PACTA · OPEN TRUST INFRASTRUCTURE · GRANT PROPOSAL

Digital public infrastructure so small businesses aren't left out of the AI economy.

An open protocol – with a working reference implementation – that lets AI agents safely contract, escrow, verify and pay small and medium businesses for real-world services.

02 · THE PUBLIC-INTEREST PROBLEM

The agent economy is being built for platforms, not for the 90%.

- SMBs are **~90% of the world's businesses and over half of employment** – and in emerging economies, almost the entire service sector.
- Agent commerce rails shipped by Stripe, Google, Visa and Mastercard connect agents to **large digital merchants first**. A law firm in San José or a tour operator in Guanacaste has no on-ramp.
- Without open trust infrastructure, AI-driven demand will concentrate on whoever is already indexed, reviewed and integrated – **widening the digital divide** instead of closing it.
- The missing piece is not payments. It is **machine-readable trust**: verifiable contracts, protected funds, provable delivery.

A working reference implementation, openly reproducible.

`discover` → `immutable step contract` → `escrow` → `delivery + public-registry proofs` → `settlement / arbitration` → `earned reputation`

- **Full lifecycle implemented and tested**: 28 API/E2E-verified scenarios, a double-entry ledger that balances to the cent, and a server-enforced contract state machine.
- **Collateralized vetting** (stake + graduated exposure + slashing): trust without a moderation bureaucracy – cheating is structurally unprofitable.
- **Proofs that verify themselves**: deliverables anchor to public-registry records (company registry, municipal permits, tax filings) that the platform re-checks.
- **Demonstrated with a real AI agent**: a Claude agent discovered, contracted, escrowed, independently re-verified every registry proof, paid and rated – end to end via MCP, fully transcripted.

`npm run demo:agent` – one command, self-auditing, no credentials.

04 · EVIDENCE, VERBATIM

The trust economics already steer a real AI agent.

> "I chose it over the cheaper alternatives because it was the only offer covering land eligibility and hotel permits, and the only one where every step required a registry-anchored proof. (The $900 offer was unvetted with zero collateral.) … Before approving, I independently checked all four registry references against the public registry, not relying on the platform's own verification flags."

– an unmodified Claude agent, given only the marketplace's MCP tools and a budget. The independent audit (state, balances on both sides, escrow, ledger invariant) passed 8/8. Full transcript in the repository.

05 · WHAT THE GRANT FUNDS

From reference implementation to public infrastructure.

WORKSTREAM 1 · OPEN STANDARD

The Open Engagement Protocol

Publish the contract/escrow/proof/reputation protocol as an open specification with this codebase as the reference implementation. Neutral governance, permissive license.

WORKSTREAM 2 · REAL REGISTRIES

Public-record verification, for real

Replace the registry mock with live integrations: Costa Rica's Registro Nacional and municipal permit systems first – the interface is already built for it.

WORKSTREAM 3 · PILOT

50 SMBs, one corridor

Onboard and collateralize 50 SMBs (legal / accounting / tourism) in Costa Rica; run real cross-border engagements with AI-assisted buyers.

WORKSTREAM 4 · RESEARCH

Open mechanism-design dataset

Publish anonymized engagement, dispute and verification data plus an evaluation of the staking mechanism – with an academic partner.

06 · MEASURABLE OUTCOMES (12 MONTHS)

Grant-auditable deliverables, not vibes.

DELIVERABLE	METRIC	VERIFICATION
Open protocol spec v1	Published, versioned, permissively licensed	Public repository + governance doc
Live registry integration	≥1 national registry verified in production	Reproducible verification calls
SMB onboarding	50 vetted SMBs with posted collateral	On-platform, public profiles
Real engagements	≥100 settled · dispute rate < 5%	Ledger + anonymized dataset
Agent interoperability	≥2 agent platforms consuming the MCP surface	Public integration demos
Research output	1 peer-reviewed paper on collateralized vetting	Publication + open dataset

07 · WHY THIS TEAM, WHY OPEN

Neutral rails only work if nobody owns the tollbooth.

- **The insight is original:** platforms renting out individual humans can't enforce anything – individuals are judgment-proof. SMBs are legal entities with reputational continuity, so trust can be *collateralized*. That reframing is the foundation of this design.
- **The work is already de-risked:** every mechanism in this proposal runs today – staking, slashing, exposure caps, registry verification, the agent demo. The grant scales it; it doesn't invent it.
- **Open by design:** a trust protocol adopted by competitors must be neutral. Incumbent marketplaces can't publish this standard; an open project can.
- **Regional fit:** built around a LatAm corridor (Costa Rica) where cross-border service trust is the binding constraint on SMB exports – aligned with IDB Lab / development-bank mandates.

08 · THE ASK

Fund the rails that let a lawyer in San José sell to an AI in San Francisco.

Open protocol · working code · a real agent already buying. The transcript, the tests and the ledger are all public and reproducible in two commands.