CEMI · FINANCIAL INNOVATION LAB

Virtual Financial Ecosystem Simulation

A digital twin of the financial ecosystem. Ready for 2027, today.

Pitch deck · September 2026

WHAT IT IS

A set of simulated counterparts of the institutions a payment or financial application must talk to in the Dominican Republic, organized exactly as the Central Bank organizes the real thing: the systems that make up the SIPARD, the participants that hold accounts in it, the payment-service providers the Reglamento recognizes, the instruments it classifies, the support entities around them, and the rules that govern the whole.

The value is that all the counterparts exist **together, consistently, in one place**, with one synthetic population moving through them — so a process that crosses six organizations is exercised as one process, under the rules that will apply when it is real.

WHY NOW

SGPI is the moment

The Sistema de Gestión de Pagos Instantáneos credits the beneficiary within **10 seconds**, runs **24/7/365**, addresses by alias and notifies both parties immediately. Every financial-intermediation entity, electronic-payment entity, acquirer and sub-acquirer is a mandatory participant. Nobody in the country can integrate against it yet.

Reglamento Art. 60–62 · Art. 61 §I · BCRD SGPI page

10 s

24/7/365 · alias

WHY NOW

Startups need it more than banks do

A would-be electronic-payment entity, wallet provider or payment-initiation provider cannot get a bank's test environment before it has a bank, and cannot get a bank without a working flow. The ecosystem breaks that loop.

The report is a document with a use

A provider preparing a request for the Central Bank's no objection needs exactly what an instrumented run produces: a description, an operating scheme, the list of providers, support entities and participants, and evidence for a risk-materiality analysis.

Reglamento Art. 83

FOUR PROVING GROUNDS, ONE LAB

Intelligent Machines

Virtual Financial Ecosystem

A digital twin of the financial ecosystem.

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Open Sandbox

Living Lab

The fourth proving ground of CEMI’s Financial Innovation Lab — This is the fourth. https://cemi.ai/en/finlab/

WHAT A TEAM GETS TODAY

Endpoints

A console at **ecosystem.financial** with a world switcher, a REST API that publishes its own OpenAPI contract, **150+ endpoints**, webhooks that tell an application what happened, a machine lane for real ATM and ITM integrations. Transfers as ISO 20022-shaped JSON; card responses carry the ISO 8583 projection.

A world of one's own

One team key, sent as `x-lab-api-key`. Each key is its own world — seed, clock, ledgers and reports — persisted in Firestore, deterministic from its seed and resettable. It is born with **5+ institutions**, **200+ synthetic people** and **40+ businesses** holding accounts, balances, cards and SGPI aliases, plus flagged adversaries.

The ecosystem, entire

Cards end to end — acquirer and sub-acquirer, two card schemes, clearing settled net in the LBTR, disputes — wallet, initiation and gateway providers, a QR profile, consent, the simulated supervisors, the financial-intelligence unit and the compliance plug, cheque clearing, chaos mode, sponsored nodes with a private vendor lane, certification runs and the Art. 83 dossier.

Try it live

A public simulation runs in the browser at **financialecosystem.io/simulate/** — no key, nothing to install: a transfer, a cash withdrawal or a card purchase, run live with every rule cited. The technical manual, the request-key form and the feedback form are on the same site.

TECHNICAL SPECIFICATIONS

Console `ecosystem.financial`	OpenAPI contract `/openapi.json`	Health `GET /v1/health`
Runs and scenarios `/v1/**`	Machine lane `/v1/atm/**`	Team key `x-lab-api-key`
Transfers `ISO 20022-shaped JSON`	Cards `ISO 8583 projection`	Rule catalogue `v2026.09.06`

30+
simulated counterparts

250+
REST endpoints

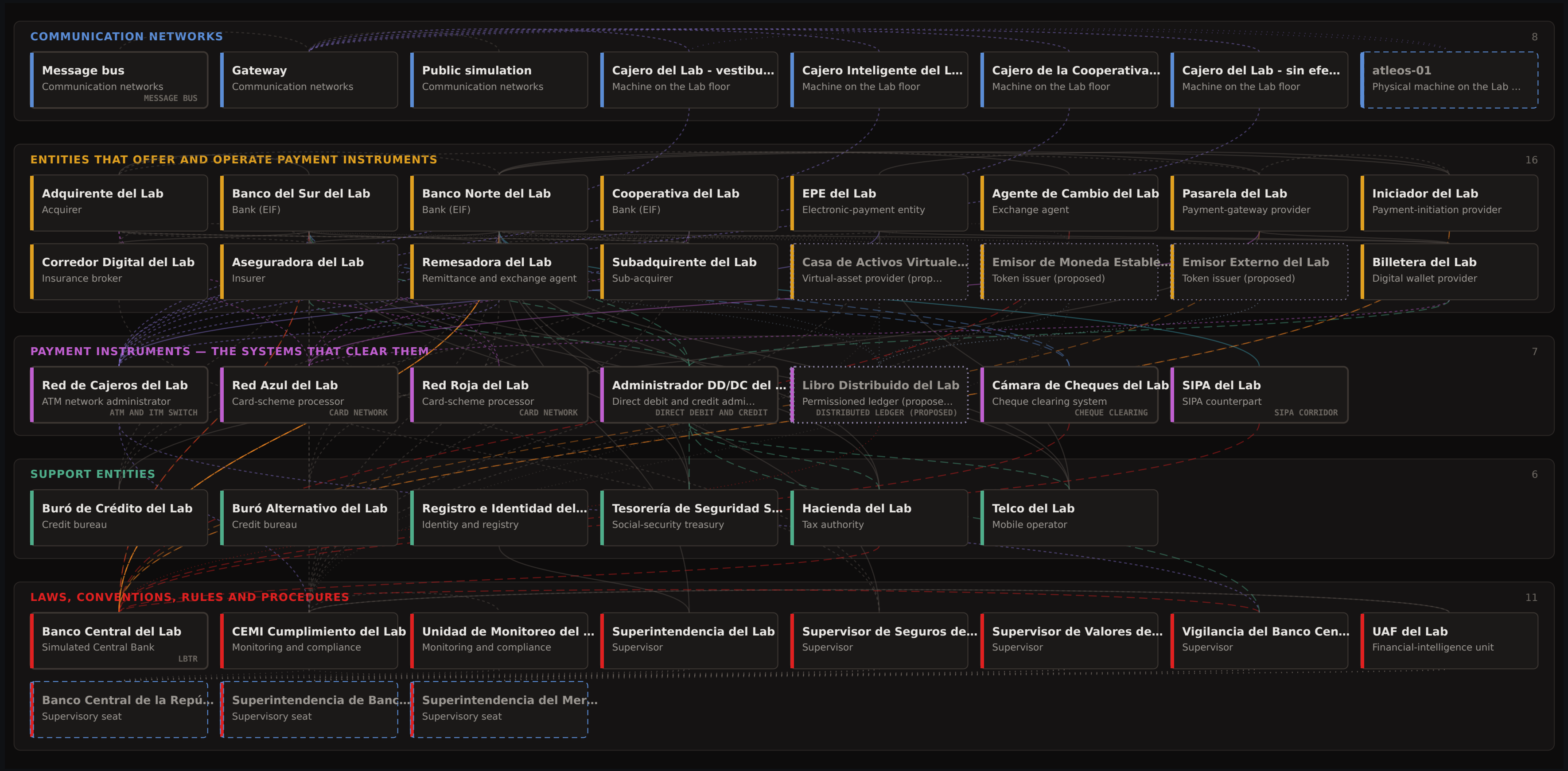
150+
executable rules, each citing its article

40+
published scenarios

1000+
automated tests

2026.09.06
rule catalogue version

THE ECOSYSTEM MAP



The ecosystem as it stands today, drawn by the platform itself from its own catalogue of actors, rails and scenarios — and fetched live for this page. Each node is a simulated counterpart on the layer it belongs to; each line is a rail two of them exchange messages on.

40+ simulated counterparts · 130+ links between them · 60+ published scenarios · financialecosystem.io/map/

THE CLOCK ENFORCES THE REAL RULES

10 s	SGPI · final credit Art. 61 §I
4 min	LBTR · third-party credit Art. 57
8 min	Pagos al Instante · final credit BCRD page
RD$79,000	cap on an electronic payment account and a prepaid card, 2026 value Art. 78 §II
Zero	charges to the beneficiary — a run that deducts is a failed run Art. 81 · Art. 56 §II
10 years	of records, rejected transactions and adjustments included Art. 41–42

VERIFIED FOUNDATIONS

180+

Everything the simulation asserts rests on a checked source: **136 sources verified** against their primary texts, each carrying the line it establishes and how it applies. In the official taxonomy of innovation facilitators this is a **regulatory accelerator or regtech lab — not a sandbox**, and Art. 83 is a no-objection filing duty, not a sandbox regime. We say so plainly.

WHO IT IS FOR

Startups

a fintech, insurtech or regtech with no bank and therefore no test environment. Free for open programmes, interns and the Championship.

Banks and electronic-payment entities

certification runs against the simulated SGPI, ahead of a system in which they will be mandatory participants — and a private lane where their own vendors arrive already certified.

Acquirers and card networks

authorization, clearing, settlement and chargeback cycles exercised against processors and banks at once.

Insurers and brokers

quote, bind, premium and claim wired to real payment rails, and embedded insurance tested where it actually sits.

Regulators

the Banco Central and the Superintendencia are offered a seat now — the seats are built and enforced: their instructivos, their reading of the rules, their scenarios.

Universities

reproducible runs, published message contracts and rule catalogues, and synthetic data with nothing personal to protect.

What is standing

- 30+ simulated counterparts on 110+ rails, 150+ executable rules each citing its article, 40+ published scenarios, 1000+ automated tests — floors, every one of them.
- A public simulation anybody runs in the browser, with no key and nothing to install.
- A world of its own per team: seed, clock, ledgers and reports, deterministic and resettable.
- A console that follows a run live and draws the ecosystem map from the platform's own catalogue.
- Sponsored nodes with their private vendor lanes, and certification packs.
- Service identities: a key carries a workload and a scope, not merely a team.
- Regulator and academic seats, built and enforced — read-only across every world, or a world of one's own.
- A proposed tokenised-money extension, available for testing today in a world that opts in, standing outside the regulated providers, awaiting the Bank's view — while every regulated provider in the simulation refuses virtual-asset products, citing its article.

What is next

- The Central Bank's QR standard and the SGPI operating rules, taken into the rule catalogue as each instructivo lands.
- The NCR machines on the floor: the machine lane is built and only software has ever driven it, so the node stays *planned* until a machine is connected.
- The first sponsored node with a partner institution.
- Certification as a priced product — per run and per scenario pack.

What waits on the Bank

- 10+ open assumptions the simulator runs on, and every run report names the ones it ran under.
- Where the Pagos al Instante eight-minute clock and the Art. 57 four-minute clock start: at the sender's acceptance, at the LBTR, or at the receiving participant's acknowledgement.
- Which roles are mandatory participants in the SGPI, and from when.
- Who publishes the reason codes a returned direct debit or direct credit must carry.
- Whether the electronic-payment-account regime reaches a token, whether virtual-asset service providers are obligated subjects, and how the Reglamento's prohibition meets the securities regulator's.

The questions are written up as a consultation to the Banco Central, open to read: `financialecosystem.io/documents/gaps/`

HOW INSTITUTIONS TAKE PART

Sponsored nodes

an institution sponsors *its kind* of node — a bank a simulated bank with its own formats and rules, an acquirer the acquiring node, an insurer the insurance node — and gets a private lane for its vendors and startups.

Certification runs

per run or per scenario pack, for startups and vendors. A bank can ask its vendors to arrive certified.

Art. 83 dossiers

an instrumented run whose report is shaped as the evidence a no-objection request needs. We prepare evidence; the Banco Central decides.

Usage tiers

free for open programmes, interns and the Championship; cost-recovery for extended private use; enterprise lanes for institutions.

Programmes and Factory work

cohorts and training on the scenarios, a financial track in the AI Learning Challenge, and custom actors, rule packs and scenarios built by CEMI Factory.

THE ASK

- **A seat now** — for the Banco Central, the Superintendencia and the industry: the seats are built and enforced — your instructivos, your reading of the rules, your scenarios.
- **A sponsored node** — for a bank, an acquirer, a card network or an insurer: your kind of node, your formats, a private lane for your vendors.
- **A first team key** — for a startup or a vendor: a world of your own, a scenario, a report — this week.

Partnerships and team keys: partners@cemi.ai · Investment: invest@cemi.ai

Ready for 2027, today.

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https://financialecosystem.io/

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Carlos Miranda Levy · Coordinator of CEMI’s Enhanced Intelligences