

M C P S E R V E R

N O C O D E

C L O U D H O S T E D

AI Automation ROI Engine is a financial modeler.

Get hard numbers on your automation project viability.

AI Automation ROI Engine gives your AI client the math it needs to vet automation proposals. Instead of guessing if a project makes sense, you use this MCP to run NPV calculations, simulate how fast employees actually adopt new tools, and weigh disruption risks against potential savings. It turns vague ideas into concrete financial models.

roi

npv

financial-modeling

automation-analysis

risk-assessment



The connectivity layer between AI and the world's software.



Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest
managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.

— Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256

Encryption at rest

Ed25519

PKI vault signatures

24h TTL

Ephemeral session keys

V8 Isolate

Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT`https://edge.vinkius.com/{token}/mcp`

Claude



Cursor



VS Code



Windsurf



Grok



Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

06 — Honeypot Trap System

Phantom credentials are injected into isolated environments. If a honeypot is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1)
Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

Get started at cloud.vinkius.com — connect your AI agent in under 60 seconds.

AI Automation ROI Engine MCP

4 tools available

Cloud-hosted on Vinkius

You shouldn't greenlight an automation project based on gut feeling. This MCP gives your agent the ability to run rigorous financial stress tests on any proposal. You can model how different implementation timelines affect your cash flow or how much a sudden drop in employee adoption might delay your payback period. It handles the heavy lifting of calculating Net Present Value and risk-adjusted returns, so you can focus on the strategic decision. Whether you are comparing two different software implementations or trying to figure out if a specific workflow change is worth the upfront cost, this tool provides the mathematical backbone for your business cases.

Core Capabilities

01 — NPV Calculation

Your agent uses this to determine the current value of future automation savings.

02 — Risk Modeling

The agent runs sensitivity tests to see how disruption impacts your bottom line.

03 — Adoption Simulation

Your agent calculates how employee usage rates change the speed of cost recovery.

04 — Investment Ranking

The agent compares multiple proposals to find the most efficient path forward.

05 — Payback Analysis

Your agent determines exactly how long it takes to recoup the initial project cost.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/ai-automation-roi-engine — connect your AI agent in three steps.

- 01 Connect the MCP to your client like Claude or Cursor via Vinkius.
- 02 Provide your agent with the project costs, expected savings, and risk factors.
- 03 Ask the agent to run specific calculations or simulations.
- 04 Review the resulting NPV, payback periods, or ranked options.

Connecting this MCP to your client gives your agent immediate access to a financial modeling engine.

Built For

This MCP is built for professionals who need to justify automation spend with hard data. It bridges the gap between technical ideas and financial reality.

Finance Managers

They use the agent to run NPV and risk-adjusted return models for new tech spend.

Operations Leaders

They hand off workflow data to the agent to see if automation actually saves time and money.

Automation Engineers

They use the tool to provide financial proof to stakeholders before starting a build.

What Changes When You Connect

- 01 Replaces manual spreadsheet modeling with direct agent queries.
- 02 Accounts for disruption risk in every financial projection.
- 03 Models the impact of human adoption on financial recovery.

- 04** Provides a standardized way to compare competing automation ideas.
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Real-World Applications

Budget Approval

Generate a formal ROI report to present to leadership for a new software purchase.

Vendor Comparison

Compare two different automation vendors to see which one pays for itself faster.

Risk Assessment

Test how a high disruption risk might turn a profitable project into a loss.

Implementation Planning

Use adoption simulations to set realistic expectations for when savings will actually hit the books.

4 Tools Available

#	TOOL	DESCRIPTION
01	calculate_automation_roi	This tool generates a full financial breakdown for a specific automation project. It provides the core metrics needed to see if the math works.
02	compare_automation_options	Use this to rank different automation proposals against each other. It identifies which investment offers the best efficiency.
03	get_risk_sensitivity_analysis	This tool checks how much your project's success depends on specific risks. It shows how sensitive your returns are to potential disruptions.
04	simulate_adoption_scenarios	This tool models how different levels of employee buy-in change your results. It helps you see how adoption speed impacts cost recovery.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

- U** Calculate the ROI for an automation project with €50,000 annual savings, €20,000 cost, 6 months implementation, and 0.2 disruption risk.



The project has a Net Present Value (NPV) of €28,450, a payback period of 5 months, and a risk-adjusted return of €24,100. The project is considered viable.

- U** Simulate the monthly savings for a project with €100,000 base savings, 0.3 disruption risk, over 12 months.



The total realized savings over 12 months is €65,000, with monthly savings starting at €2,500 and scaling up as adoption increases.

- U** Compare these two options: Option A (€10k cost, €50k savings, 3m timeline, 0.1 risk) and Option B (€15k cost, €60k savings, 4m timeline, 0.3 risk).



Option A is ranked first with a higher risk-adjusted return, followed by Option B.

Frequently Asked Questions

01 What kind of financial metrics does this MCP provide?

It calculates Net Present Value (NPV), payback periods, and risk-adjusted returns for your automation projects.

02 Can I compare two different automation tools?

Yes, you can use the `compare_automation_options` tool to rank multiple proposals based on their efficiency and returns.

03 How does the MCP handle project risk?

The `get_risk_sensitivity_analysis` tool determines how sensitive your project's viability is to changes in disruption risk.

04 Does this account for how long it takes employees to use the new tool?

Yes, the `simulate_adoption_scenarios` tool evaluates how different levels of employee adoption affect the speed of cost recovery.

05 Which AI clients can I use this with?

You can use this MCP with any compatible client, including Claude, Cursor, and Windsurf.

Go Live in 60 Seconds

Get your connection token from cloud.vinkius.com, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

`https://edge.vinkius.com/[TOKEN]/mcp`

CLIENT	WHERE TO CONFIGURE
 Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
 Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
 VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add <code>"ai-automation-roi-engine": { "url": "..." }</code>
 Windsurf	MCP Settings → <code>mcp_settings.json</code> → Add endpoint URL
 ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
 Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

-  Ask ChatGPT 
-  Ask Claude 
-  Ask Perplexity 
-  Ask Gemini 
-  Ask Grok 

READY TO CONNECT

AI Automation ROI Engine is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and
start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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