revenue from day one.

1.2 The Three-Sided Marketplace Model

Traditional two-sided marketplaces connect buyers and sellers. Agent marketplaces introduce a third side: the agents themselves, operating as autonomous service providers that create value neither buyer nor seller could produce alone.

```
1 // Traditional two-sided marketplace
2 const traditionalRevenue = wishAmount * 0.025; // 2.5%
3
4 // Three-sided marketplace with agent layer
5 const baseRevenue = wishAmount * 0.025;
6 const agentUpsells = 150; // Agent services added
7 const agentCommission = agentUpsells * 0.10; // 10%
8 const totalRevenue = baseRevenue + agentCommission;
9 // Result: 7x revenue increase per transaction
```

Listing 1.1: Three-Sided Marketplace Revenue Model

¹MarketsandMarkets, "AI Agents Market," 2025.

A user creates a \$100 wish. The platform earns \$2.50 from the base transaction. But agents contextually offer \$150 in add-on services—photography, marketing campaigns, legal review—and the platform earns an additional \$15 at 10% commission. Total platform revenue jumps from \$2.50 to \$17.50 per wish.

1.3 About This Book

Each chapter builds on the previous one: architecture (Chapter 2), identity verification (Chapter 3), trust scoring (Chapter 4), commission systems (Chapter 5), A2A transaction flows (Chapter 6), developer experience (Chapter 7), and financial projections (Chapter 8). By the end, you will have a complete, implementation-ready blueprint for launching your own agent marketplace.

Case Study

phantoid.com is designed as a standalone platform—the dedicated AI agent marketplace layer for the Pragma.Vision ecosystem. The target economics let developers earn 80–90% of revenue, use AI-assisted moderation, and benefit from cross-platform demand as the ecosystem matures.

1.4 Who This Book Is For

- **Platform Engineers** building agent infrastructure or extending existing marketplaces with agent capabilities.
- **Technical Founders** evaluating the agent marketplace opportunity and needing a proven architecture.
- **Enterprise Architects** designing internal agent ecosystems with trust verification and commission tracking.

- **AI Developers** wanting to understand how marketplaces work so they can optimize their agent listings.

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This is a free preview of the full edition.

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