



# Secret AI Rails

## The Execution Layer for AI That Enterprises Can Trust

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### Executive Summary

**Secret AI Rails is the infrastructure that allows AI to act — not just assist.**

We are building the execution layer that enables businesses to deploy AI automation with three non-negotiable guarantees:

1. **Trust** — Every AI action is policy-governed and controlled
2. **Proof** — Every action is verifiable, auditable, and cryptographically proven
3. **Confidentiality** — Data is protected even while being processed

Unlike AI copilots that stop at suggestions, Secret AI Rails enables AI to **execute real business operations** — sending communications, processing documents, updating systems, making decisions — inside a controlled, verifiable, and confidential runtime.

**"Trust — not intelligence — is the bottleneck to AI adoption. We remove that bottleneck."**

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### The Problem We Solve

#### AI Can Think, But Enterprises Won't Let It Act

Modern AI is capable of reasoning, drafting, and deciding. Yet enterprises still do not let AI **execute**.

flowchart LR subgraph Today["Today's Reality"] A[AI Recommends] --> B[Human Reviews] B

--> C[Human Executes] C --> D[Human Documents] end subgraph Problem["The Problems"]  
P1[Slow] P2[Expensive] P3[Error-Prone] P4[Not Scalable] end Today --> Problem

## Why?

Barrier	Impact
AI actions cannot be trusted	Humans must review everything
No proof that actions occurred correctly	Compliance and audit impossible
Errors are costly and risky	Conservative, manual processes remain
Data confidentiality not guaranteed	Sensitive workflows excluded from AI

## The Result:

- Humans remain in the execution loop
- AI adoption stalls at "assistive" use cases
- Operational costs stay high
- AI ROI remains unrealized

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## Our Solution: Secret AI Rails

### The Missing Layer Between AI Reasoning and Business Outcomes

flowchart TB subgraph Input["Triggers"] E1[Email Received] E2[Slack Message] E3[Document Uploaded] E4[API Request] end subgraph Rails["Secret AI Rails"] direction TB Policy[Policy Engine<br/>Thresholds & Gates] AI[AI Reasoning<br/>Classify, Extract, Decide] Exec[Confidential Execution<br/>Encrypted VM Runtime] Proof[Proof Ledger<br/>Append-Only Record] end subgraph Output["Outcomes"] O1[Email Sent] O2[Ticket Created] O3[Document Processed] O4[System Updated] end Input --> Policy Policy --> AI AI --> Exec Exec --> Proof Exec --> Output style Rails fill:#1a1a2e,stroke:#00d4ff,stroke-width:2px style Exec fill:#0d7377,stroke:#14ffec,stroke-width:2px style Proof fill:#212121,stroke:#00d4ff,stroke-width:2px

# What Secret AI Rails Does

Capability	Description
<b>Policy Enforcement</b>	Define what AI can and cannot do. Set thresholds, require approvals, enforce compliance rules.
<b>Confidential Execution</b>	Every workflow runs in its own encrypted VM. Data protected in memory, in storage, everywhere.
<b>Proof Generation</b>	Every action produces cryptographic proof — what happened, when, why, and who authorized it.
<b>Human Gates</b>	Insert approval checkpoints for high-risk actions. AI proposes, humans approve when needed.
<b>Audit Trail</b>	Complete, tamper-evident record of all AI actions. Export for compliance, replay for debugging.

## The Mental Model

AI decides *what* to do. Secret AI Rails controls *whether, how, and with what proof* it happens.

## Why We Are Uniquely Positioned

### We Already Own the Infrastructure

We are not starting from zero. We operate a **production confidential cloud platform** today.

```
graph TD; Existing["What We Have Today (Production)"] --> Portal[Web Portal<br/>AWS/Azure-like Experience]; Existing --> CVM[Confidential VMs<br/>Intel TDX / AMD SEV]; Existing --> GPU[NVIDIA H100 CC<br/>Confidential GPU]; Existing --> KMS[Blockchain KMS<br/>Attestation-Gated Keys]; Existing --> Customers[Production Customers<br/>Docker Compose Deployments]; New["What We're Adding (AI Rails)"] --> Studio[Workflow Studio<br/>Visual Builder]; New --> Components[Component Packs<br/>Email, Slack, Voice, etc.]; New --> Dashboard[Operations]
```

Dashboard<br/>Approvals & Audit] Ledger[Proof-of-Work Ledger<br/>Cryptographic Evidence] PolicyEng[Policy Engine<br/>Gates & Thresholds] end Existing --> New style  
 Existing fill:#1a1a2e,stroke:#00d4ff,stroke-width:2px style New  
 fill:#0d7377,stroke:#14ffec,stroke-width:2px

## The Vertical Integration Advantage

Layer	Our Position	Competitors
Infrastructure	<input checked="" type="checkbox"/> Owned — our portal, our hardware	Rent from AWS/Azure/GCP
Confidential Compute	<input checked="" type="checkbox"/> Native — TDX, SEV, H100 CC expertise	Bolted on, if available at all
Key Management	<input checked="" type="checkbox"/> Blockchain KMS — attestation-gated	Third-party dependency
AI Execution	<input checked="" type="checkbox"/> Secret AI Rails — building now	Non-existent
Proof Layer	<input checked="" type="checkbox"/> Native ledger — our expertise	Non-existent or afterthought

We control the entire trust chain. No third-party dependencies. No margin leakage.

## Technical Moat

Capability	Competitive Implication
Intel TDX / AMD SEV expertise	12-18 month head start on competitors
NVIDIA H100 Confidential Compute	Ready for GPU inference when others are still figuring out CPU isolation
Blockchain-based KMS	Attestation-gated key release is solved — others must build or buy
Ledger/proof systems	Audit trail is native to our thinking, not bolted on

# Why NOW Is the Time

## Five Forces Converging

flowchart TB subgraph Forces["Market Forces Converging NOW"] F1[AI Capability<br/>LLMs can execute operational tasks] F2[CC Maturity<br/>TDX/SEV production-ready] F3[Market Demand<br/>Copilot fatigue, want execution] F4[Cost Pressure<br/>CFOs want AI to replace, not assist] F5[Regulation<br/>Auditability becoming mandatory] end Forces --> Window[Optimal Window<br/>2025-2026] Window --> Opportunity[Category Definition<br/>Opportunity] style Window fill:#0d7377,stroke:#14ffec,stroke-width:3px style Opportunity fill:#1a1a2e,stroke:#00d4ff,stroke-width:2px

## The Timing Analysis

Factor	Status	Implication
<b>AI Capability</b>	LLMs reliably execute operational tasks	"Can AI do this?" is answered
<b>Confidential Compute</b>	TDX/SEV/H100 CC production-ready	Infrastructure to build trusted execution exists
<b>Enterprise Sentiment</b>	Copilot fatigue setting in	Buyers want AI that <b>acts</b> , not just suggests
<b>Economic Pressure</b>	Efficiency mandates, headcount pressure	CFOs asking "where can AI replace work?"
<b>Regulatory Environment</b>	EU AI Act, SEC guidance, industry rules	Auditability shifting from optional to mandatory

## Why Not Wait?

- Hyperscalers will eventually build this (they're slow, but they'll come)
- Category definition happens now — latecomers become "also-rans"
- Our infrastructure advantage compounds with time — but only if we move

- First-mover in "trusted AI execution" can own the category
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# The Platform Architecture

## Three Planes of Operation

```

flowchart TB subgraph Build["BUILD PLANE"] Studio[Workflow Studio<br/>AI-Assisted Visual Designer] Packs[Component Packs<br/>Domain Capabilities] Registry[Workflow Registry<br/>Versioned Artifacts] end subgraph Operate["OPERATE PLANE"] Dash[Dashboard<br/>Status & Metrics] Policy[Policy Configuration<br/>Thresholds & Gates] Audit[Audit Explorer<br/>Proofs & Evidence] Alerts[Alerts & SLOs<br/>Monitoring] end subgraph Execute["EXECUTE PLANE"] Orch[Workflow Orchestrator] subgraph CC["Confidential Computing Layer"] CVM[Per-Workflow CVM<br/>Encrypted Memory & Disk] GPU[H100 Confidential GPU<br/>When Needed] Ledger[Proof-of-Work Ledger<br/>Append-Only] end Conn[Connector Runtime<br/>Integrations] Keys[Key Management<br/>Attestation-Gated] end
Studio --> Packs
Studio --> Registry
Dash --> Audit
Dash --> Alerts
Registry --> Orch
Orch --> Orch
CVM --> Ledger
CVM --> Conn
CVM --> GPU
CVM --> Keys
Audit --> Ledger
style Build fill:#2d3436,stroke:#00d4ff,stroke-width:2px
style Operate fill:#2d3436,stroke:#00d4ff,stroke-width:2px
style Execute fill:#1a1a2e,stroke:#14ffec,stroke-width:2px
style CC fill:#0d7377,stroke:#14ffec,stroke-width:2px

```

## Workflow Execution Model

```

sequenceDiagram participant T as Trigger participant O as Orchestrator participant P as Policy Engine participant H as Human Gate participant V as Confidential VM participant S as External Systems participant L as Proof Ledger
T->>O: Event received
O->>L: Log TRIGGER RECEIVED
O->>P: Evaluate policies
P-->>O: Allow / Require Gate alt Human Approval Required
O->>H: Request approval (Dashboard)
H-->>O: Approve / Deny
O->>L: Log HUMAN_GATE_DECISIONED
end
O->>V: Execute in Confidential VM
V->>S: Perform action (API call)
S-->>V: Response + Evidence
V->>L: Log ACTION_EXECUTED + Evidence Hash
V->>O: Step complete
O->>L: Log WORKFLOW_COMPLETED

```

# Confidential VM Lifecycle

stateDiagram-v2 [\*] --> Provisioned: Deploy Workflow Provisioned --> Attested: Attestation Check Attested --> KeysReleased: KMS Releases Keys KeysReleased --> Running: Start Runtime Running --> Running: Execute Workflows Running --> RotatingKeys: Periodic Key Rotation RotatingKeys --> Running Running --> Terminated: Scale Down / Decommission Terminated --> [\*] note right of Attested: Hardware verification<br/>ensures VM integrity note right of KeysReleased: Secrets only released<br/>to verified environments

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## V1 Product Scope

### Target Use Case

**Trusted business communications automation** — starting with email, messaging, and customer-facing workflows.

### Platform Core (Must Ship)

Area	Components
<b>Build</b>	Basic workflow studio, visual graph editor, compiler, versioning
<b>Execute</b>	Confidential VM runtime (CPU-only initially), proof ledger, policy engine
<b>Operate</b>	Dashboard with status, approvals, and audit views
<b>Trust</b>	Attestation-gated KMS, encrypted storage, idempotency framework, evidence hashing

## V1 Component Pack

Component	Capabilities
<b>Email Automation</b>	Classify intent, extract fields, draft response, send with verification
<b>Slack Integration</b>	Handle requests, approvals in-channel, notifications

Component	Capabilities
<b>Web Search</b>	Factual lookup, citation capture
<b>Social Sentiment</b>	Monitor mentions, analyze sentiment, alert on issues
<b>Product Q&amp;A Bot</b>	Knowledge-grounded answers, escalation gates
<b>Scheduler</b>	Calendar coordination, booking automation
<b>Voice (Basic)</b>	STT transcription, intent detection, escalation

## Explicitly NOT in V1

- GPU-dependent large-scale inference
  - Fully autonomous financial transactions
  - Open-ended agent tool use
  - Third-party component marketplace
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## Business Value Proposition

### Quantifiable Outcomes

Metric	Without AI Rails	With AI Rails
<b>Time to Resolution</b>	Hours/days (human queues)	Seconds/minutes
<b>Cost per Operation</b>	\$5-50 (human labor)	\$0.10-1.00
<b>Availability</b>	Business hours	24/7/365
<b>Error Rate</b>	2-5% (human inconsistency)	<1% (deterministic)
<b>Audit Preparation</b>	Days/weeks (manual)	Minutes (ledger export)
<b>Compliance Risk</b>	High (undocumented)	Low (100% coverage)

## Value by Stakeholder

Stakeholder	Value Delivered
Operations	Remove humans from execution paths. 24/7 automation.
Finance	Reduce cost per operation. Predictable, scalable costs.
Compliance	Audit-ready from day one. Cryptographic proof of all actions.
Security	Data never leaves confidential environment. Zero-trust by design.
IT	Managed infrastructure. No ML expertise required.
Executive	Actual AI ROI. Competitive advantage through automation.

## Competitive Positioning

### Market Landscape

quadrantChart title AI Automation Market Position x-axis Assistants Suggest --> Execution Act y-axis Low Trust/Proof --> High Trust/Proof quadrant-1 THE OPPORTUNITY quadrant-2 Compliance Tools quadrant-3 AI Assistants quadrant-4 Workflow Automation Copilots: [0.2, 0.3] ChatGPT: [0.25, 0.25] LangChain: [0.35, 0.2] Zapier: [0.75, 0.3] UiPath: [0.8, 0.35] Secret AI Rails: [0.85, 0.9]

### Competitive Analysis

Competitor Type	What They Offer	What We Offer
Hyperscalers (AWS, Azure, GCP)	General cloud + fragmented AI services	Integrated confidential AI execution platform
AI Platforms (OpenAI, Anthropic)	Models via API, no execution layer	Complete execution infrastructure, model-agnostic
Workflow Tools (Zapier,	Automation without	Automation with proof, policy,

<b>Competitor Type</b>	<b>What They Offer</b>	<b>What We Offer</b>
n8n)	trust guarantees	confidentiality
<b>RPA</b> (UiPath, Automation Anywhere)	Legacy automation, not AI-native	AI-native, confidential, auditable
<b>Agent Frameworks</b> (LangChain, CrewAI)	Developer tools, no runtime	Production runtime with trust guarantees

## Why We Win

<b>Dimension</b>	<b>Our Advantage</b>
<b>Integration</b>	Only platform combining execution + trust + proof + confidentiality
<b>Infrastructure</b>	We own the stack — no dependencies, no margin leakage
<b>Expertise</b>	Deep CC experience (TDX/SEV/H100) others don't have
<b>Focus</b>	Purpose-built for trusted AI execution, not retrofitted
<b>Timing</b>	Production platform ready, category is undefined

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## Go-to-Market Strategy

### Phase 1: Prove (Current → 6 months)

**Goal:** Prove AI can safely replace humans in execution

- 2-3 SMB pilots on trusted communications automation
- MIT pilot partnership
- Establish success metrics and case studies
- Refine v1 component pack based on real usage

## Phase 2: Expand (6-18 months)

**Goal:** Horizontal expansion across workflows and customers

- Additional workflow types (document processing, customer ops)
- Expand customer base (SMB → mid-market)
- Add component packs (legal, finance, IT ops)
- Self-serve onboarding for standard use cases

## Phase 3: Platform (18+ months)

**Goal:** Become the default execution layer for enterprise AI

- Enterprise sales motion
- Partner ecosystem (SI, ISV integrations)
- Component marketplace
- Cross-industry expansion

## Target Customers

Segment	Why They Buy	Entry Point
SMBs	Need automation, can't afford complexity	Pre-built templates, self-serve
Regulated SMBs	Serve enterprise customers, need compliance	Audit-ready automation
Mid-Market	Cost pressure, scaling operations	Department-level automation
Enterprise	Compliance mandate, AI governance	Platform for AI operations

# Revenue Model

## Pricing Dimensions

Dimension	Model
Infrastructure	Compute usage (VM hours, storage)
Execution	Workflow runs, API calls
Platform	Tier-based access to Studio, Dashboard, Components

## Tier Structure (Conceptual)

Tier	Includes	Target
Starter	VM Portal + 2 workflow templates + basic dashboard	Testing, micro-business
Growth	Full Studio + core component packs + policy engine	SMB automating operations
Scale	Everything + custom components + priority support + SLAs	Growing SMB, regulated industries
Enterprise	Custom deployment, dedicated support, advanced compliance	Mid-market and enterprise

## Revenue Amplification

Every AI Rails workflow drives additional infrastructure revenue:

- More VM compute hours
- More storage for evidence and logs
- More KMS operations
- Higher customer lifetime value

# Risk Analysis & Mitigation

Risk	Likelihood	Impact	Mitigation
<b>Engineering Complexity</b>	Medium	High	Team has proven CC expertise; narrow v1 scope
<b>Sales Cycle Length</b>	Medium	Medium	Start with SMB (faster cycles); land-and-expand
<b>Hyperscaler Competition</b>	Medium	High	18-month head start; vertical integration; category ownership
<b>Scope Creep</b>	Medium	Medium	Disciplined v1 definition; prove wedge before expanding
<b>Market Timing</b>	Low	High	Multiple signals confirm timing is right

## The Moat

### Why This Is Defensible

flowchart TB subgraph Moat["Compounding Defensibility"] Tech[Technical Moat<br/>CC Expertise, Vertical Stack] Product[Product Moat<br/>Only Integrated Trust Platform] Data[Data Moat<br/>Workflows + Proof Ledgers] Switch[Switching Cost<br/>Audit History, Integrations] Brand[Brand Moat<br/>Category Definition] end Tech --> Product Product --> Data Data --> Switch Switch --> Brand Brand --> Tech style Moat  
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Moat Type	How It Works
<b>Technical</b>	12-18 months of CC expertise competitors don't have
<b>Product</b>	Only platform combining execution + trust + proof + confidentiality
<b>Data</b>	Customer workflows and proof ledgers create lock-in over time

Moat Type	How It Works
<b>Switching Cost</b>	Audit trails, compliance history, workflow dependencies
<b>Category</b>	First to define "trusted AI execution" — we set the terms

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## Team Readiness

### Relevant Expertise

Capability	Team Status
Intel TDX / AMD SEV	✓ Production experience
NVIDIA H100 Confidential Compute	✓ Ready for deployment
Encrypted filesystems	✓ Implemented
Blockchain-based KMS	✓ In production
Ledger / proof systems	✓ Core competency
Cloud platform operations	✓ Currently operating

## Current Traction

Asset	Status
Web portal (VM provisioning)	✓ Production
Confidential VM infrastructure	✓ Production
Production customers	✓ SMBs deploying Docker apps
Pilot commitments	✓ 2-3 SMBs + MIT connection

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# Investment Ask & Use of Funds

## What We Need

Category	Purpose
Engineering	Build Workflow Studio, policy engine, dashboard, component packs
Infrastructure	Scale confidential compute capacity for pilot growth
Go-to-Market	Sales, marketing, customer success for SMB expansion
Operations	Support, documentation, compliance certifications

## Milestones

Milestone	Deliverable
M1	V1 platform complete (Studio, Dashboard, Core Components)
M2	3-5 paying pilot customers
M3	First case studies published
M4	Self-serve onboarding for standard workflows
M5	20+ active customers

## The Big Picture

## Where We're Going

```
flowchart LR
    subgraph Today ["TODAY"]
        T1[AI Assists]
        T2[Humans Execute]
        T3[Trust Unclear]
    end
    subgraph Tomorrow ["WITH AI RAILS"]
        W1[AI Executes]
        W2[Humans Govern]
        W3[Trust Proven]
    end
    Today -->|Secret AI Rails| Tomorrow
```

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## The Transformation We Enable

From	To
AI as Assistant	AI as Operator
Suggestions	Actions
Opaque	Auditable
Risky	Trusted
Human-in-the-loop	Human-on-the-loop

## Call to Action

### Why Back This Now

1. **The market is ready** — Enterprises hit the trust wall; they want AI that acts
2. **The technology is ready** — Confidential compute is mature; AI is capable
3. **We are ready** — Production platform, proven expertise, pilot customers
4. **The window is open** — Category definition happening now; first-mover advantage is real

### What Success Looks Like

"When any business asks 'Can AI do this safely?' — the answer is 'Yes, on Secret AI Rails.'"

We become the infrastructure layer that allows AI to finally do the work — trusted, proven, and confidential.

# Summary

**Secret AI Rails is not about making AI smarter. It's about making AI trusted enough to do the work.**

We have:

- Production infrastructure (confidential cloud platform)
- Technical expertise (TDX, SEV, H100 CC, blockchain KMS)
- Pilot customers ready
- Clear product vision and disciplined scope
- Unique market position (only integrated trust + execution platform)

We need:

- Investment to build v1 and scale go-to-market
- Partners who believe AI execution requires trust infrastructure

**The time is now. The team is ready. The platform exists. Let's build the future of trusted AI execution.**

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*"AI Rails is the execution layer that allows enterprises to finally let AI do the work."*

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**Confidential — For Stakeholder Review Only**