

The AI Infrastructure for Multi-Agent Collaboration



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Our Background & Expertise

Loup Marquez-Luttringer

- AI & Software Engineering | 3 years of experience in AI projects & internships.
- Passionate about AI-driven applications, RAG, and autonomous AI agents.
- Worked on computer vision, AI inference systems, and full-stack development.

Noah Gibelli

- Generative AI Specialist | 2+ years of experience in AI security, deployment & customization.
- Strong expertise in RAG, model training, & chatbot development.
- Focuses on AI optimization & real-world integration.

Matheus Lopez

- Full-Stack & Backend Developer | Experience in Java, Golang, React, Angular, .NET & Node.js.
- Built backend systems using FastAPI and explored AI-powered decision-making.
- Passionate about bridging AI with real-world applications.

Why Does It Matters:

Our combined expertise in AI development, security, backend engineering, and software deployment positions us **to deliver** a scalable, intelligent, and business-ready **AI solution.**



Where did our Idea Came from?

Observing the AI Shift

• The rise of **ChatGPT sparked a wave of AI adoption**, but many businesses reacted with bans due to security concerns.

Industry Insights

• Conversations with IT professionals and research into AI trends (e.g., <u>VentureBeat on AI agents</u>) revealed a gap—companies lacked AI solutions they could fully control.

Brainstorming the Future

• Instead of restricting AI, why not help businesses integrate it securely? Horus was born to **bridge the gap**, offering **custom AI infrastructure** that companies **own & manage**.

This presentation dives into how Horus makes AI adoption seamless, secure, and scalable.



Breaking AI Silos: The Efficiency Crisis



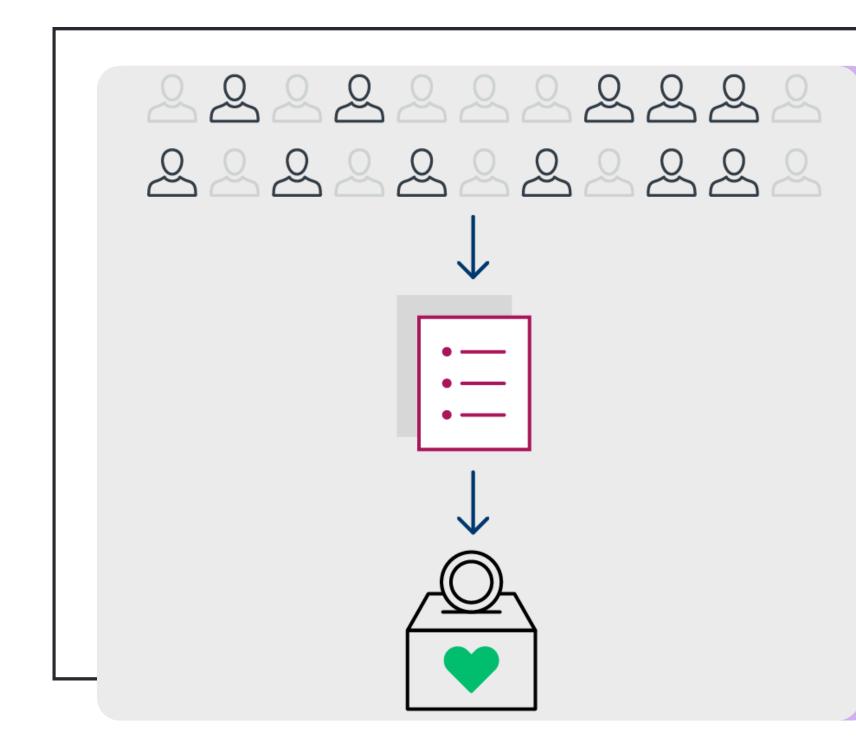
- **Businesses struggle** with disconnected AI systems that operate in **isolation**.
- Modern AI lacks real-time knowledge retrieval and adaptive decision-making.
- Enterprises **risk data privacy issues** and **vendor lock-in** with fully cloud-based AI solutions.
- The rise of the Internet of Agents (IoA) demands scalable, multi-agent AI collaboration.



Survey Insights

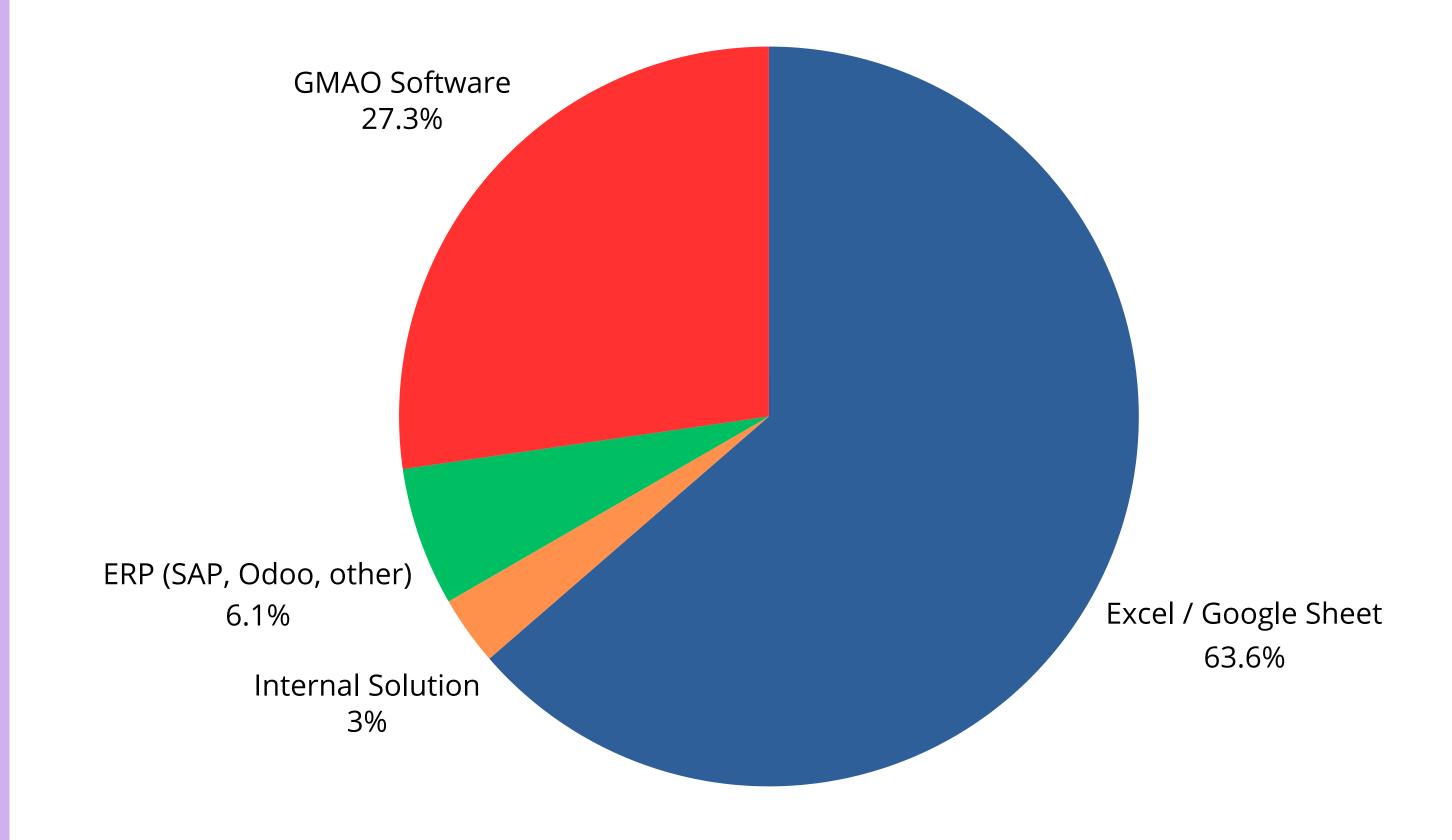
21 professionals from logistics, IT, and other fields shared their daily challenges and expectations for AI.

Source: Internal survey conducted by our team across multiple industries.





Too Much Manual Work - 16 out of 21 rely on Excel or Google Sheets for critical tasks.



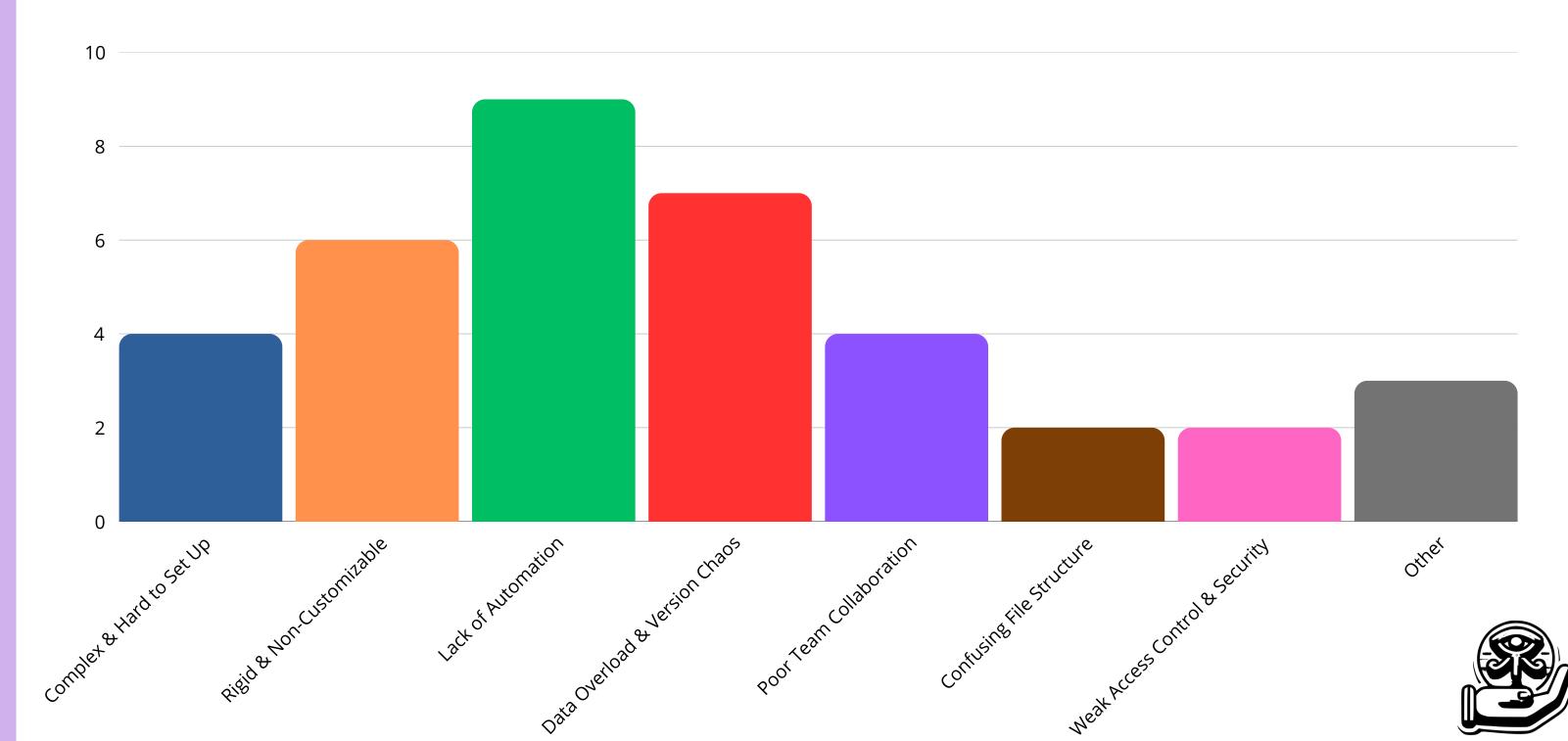


Why Work Feels Harder Than It Should

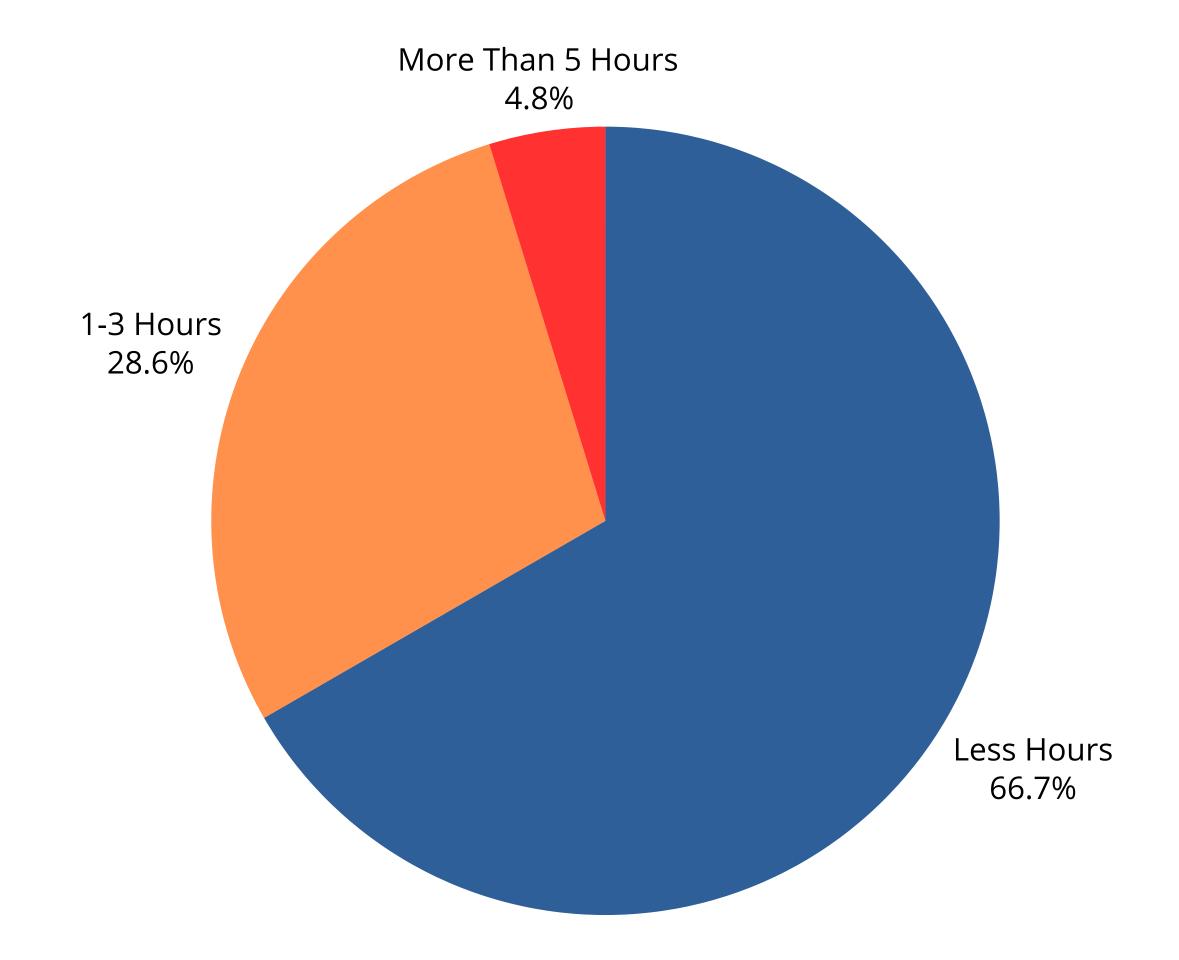
Too Many Repetitive Tasks - 9 say their tools lack automation.

Messy & Disorganized Files – 7 struggle with multiple file versions and poor collaboration.

Security Gaps – 2 highlight weak access control and data risks.

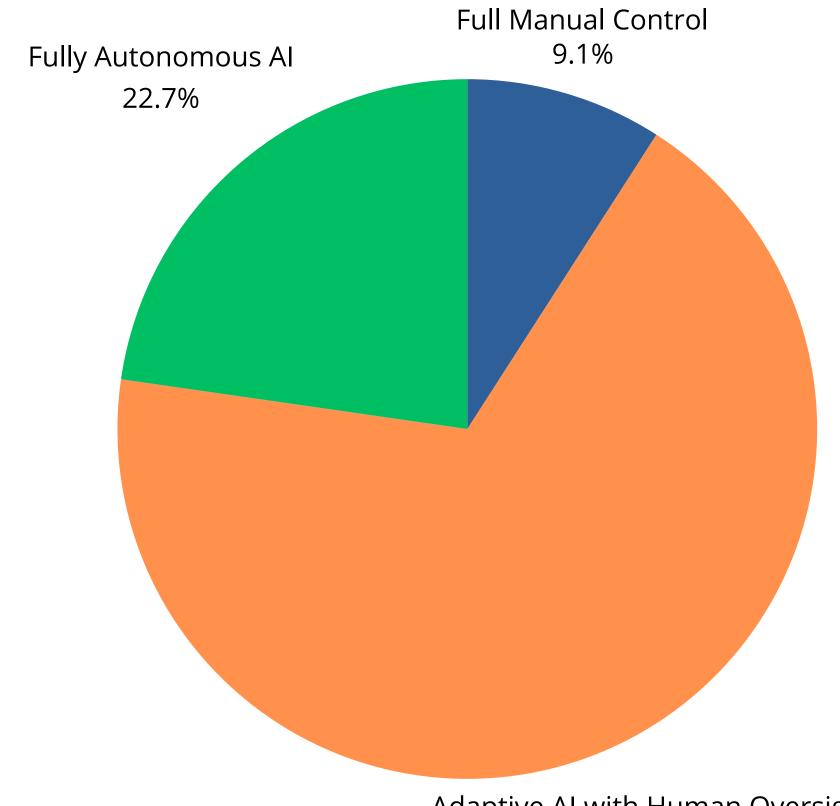


Wasted Time - 14 out of 21 lose at least an hour per week due to inefficient tools.





AI Should Help, Not Replace – 15 out of 21 want automation but still require human oversight.







Key AI Terms

Understanding these terms will help us grasp the topic better.

- AI Model A program that learns from data to make predictions or decisions on its own.
- RAG (Retrieval-Augmented Generation) An AI technique that looks up information in a database before generating a response.
- NLP (Natural Language Processing) A type of AI that helps computers understand and generate human language, like ChatGPT.
- **Agentic AI** AI that doesn't just respond but takes action on its own. It can plan, make decisions, and interact with other tools.
- **Machine Learning** A branch of AI where a program learns from data to make predictions or decisions without being manually programmed for every task.
- AI Agent A self-operating program that understands its surroundings, makes decisions, and takes actions to reach a goal.



Building Horus: The AI Blueprint

Horus is a software powered by **trusted AI models** like Neural Networks, RAG AI, and Large Language Models (LLMs).

It enables **AI agents to work together**, sharing knowledge, analyzing data, and making real-time decisions.

Designed for the **Internet of Agents (IoA)**, Horus **automates tasks**, adapts over time, and ensures secure, scalable AI integration tailored to business needs.

Horus isn't just AI—it's the foundation for intelligent, connected systems.



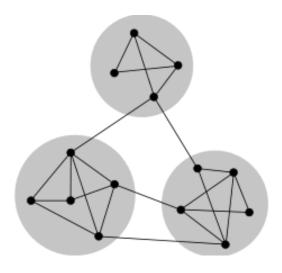
How Does Horus Stand Out

Without Horus X	With Horus 🗸	
AI works in isolation, lacking communication.	Seamless AI collaboration for better efficiency.	
Slow, manual decision-making reliant on human input.	Real-time, AI-driven decisions with adaptive learning.	
Rigid, hard-to-adapt systems.	Horus integrates effortlessly into any environment	
Data exposed to third-party clouds, increasing risk.	Secure, self-hosted AI for full control and privacy	

Horus transforms AI from disjointed and slow to connected, fast, and intelligent.

Why Choose Horus?

Seamless AI Collab.



AI agents exchange data in real-time.

Security & Flexibility.



Full control with cloud-free option.

★ Real-Time Intelligence.



Decisions powered by up-to-date insights.

Horus Key Features



Multiple AI agents collaborate, each with a specific role, just like a wellstructured company. Real Time
Decisions

Uses RAG to gather data and an agentic AI approach to apply intelligent decisions instantly.

Machine Learning

Self-improving AI through ongoing Machine Learning pipelines.

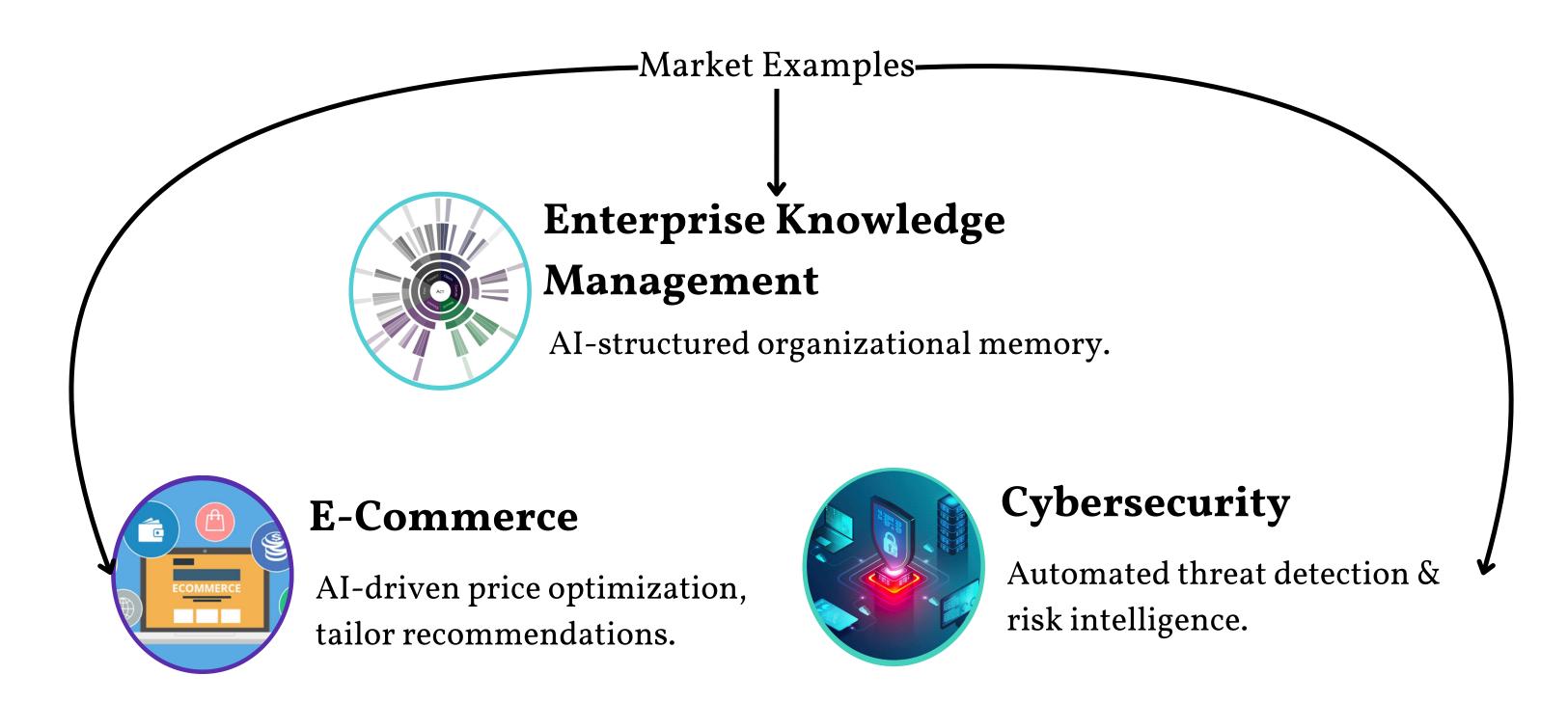
Safety & Flexibility

Fully self-hosted by default, ensuring complete data protection and privacy.



AI-Powered Solutions for Every Industry

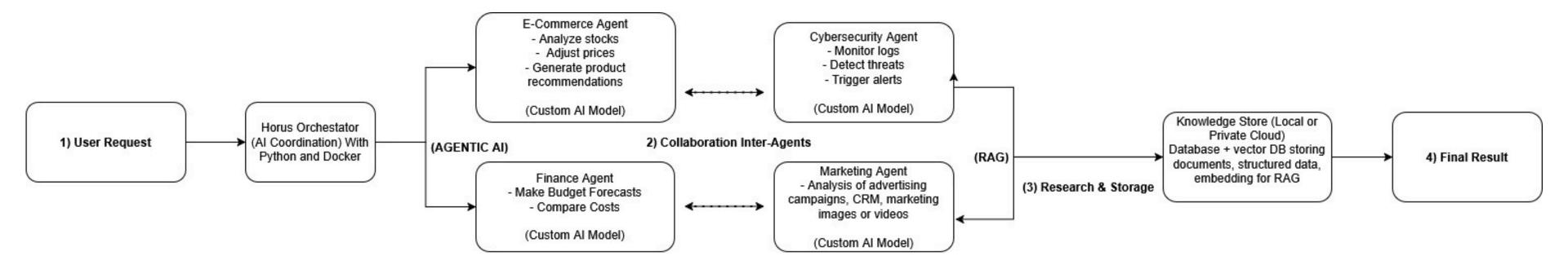
Horus adapts to any industry, scaling effortlessly to meet diverse needs.





Horus AI System: Coordination & Execution

Example of a Horus Multi-Agent Workflow



Orchestrator

- Manages coordination and request routing between AI agents.
- Fully local No calls to ChatGPT or external cloud services.
- Built in **Python** for flexibility and efficiency.

AI agents

- Containerized with Docker for security and isolation.
- Each agent can run a specialized AI model (e.g., NLP, classification).
- Internal communication via RPC or API message queues.



Horus AI System: Security & Deployment

Knowledge Store

- Stores business data, documentation, and embeddings.
- Enables **local RAG** for AI agents.
- Keeps all data on-premise No external cloud dependencies.

Self-Hosted / On-Premise

- Fully local Horus runs offline or on a private network.
- Total data control No leaks, no vendor lock-in.

Unlike ChatGPT, Horus doesn't just generate responses – it makes decisions using internal data and AI collaboration.



Horus in Action

System learns & improves & Adapts based on Readback and

Self-Improvement – AI adapts & evolves

User submits a request →"Analyze my sales data."

User Input – Request for analysis

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Final Output –

Dashboard, report, or action

Horus (Al Coordinator)

AI Coordination – Task breakdown & agent selection

Generates reports, dashboards, or

Collaboration – AI agents refine insights

Al agents collaborate →
Share insights and refine results.

Knowledge Retrieval – Fetch
relevant data

Agents retrieve data

Agents retrieve data

Access knowledge from the local

Access knowledge from



The AI Powering Horus

We Don't Build AI from Scratch – Horus leverages & customizes pre-existing AI models.

Pre-Trained AI Models – Uses LLaMA, Mistral, Falcon for fast knowledge retrieval & processing.

Autonomous AI Agents – AI that analyzes, decides & acts independently for specialized tasks.

Machine Learning Customization -

Fine-tuned AI for cybersecurity, automation & more.

AI Communication Protocol -

Ensures seamless data exchange & decision-making between AI agents.

Horus isn't ChatGPT API Calls— it's an AI orchestrator, coordinating multiple models to collaborate & take action.



Who is Horus For?

Horus is designed for businesses across multiple sectors, adapting to their unique needs.

IT & Security Leaders – Full AI control, compliance, and risk reduction.

E-Commerce & Retail Managers – Automated pricing, inventory, and sales optimization.

Enterprise Decision-Makers - Workflow automation and cost-efficient AI solutions.

Industrial & Logistics Operations – Predict demand and reduce downtime with AI.

Horus is built to scale across industries, transforming how businesses leverage AI.



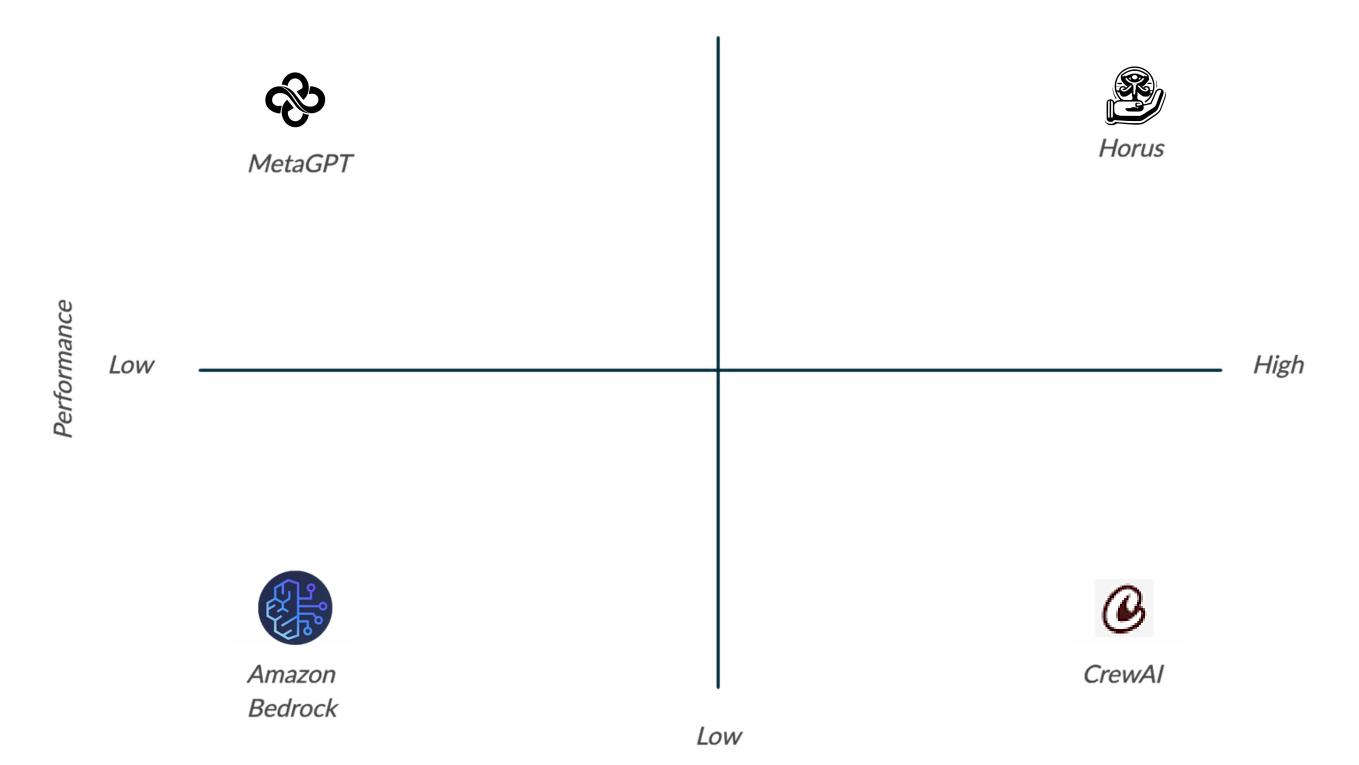
How Horus Stands Out from the Competition

Feature	Horus	Amazon Bedrock	MetaGPT	CrewAI
Multi-Agent Collaboration		×		
Real-Time Data Retrieval (RAG AI)			X	×
Autonomous AI Decision-Making (Agentic AI)		X		
Privacy & Security (Self-Hosting Option)		X	X	×
Industry Customization			X	X

What Sets Horus Apart

Quality

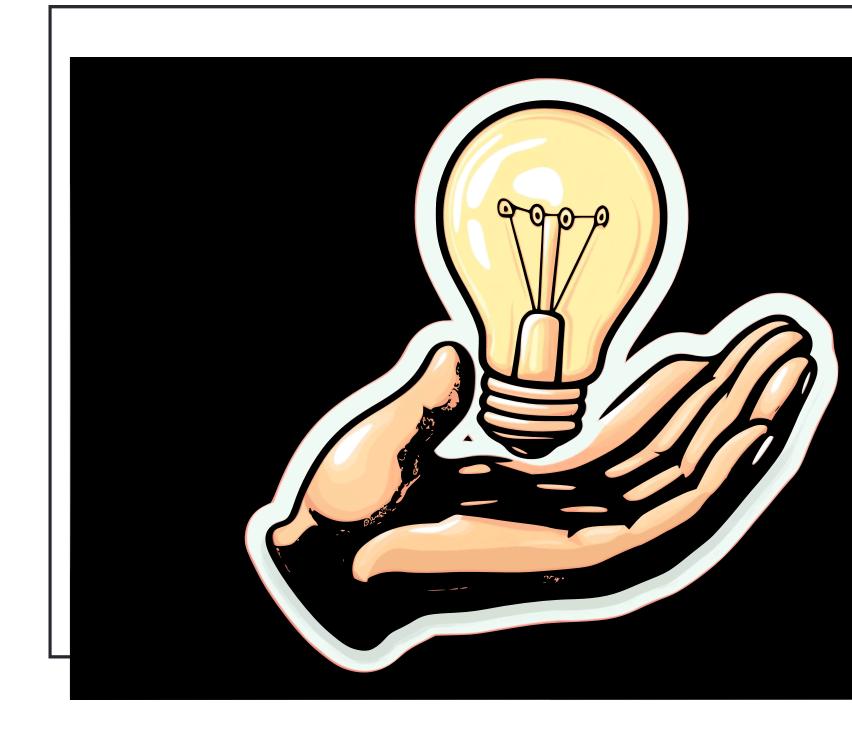
High





Horus Advantage: Intelligent & Adaptive AI

- Versatile Across Industries Horus adapts to any business, regardless of its sector.
- **Real-Time Intelligence** Continuously learns and updates to ensure the best decisions.
- **Autonomous AI** Thinks and acts independently, minimizing human intervention.





Horus Advantage: Secure & Scalable AI

- **Guaranteed Security & Privacy** Your data remains in your control, with no external providers.
- **Seamless Integration** Works with your existing tools and scales with your business.
- Fully Self-Hosted No external data leaks, no reliance on third-party AI.
- **Custom AI Models** Tailored open-source AI models for optimized performance.





Horus Development Milestones (Starting April 1, 2025)

Milestone	Objective	Target Date
I	Complete AI Agent System & Local Execution Engine	Month 4
II	Implement RAG AI (Knowledge Retrieval & Summarization)	Month 7
III	Develop Agentic AI (Task Automation & Workflow Learning)	Month 10
IV	Release Modular AI Agent Marketplace & UI Enhancements	Month 13
V	Beta Release & Early Business Testing	Month 16

Revenue Model & Market Strategy

AI Marketplace

Access premium AI tools & features on demand.

Cloud & Hardware Bundles

Optional turnkey AI infrastructure through strategic partnerships.

Training & Certification

Upskill teams with AI education & professional certification programs.

Enterprise License

Access the core Horus AI infrastructure & software with a one-time licensing fee.

AI Model Subscription

Customize Horus with specialized AI models tailored to business needs.

Consulting & Integration

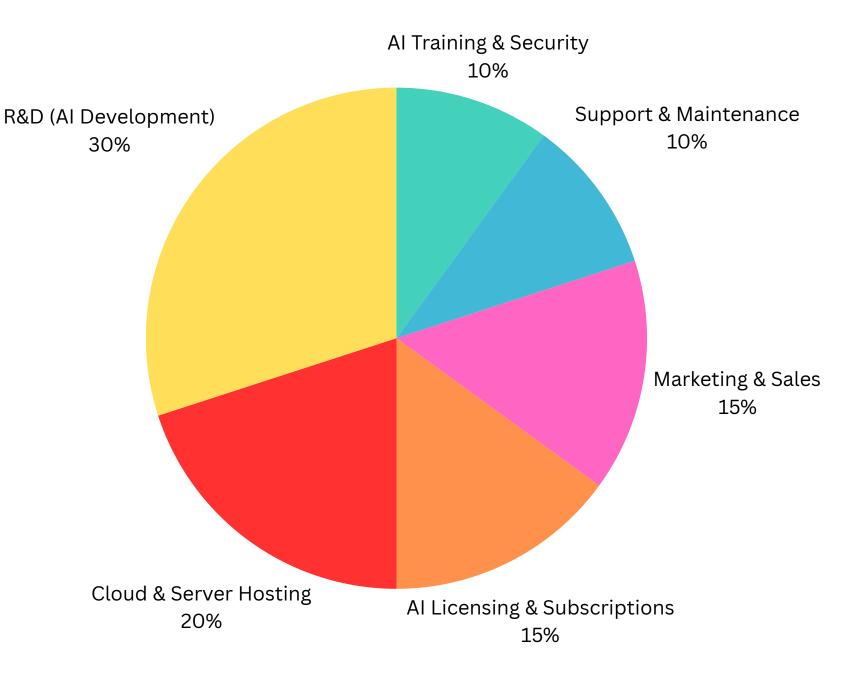
Expert guidance for seamless AI deployment & optimization.

Horus provides the foundation – businesses choose the AI models they need.



Cost Structure: Key Investments

- **R&D 30%** Developing, testing, and improving AI models.
- **AI Licensing 15%** Access to external AI frameworks.
- Cloud & Hosting 20% Servers for training and execution.
- Marketing & Sales 15% Growth, partnerships, and customer acquisition.
- **Support & Maintenance 10**% AI upkeep and user assistance.
- **Training & Security 10**% Updates, compliance, and cybersecurity.





Thank you.



Empowering AI to Think, Connect, and Act —Beyond Automation, Towards Intelligence.