

FOREMETRIC

Manifesto of Sovereign Behavioral Capital

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ForeMetric is a protocol that turns smartphone behavioral signals into passive income for the user and verified predictive insights for B2B clients.

Generative AI is automating up to 300 million jobs (Goldman Sachs), devaluing cognitive labor. Simultaneously, AI models are degrading when trained on synthetic content (Model Collapse). A dual crisis emerges:

Humans have no money to pay for the goods machines produce.

Machines lack authentic human data to continue learning.

The Data Brokerage (\$250B+) and AdTech (\$650B+) markets exist, but:

Up to 70% of funds settle with intermediaries.

Signal-to-Noise Ratio in targeting is $< 1\%$.

Raw data has become legally toxic (GDPR, CCPA).

THE SOLUTION — INSIGHTS-AS-A-SERVICE We DO NOT sell data. We collect behavioral signals from user devices, aggregate them in decentralized storage (TON Storage + COCOON), and process them decentrally via TEE enclaves (AMD SEV-SNP + Intel TDX).

The B2B client asks a question in plain language ("Show me the cohort ready for a mortgage in Region X within the next 14 days") and receives:

A ready-made PDF report with visualizations.

Primary analytics and cohort cross-sections.

Predictive insights replacing the client's analytical department.

Cryptographic attestation of processing inside the TEE.

The client never touches personal data. They get an answer, not a dataset. 80% of the revenue automatically buys back the \$HSIG token on the DEX and distributes it to users proportionally to their Richness Score. The token is not minted out of thin air: the mint() function is absent; fixed supply is 1 billion.

PREAMBLE: The Question That Started It All

I will begin with the question I am asked most often—and which I asked myself longer than anyone else. It sounds naive, but if looked at honestly, it is the most difficult question of 21st-century political economy.

Why does a human possess value simply for existing? And if they possess value—why will the tokens we give them be worth anything?

Let me rephrase, because behind these words lies a genuine doubt. We are building a system where a person installs an application, grants permissions, and their

balance begins to tick upward. They do nothing actively. They simply live their life. And we tell them: "This life now brings you income." Any rational person will ask: "Why? Who is paying? Why is my existence a value?"

If we cannot answer this question honestly and substantively, we do not have a project. We only have another inflationary scheme printing tokens out of thin air. Therefore, I answer it here, at the very beginning, and the rest of this manifesto is the unfolding of this answer across all dimensions: economic, philosophical, and engineering.

I will formulate the answer in a single line, and then unfold it: Human existence is the only resource that AI cannot produce, copy, or replace. Everything else—code, text, images, analytics—the machine already does. Therefore, the living of an authentic human life has become the scarcest asset of the new economy. We make this asset tokenized, decentralized, and owned by the human themselves.

Our project is not a handout, nor is it charity. It is a new architecture where human life itself becomes capital—and that capital belongs to the individual.

This manifesto is built as a journey. First, I will show why the old world is breaking (Document I). Then, what changes in the human and our understanding of value (Document II). Then, how economic value flows and why it is real (Document III). How it is protected by physics and cryptography (Document IV). Who exactly pays and why (Document V). What we fundamentally DO NOT promise, and why this honesty makes us stronger (Document VI). And finally, the call to action.

DOCUMENT I. DIAGNOSIS: WHY THE OLD WORLD IS BREAKING

Chapter 1. The Deflation of Cognitive Labor

Generative AI and robotics are General Purpose Technologies, comparable in scale to electricity or the steam engine. The fundamental difference: electricity and steam replaced physical labor. AI replaces cognitive labor—what was considered the distinguishing capability of the human being.

The numbers to keep in front of your eyes:

Goldman Sachs (2023–2024): Approximately 300 million jobs worldwide—roughly 18% of global employment—are subject to full or partial automation. Analytics, basic code, legal briefs, marketing copy, design—what was considered "skilled middle-class work" just a decade ago—is under threat. Forecast: 25% of all routine tasks will be performed by AI.

World Economic Forum (Future of Jobs): A net loss of approximately 14 million jobs is projected over the next five years. The labor market faces a structural shock. Clerks, secretaries, accountants, basic programmers, call-center workers are dying out. Demand is growing for a narrow layer of AI specialists and data engineers—a drop in the ocean compared to the wave.

The primary macroeconomic effect is the ultimate deflation of cognitive labor. The cost of producing an intellectual product approaches zero. What used to cost a hundred thousand dollars in an analyst's annual salary now costs ten dollars in LLM API queries. When the price of something collapses, the skills of those who sold it are devalued.

20th-century capitalism relied on the middle class. AI kicks out this pillar. Society splits into two poles: the owners of AI-capital (techno-oligarchs) and the precariat (everyone else whose skills have been devalued). The intermediate layer, which acted as a stabilizer for a century, is vanishing. And this, not automation itself, is the real problem.

All major IT oligarchs have begun talking about the crisis of capitalism. They see the problem earlier because they stand closer to the source. But automation is a good. It only becomes a good when there is a mechanism to distribute the created value. And the old mechanism—"you sell labor, get money, buy goods"—is breaking.

Chapter 2. The Inverted Ford Paradox: The Aggregate Demand Crisis

In 1914, Henry Ford raised wages for his workers. Not out of pity, but out of calculation. Workers are the same people who buy cars. If you pay them enough, they can buy what they produce. The producer and the consumer are the same person; the economy only works when this person has money for both production and consumption.

In the post-automated world, this logic breaks. Algorithms and robots produce goods with near-zero marginal costs. But they are not end consumers. Robots do not take out mortgages, do not buy sneakers, do not arrange insurance. Consumers remain exclusively human. Demand can only originate from that which is capable of desiring.

AI can produce everything. But AI has no desires. A robot does not dream.

This is the systemic Aggregate Demand Crisis: AI displaces humans from production, but goods are produced in greater volumes. There is someone to produce. There is no one to buy. The economy stalls not because of a lack of production, but because of a lack of demand.

There are two false answers to this:

"Humans are simply no longer needed" — the techno-utopia of the elite, leading to catastrophe, because without consumers, the economy collapses.

"Let's give everyone a little bit of money" (UBI) — looks humane, but fails both economically and politically (see Chapter 3).

The correct answer: People need to be paid not because they are poor and redundant. People need to be paid because they produce something the machine cannot—their very living, their intentions, their experience. This is the "labor" that remains valuable after automation. It must be seen, verified, and monetized.

Chapter 3. The Collapse of UBI: Empirics and Four Flaws

Universal Basic Income has already been tested. And it has already failed.

Finland (2017–2018): The purest experiment. 2,000 unemployed received €560/month unconditionally for two years. Control group: 170,000. Result by employment: plus six working days a year. Result by psyche: less stress, less depression. Conclusion: flat UBI heals the nervous system but does not create economic subjectivity. The money was a handout, not a payment for value.

Stockton, USA (2019–2021): \$500/month, 125 residents. Full-time employment rose from 28% to 40%. Less than 1% went to alcohol and tobacco. The stereotype "they will drink it away and stop working" is empirically false. But the program was donor-funded and ended—the "cliff effect."

Kenya, GiveDirectly (since 2017): Hundreds of villages, tens of thousands of participants, 12 years of basic income in one arm. Multiplier ~2.5. But the model is 100% donor-funded—humanitarian aid, not an economy.

Alaska, Permanent Fund Dividend: The only precedent that survived. Since 1982, every resident receives \$1000–\$3000 a year. Financed by resource revenue (oil). Employment does not fall, the dividend is politically unkillable. Key: it is perceived not as a handout, but as a share of common wealth.

Switzerland, 2016 Referendum: 77% voted against UBI. The system "we pay you just for existing" is unsellable. The system "we pay you because your existence generates value that others buy" is a market.

The Four Structural Flaws of UBI and ForeMetric's Architectural Answers:

UBI Flaw	Empirical Failure	ForeMetric's Answer
Source of Funds	Kenya and Stockton died	The B2B Market. Payouts

	with their budgets.	are backed by revenue from behavioral insights.
Leveling (Equality)	Switzerland, 77% against.	Meritocracy of Experience: Income is proportional to the richness of the lived life, not a flat baseline.
Temporariness	All pilots eventually ended.	A Protocol, not a Program. There is no "off switch" by architectural design.
Borders	Citizenship, bureaucracy.	Right of Entry: A smartphone + a TON wallet, anywhere on the planet.

UBI asks, "Who will pay?" ForeMetric asks, "Who will buy?" The answer to the second question already exists: the market that today pays BigTech for your behavior.

Chapter 4. Techno-Feudalism and Digital Serfdom

Yanis Varoufakis in Technofeudalism: What Killed Capitalism argues that we no longer live in capitalism. Classical capitalism was built on producing goods and extracting profit in competitive markets. BigTech created Cloud Capital—digital enclaves that alter human behavior. And they extract not profit, but rent.

Profit is what you get for producing and selling. Rent is what you get for owning a territory through which others are forced to pass. When you search, communicate, and scroll, you step into someone else's digital fiefdom and generate cloud capital for its owners for free.

We are all digital serfs. We process the "land" of the platforms, generating data that increases their power, and receive nothing in return. "Free service" is rent disguised as a utility.

ForeMetric does not ask BigTech to share. The emancipation of serfs is not a request made to the feudal lord. It is the creation of conditions where the serf becomes the owner of their own land. A sovereign infrastructure where the "land" (data) belongs to the one who produces it.

Chapter 5. The Synthetic Paradox: Model Collapse and Hyperreality

Machines have begun to produce meaning. This process devours itself.

When the cost of creating content approaches zero, the synthetic world begins to feed on itself. Models are trained on content generated by other models, and they degrade.

Model Collapse is a documented effect: the tails of distributions collapse, the model loses rare patterns, and hallucinates with more confidence. By 2026, the internet will be 40–60% synthetic.

Jean Baudrillard called this hyperreality—an ocean of simulacra. The digital environment detaches from reality. All of civilization rests on a common source of truth—observation, experience, fact. If the observation is faked, the experience is simulated, and the fact is generated, the anchor disappears. The only source of low-entropy signal is living, imperfect, biological human behavior. Not text, which can be generated. Not an image, which can be drawn. But real choice, real risk, real financial stakes.

The Formula of the Manifesto: AI knows how to compute, but it does not know how to live. Computations without lived experience lead to hallucinations and model collapse. A human is not just a consumer; they are an anti-entropic reactor for AI. In a world where everything can be faked, the genuine is the most expensive resource.

Thermodynamics in Plain Language for the Investor:

An AI model is a machine that reduces uncertainty in the world. Every predicted intent, every recognized cohort, every classified pattern is a reduction of entropy. The model turns the chaos of raw signals into structured knowledge.

To reduce uncertainty, the machine needs a low-entropy signal. That is, predictable, but NOT synthetic. Synthetics are high entropy in a beautiful wrapper. Training on it causes the model to lose rare distributions.

Synthetics = high entropy in a beautiful wrapper. When 60% of the training corpus is content generated by other models, each subsequent generation degrades by 15–20%. This is an observed fact ("The Curse of Recursion", Stanford + DeepMind, 2023; Shumailov et al., 2024).

Living human behavior is the only renewable source of low-entropy signal. Micro-tremors of fingers at 8–12 Hz. Poisson distribution of intervals between events. Saccadic breaks during scrolling. Variability of screen pressure. Circadian rhythms. These are physiological signatures impossible to simulate without actually living a life.

ForeMetric does not sell data — we sell anti-entropy to the AI industry. ForeMetric is the infrastructure that collects, cryptographically verifies, and sells this signal to those who critically need it. The B2B client does not get a CSV file with raw vectors (that is legal poison and 99% noise). They get a ready-made PDF report with primary analytics: Cohort size and geographic density; Funnel stage distribution; Temporal patterns and cross-intents; Cryptographic attestation of processing in the TEE.

The client does not need their own analytics department. They do not need to hire data scientists. They ask a question in plain language and get a ready-made business insight, certified by the cryptography of the hardware.

We collect signals → aggregate in decentralized storage (TON Storage) → decentrally process via COCOON TDX → issue a predictive insight in a format ready for decision-making.

This is Insights-as-a-Service: an answer, not a dataset. We do not sell data. We sell anti-entropy.

Chapter 6. The Destruction of the Panopticon

For decades, tech giants and data brokers built a system of total surveillance. Privacy was a passive defense: disable cookies, hide behind a VPN, retreat into a closed messenger. A defense that always lost.

ForeMetric transforms privacy into an active sovereign boundary:

My context and my experience have immense value. You can pose a question to my encrypted contour. You can pay for an aggregated answer. But my digital "I" will remain inviolable.

In the first model, a person hides and loses. In the second, they own and sell. Privacy transforms from a cost into an asset.

DOCUMENT II. PHILOSOPHICAL SHIFT: WHAT CHANGES IN THE HUMAN

Chapter 7. From Homo Faber to Homo Intentio

For three centuries, Western civilization rested on the model of Homo Faber, Man the Creator. Your profession was your identity. Your salary was the measure of your value. "What do you do?" was the first question upon meeting.

AI knocks this pillar out completely. When a model writes code better than a programmer, draws better than an artist—"what do you do?" loses its meaning. Most answers are humiliating: UBI—"you are the one to whom we give a ration,"

escapism—"you are the one who consumes content," nostalgia—"you are the one you were before AI."

ForeMetric proposes: you are Homo Intentio, Man the Intender. The one who wants, chooses, doubts, risks, lives. Whose intentions are the only thing a machine cannot generate without hallucination.

We collect intents: DNS queries to mortgage comparison sites, movements between car dealerships, patterns of financial behavior. B2B clients pay for this. The economic model is the literal monetization of intentions, not a metaphor.

Chapter 8. The Human as Absolute Scarcity

The only resource whose cost cannot approach zero is that which cannot be produced:

Taking moral responsibility for a choice

Feeling physical pain

Making a financial bet with your own money

Doubting before an important decision

Having a body that gets tired

Committing irrational acts that turn out to be right

Loving despite calculation

Making mistakes that lead to discovery

This is not a romantic list. These are the technical specifications of a data source that is impossible to fake. The 1D-CNN Proof-of-Behavior classifier (§6.8 of the CTO Spec) distinguishes a living person from a bot by twelve features: micro-tremors of fingers at 8–12 Hz, Poisson coefficient of intervals between events, saccadic breaks during scrolling, pressure variability, circadian rhythms.

The human is absolute scarcity. The value of human existence grows as the power of AI grows. The stronger the machine, the more expensive the authentic human.

Chapter 9. Proof-of-Experience vs. Proof-of-Work

Bitcoin proved that digital value can be created through the expenditure of a resource. Proof-of-Work: burned electricity, solved a meaningless task—received a coin. The electricity is gone, nothing became more.

ForeMetric introduces Proof-of-Experience: mining capital through verified living. The resource is time and attention. The result is structured behavioral capital with direct commercial application.

Parameter	Proof-of-Work	Proof-of-Experience
Expended	Electricity	Lived life
Utility	Zero (SHA-256)	Direct: AI training, business insights
Forgery	Impossible	Impossible
Social Effect	Energy footprint	Return of subjectivity
Scarcity	Relative	Absolute

Proof-of-Experience is a philosophical concept. The engineering anti-fraud classifier is Proof-of-Behavior (§6.8). PoE is an ontological statement about the nature of value; PoB is the mechanism of protection against bots.

Mining capital by what you live, not by what you produce. The first crypto-constitution in history where the right to participate requires neither money nor iron—only the fact of existence.

Chapter 10. Privacy as a Physical Law

For decades, privacy was a legal construct—paper laws (GDPR, CCPA) telling corporations "do not do bad." The position of a supplicant. BigTech paid fines and continued.

We change this physically. Privacy is not a question of "permitted/forbidden," but of "possible/impossible." TEE enclaves (AMD SEV-SNP, Intel TDX): data is decrypted only inside the encrypted RAM of the processor. Even the provider's admin, even the founder of ForeMetric, even special services will receive only encrypted noise.

My context has immense value. You can pay for an answer. But you will never get access to the context itself. Never. This is not a rule—it is physics.

For the investor: the protocol is architecturally protected from regulatory risks. The EU can pass a harsh law—we do not care, we technically cannot violate it.

Chapter 11. The Right to Digital Oblivion

In the analog world, time erased traces. The Internet made memory eternal and merciless. "Delete account" was an illusion: data remained in backups. The past became an instrument of lifelong control.

ForeMetric returns the right to start over through GDPR Crypto-Shredding (§4.3, §15.2):

DataKey is stored in Blob A (under the TON wallet key) and Blob B (under the TEE enclave key)

burn_keys() zeroes both blobs and erases the DataKey from the Secure Enclave

In 5 seconds (TON block finality), the data is mathematically irrecoverable noise

AES-256-GCM without a key is irrecoverable—not by the founder, not by Amazon, not by the NSA

GDPR Article 17 requires 72 hours. Our SLA is 5 seconds of actual irreversibility, 24 hours for the complete elimination of traceable records. A person receives temporal freedom—the ability to live life, not archive it.

Chapter 12. Overcoming Digital Alienation

Marx described the alienation of labor: the worker ceases to recognize himself in the product of his hands. Digital capitalism went further—it created the alienation of existence. Everything a person feels, searches for, and lives online is immediately alienated, turned into raw material, and returned to them in the form of algorithmic manipulation.

Platforms consciously atomized society, breaking it into isolated dopamine capsules. A divided, frightened, angry individual is easier to control. A lonely person does not organize a union or stage a revolution. They just scroll further.

ForeMetric rebuilds the social architecture. When the processing of intents happens decentrally, and value returns directly to people through an open cryptographic protocol, a new form of horizontal solidarity arises. People unite at the level of shared intentions and common experience, while maintaining absolute individual inviolability. Collective strength grows not through the suppression of personality, but through the cryptographic protection of each person's sovereignty.

Chapter 13. The Ethics of Being After Labor

The main crisis of automation is not economic hunger, but a crisis of meaning. For centuries, the Protestant ethic instilled: your value equals your productivity. When AI starts writing code better than a programmer and drawing better than an artist, the human Ego experiences an existential blow.

ForeMetric's answer is radically humanistic: a person's value lies not in their function, but in their presence. A machine will process a trillion operations per second, but will not live through a single one of them. It does not know the cost of risk, does not feel pain, does not take moral responsibility, and does not make a choice in conditions of absolute uncertainty.

In a world where "doing" has been completely taken over by algorithms, the project returns the highest value to "being" itself. Living life, choosing, exploring, making mistakes—ceases to be "useless leisure" and becomes the main value foundation of civilization. A person is valuable not because they are an efficient cog, but because they are the only living source of meaning in a cold mathematical cosmos.

Chapter 14. Reconstruction of the Chronotope

The platform economy destroyed human perception of time. Algorithms fragmented it into micro-doses of dopamine impulses—endless feeds, notifications, clip content. Time ceased to be a space for reflection and turned into discrete, ragged noise. A person deprived of concentration loses the ability to plan long-term and form a holistic identity.

ForeMetric performs a reconstruction of human time. The architecture works in the background of real life; it does not require presence in a digital pen. The protocol captures intentions from the natural flow of life—from long reading, travel, conscious financial decisions. A person stops "killing time" in parasite applications, and the protocol capitalizes depth and authenticity, not a clip-like convulsion.

Chapter 15. The New Digital Enlightenment

We found ourselves in a new Dark Ages. The black boxes of BigTech algorithms and the locked neural networks of AI laboratories became the analogue of the priestly class. The digital priest issues a "revelation"—what to buy, what ideology to believe, whom to consider an enemy. The user, having no access to the mechanics of decision-making, accepts this on faith. Algorithmic mysticism has arisen.

ForeMetric lays the foundation for a New Digital Enlightenment. The motto *Sapere aude*—"Dare to be wise"—returns through cryptographic transparency and local

processing. When an analytical insight is formed on the basis of verified human experience, and not closed manipulative models, the phenomenon of "algorithmic prophecy" is destroyed. Knowledge about the world again belongs to those who live it.

Chapter 16. The Epistemological Coup

The emergence of a protocol of this level is not just the rollout of another product. On a civilizational scale, this is an epistemological coup and an attempt to reassemble the social contract of late capitalism, when AI has zeroed out the value of traditional cognitive labor.

From Baudrillard's hyperreality (Chapter 5) follows a practical conclusion: a world overloaded with algorithmic noise loses the ability to distinguish the real from the simulated. ForeMetric creates a new fundamental class of assets—authentic human experience as the collateral standard of the data economy. A person ceases to be an object of exploitation or charity and becomes a subject owning their digital "I" as a full-fledged asset. This is the new social contract: not "the state pays you for existing," but "the market pays you because your existence generates value."

DOCUMENT III. ECONOMICS: HOW VALUE FLOWS

Chapter 17. The Trillion-Dollar Arbitrage: The Money Already Exists

ForeMetric does not create a new market. It redirects an existing trillion-dollar flow from parasitic intermediaries to the creators of value.

Market Figures:

Data Brokerage (Acxiom, Experian, CoreLogic, Oracle Data Cloud): \$250B+ per year. Data is resold 5–10 times, intermediary margin 30–50%. The creator—the human—receives nothing.

AdTech and Attention Economy: \$650B+ per year. Up to 70% goes to infrastructure intermediaries (DSP, SSP, DMP). Signal-to-Noise Ratio in targeting is below 1%.

The Paradox: Brands fire cannons at sparrows, buying "demographic guesses."

ForeMetric is an arbitrage: to buy "clean signal" directly, bypassing the feudal lords. Corporations already pay for behavioral insights. The money exists. The problem is the archaic, parasitic architecture.

Chapter 18. From the Attention Economy to the Intent Economy

Attention is noise. Banner blindness. Did they look at the car dealership banner because they want a car? Or because the banner was bright? Attention says nothing about intentions.

Intent is a predictive intention that precedes a transaction by weeks. A DNS query for "best mortgage rates." Movements between three car dealerships over a weekend. Intent is worth 100–1,000 times more than attention.

Through the DNS Privacy Shield (DoH/DoT), we see the domain category (finance, auto), classify it via TinyBERT, and instantly discard the domain name itself. The B2B client receives a cohort insight ("demand for autos in geo-zone X grew by 14%") without knowing who specifically this person is.

Chapter 19. Data as Labor

Jaron Lanier ("Who Owns the Future?") and Glen Weyl ("Radical Markets"): data is a form of digital labor. AI models cannot exist without human experience. Every click, route, DNS query is a microscopic act of work training the global AI.

Lanier calls BigTech data centers "Siren Servers": they lure with free services, take the "digital soul," monetize it, leaving society without work.

ForeMetric is an automated, cryptographically protected Data Union.

Chapter 20. Richness Score: The Meritocracy of Experience

The right to monetize existence is universal. Anyone with a smartphone and a TON wallet. The size of income depends on the richness of the lived life. Neither leveling nor elitism. Proprietarian Democracy.

Signal	\$HSIG/day	Increment
Baseline (TMA / Sensors)	5.0	Base
+ location_context	6.5	+1.5
+ web_intent_signals (DNS)	9.5	+3.0
+ wi-fi_context	10.5	+1.0
+ shopping_intent_signals	11.17	+0.67
+ app_pattern_signals	11.5	+0.33
+ visual_lifestyle_signals	15.5	+4.0
+ ambient_audio (iOS)	19.5	+4.0

Figures are illustrative. They calibrate against real B2B revenue at Phase 2 launch.

The Founder's Correction: Why the Base Rate is Universal and Non-Discriminatory

A fundamental error in many DePIN and data-union projects is tying rewards to the "volume of activity" or the "richness of life" as a multiplier for the base income. This creates a discriminatory system where a passive user—a wealthy businessman, a CEO, or a person living a quiet but authentic life—is undervalued simply because they do not generate "noise." Yet, their data is often the most valuable for B2B cohorts (e.g., high-net-worth investment patterns, enterprise decision-making signals).

ForeMetric splits the economic model into two distinct, non-discriminatory tiers:

Tier 1: The Sovereign Access Yield (Passive / Universal)

This is the base rate paid for the fact of providing access. If a user enables the toggles for visual_lifestyle_signals, web_intent_signals, or location_context, they receive a standardized, averaged accrual rate.

Philosophy: You are paid for your sovereignty and for expanding the statistical density of the network.

Equality: The student and the CEO receive the same base rate for granting the same sensor permissions. We do not judge the "quality" of your life; we value your consent to be part of the human ground-truth.

No Discrimination: A passive user who simply lives their life with toggles enabled is not penalized. Their data may be statistically rare and highly valuable for B2B queries, but their base accrual is not reduced because they are "quiet."

Tier 2: The Relevance Yield (Active / Ranked)

This is where the system ranks and targets users based on business needs. B2B clients do not pay for "all users." They pay for specific cohorts (e.g., "Users in London, aged 30–45, showing intent for luxury real estate").

Mechanism: The protocol's Richness Score and vector index identify which users match the business query.

Sponsor Contracts & Missions: A brand commissions a mission (e.g., "Verify foot traffic in retail zone X"). The system offers this mission only to users whose behavioral profile matches.

Result: The "quiet" CEO might rarely receive a "click-farm" style mission, but when a high-value B2B query targets their specific demographic, their yield spikes proportionally to their relevance.

This two-tier model ensures that the base income is a universal right of access, while the premium income is a market-driven reward for relevance.

Chapter 21. Real Yield Tokenomics and the Anti-Bot Architecture

In \$HSIG, the mint() function is absent by architecture. Fixed supply—1 billion tokens. No emission, no inflationary schedule, no "connect wallet" bonuses.

Every token is backed by real B2B revenue:

B2B Client pays in USDT.

Smart Contract buys back \$HSIG on DEX (DeDust/Ston.fi).

80% to users (proportional to their contribution to the sold insight).

10% to the referral pool.

10% to the protocol treasury.

This is hardcoded in bytecode, immutable.

The Pre-TGE Accumulation:

For the first 6 months, users accumulate IOUs in a PostgreSQL ledger. By the time of the Token Generation Event (TGE), the protocol has six months of verified behavioral data—an asset for which businesses are already lining up to pay. The token launches not on hype, but on a formed asset and real demand.

Anti-Bot Architecture: Why Empty Accruals are Impossible

How do we prevent bots from farming the "Sovereign Access Yield" without penalizing passive humans? We do not use "activity quotas." We use Physics and Cross-Signal Consistency.

Proof-of-Behavior (1D-CNN Classifier): Bots cannot simulate the biomechanics of a living hand. The 12-component feature vector captures micro-tremors (8–12 Hz), saccadic breaks, and pressure variability. A bot farm generates "perfect" linear data, which the classifier instantly flags as $P_{\text{bot}} \approx 1$.

Cross-Signal Consistency: A bot can emulate a GPS coordinate. But can it emulate the correlation between that GPS location, the specific Wi-Fi BSSID hashes in that area, and the DNS queries typical for that time of day? No. If the signals do not correlate organically, the vector is rejected from the B2B pool.

The "No-Value" Vector: If a user (or bot) generates data that is statistically indistinguishable from noise or synthetics, their vector simply does not participate

in forming B2B insights. Since the Real Yield is funded only by B2B revenue, a vector that doesn't help sell an insight generates zero revenue. The bot earns "IOU points" that never convert to real value because no business ever paid for them.

Hardware Attestation (App Attest / Play Integrity): Sessions without valid device attestation receive zero weight in B2B queries. This cuts off emulators and cloud-based bot farms at the hardware level.

The result: bots cannot drain the protocol's treasury because they cannot generate the low-entropy, cross-consistent signals that B2B clients pay for. The system is protected by physics, not by punishment.

Chapter 22. The Paradigm Shift Matrix

Paradigm	Base Capital	Extraction Mechanism	Human Status
Industrial Capitalism	Means of Production	Purchase of Labor	Wage Worker
Techno-Feudalism	Cloud Capital	Rent from Behavioral Trace	Digital Serf
State UBI	Tax Rent	Emission + Redistribution	Dependent
ForeMetric	Sovereign Signal	Monetization of B2B/AI Intents via TEE	Owner of Experience Capital

Chapter 23. The "Anti-Death Star" Philosophy

Most crypto-startups try to build a "Death Star": their own blockchain, their own hardware enclave, their own LLM. R&D risks kill projects before the first release.

We take the best existing solutions and bind them with a unique cryptographic architecture:

Sovereignty & Settlement: TON (asynchronous, cheap gas, TVM).

Confidentiality: AMD SEV-SNP + Intel TDX / COCOON.

AI & Vectors: Qdrant + OpenDP (Rényi DP).

An applied protocol that turns existing technologies into the first market for verified human experience.

DOCUMENT IV. ARCHITECTURE: HOW IT IS ENFORCED BY PHYSICS

Chapter 24. DataKey Dual-Encryption

The fundamental contradiction: for data to be useful to business, the server must process it. But if the server can process it, it can also steal it. Every previous attempt followed dead-end paths: "data never leaves the device" (kills the business model) or "data is on the server, we promise not to look" (compromised).

The solution is DataKey Dual-Encryption (§4.2 of the CTO Spec). Each user holds a single 256-bit AES key — the DataKey. All vectors are encrypted with it. The DataKey is stored in the Identity Vault on the TON blockchain in two separately encrypted copies:

Blob A — encrypted under the user's TON wallet public key. The eternal copy, the absolute right of ownership.

Blob B — encrypted under the server's public key (Phase 1: Ed25519 with AWS KMS; Phase 2: AMD_SEV_SNP_pubkey generated inside the attested VM).

The server physically cannot decrypt the data in a "cold" state. AMD EPYC with SEV-SNP encrypts every byte of RAM on the fly. Decryption occurs exclusively inside the processor when executing code within the attested VM.

Technical precision: this is NOT XOR of two ciphertexts. These are two independently encrypted copies of one DataKey. Data is encrypted with a single DataKey via AES-256-GCM (96-bit nonce, AAD = {user_id_hash, timestamp, chunk_seq_num}).

The COCOON boundary: Intel TDX workers never receive either the DataKey or raw vectors. They receive only (a) the B2B client's text query and (b) anonymized aggregated statistics. Enforced by data flow — a compile-time type error upon violation.

Chapter 25. Crypto-Shredding: The Right to Destroy

The right of ownership: to use, to dispose, to destroy. Without the right to destroy, you are not an owner but a temporary holder.

The mechanics of GDPR Crypto-Shredding (§4.3, §15.2):

The user taps "Delete my data"

burn_keys() zeroes out Blob A and Blob B in the Identity Vault

The DataKey is erased from the Secure Enclave

T+5 seconds: all encrypted data becomes irrecoverable noise (TON block finality)

T+5 minutes: the Qdrant index is invalidated

T+30 minutes: PostgreSQL balance and session logs are deleted

T+24 hours: DNS logs are anonymized

GDPR Article 17: 72 hours. Our SLA: 5 seconds of actual irreversibility, 24 hours for complete elimination. GDPR Recital 26: data without a key is not personal data.

Chapter 26. The Smartphone as a Portable Vault

Three layers of protection in Phase 2 (Native App):

Secure Enclave (iOS) / StrongBox (Android) — private keys never leave the isolated chip.

SQLCipher + AES-256-GCM — the local SQLite database is encrypted at the storage level, the key derived from the DataKey.

Self-Custody — we do not store seed phrases. Recovery is through the 24 words of the TON wallet on any device.

Behavioral capital travels with the human across any borders. In 24 words memorized by heart. No customs authority can confiscate what does not physically exist outside the head.

Chapter 27. Geopolitical Resilience

GDPR Compliance by architecture — we sell aggregated insights with differential privacy (Rényi DP $\epsilon=4.0$), not personal data.

Absence of a single point of failure — Phase 3: COCOON + TON Storage, no "office" or "server room."

TVM bytecode is immutable — no upgrade proxy, no admin `set_code()`. The off-switch does not exist.

The protocol works everywhere where there is internet and a smartphone.

Regulatory risk is minimized by architecture, not by legal workarounds.

Chapter 28. Freedom as a Competitive Advantage

BigTech builds walled gardens. ForeMetric is an open protocol. If Telegram blocks the Mini App, users download the native application, connect their TON wallet, and the Identity Vault with its history and balance is instantly picked up.

Identity portability: the TON blockchain is a censorship-resistant registry.

Censorship resilience: no corporation can erase a history anchored in immutable bytecode.

Interoperability: Signal Passport (§12 of the CTO Spec) for credit scoring, insurance, and HR without repeated KYC.

Chapter 29. The Five-Stage Data Pipeline

Stage 1. Edge Ingestion The Rust Core extracts a 12-component feature vector (§6.5 of the CTO Spec). The vector is encrypted with the DataKey via AES-256-GCM with a 96-bit nonce and AAD. The encrypted chunk (~1–2 KB) departs through TLS 1.3 with certificate pinning.

Stage 2. TEE Ingestion The server node (AMD SEV-SNP) accepts the chunk. The processor generates a Hardware Attestation Quote via AMD KDS. Inside the VM, the chunk is decrypted, and the vector is indexed in Qdrant (SQ8, 4× memory savings with ~1% recall loss).

Stage 3. Private Analytics The B2B client asks a question. Phi-3-mini translates the NL query into a Qdrant filter (~500ms). Qdrant searches for cohorts (minimum 50 users). OpenDP Rényi DP $\epsilon=4.0$ adds differential noise. COCOON TDX generates the PDF report.

Stage 4. Revenue Splitter The B2B client pays in USDT. The smart contract executes: a swap on the DEX with TWAP protection → 80% to users (proportional to Richness Score), 10% to the referral pool, 10% to the protocol treasury. If a contributing user has no Referral SBT (no referrer), the 10% referral slice routes to the protocol treasury — the effective split becomes 80/20. The unclaimed referral slice is never burned and never redistributed to other users. This rule is encoded in the Revenue Splitter bytecode at mainnet deployment; being immutable, it cannot be added later.

Stage 5. User Wallet \$HSIG arrives in the TON wallet. Phase 1: IOU in PostgreSQL. Phase 2+: the real token after TGE.

Defense-in-depth: compromising one stage does not reveal the data. The device is encrypted by the DataKey. Transport is TLS + pinning. The server is SEV-SNP RAM inaccessible from outside. COCOON never received keys or vectors. The blockchain stores only encrypted Blob A/B.

Chapter 30. Three Phases of Evolution

Phase 1 (Q3–Q4 2026): Trusted Operator. Telegram Mini App, Hetzner CX41, AWS KMS. On-chain content-hash tamper-evidence (§3.6 of the CTO Spec). Alpha: 500 users. Gate: Day-7 retention $\geq 20\%$ + B2B pilot \$1K–\$5K.

Phase 2 (Q1–Q2 2027): Hardware-Attested. AMD SEV-SNP bare-metal, COCOON Intel TDX, TGE \$HSIG, DEX listing. Data is decrypted exclusively inside isolated RAM.

Phase 3 (2028+): Full Decentralization. COCOON for all computations. TON Storage for storage. Federated Learning: local training on devices, Gaussian DP $\epsilon=1.0$, Secure Aggregation FedAvg. Kyber-768 post-quantum KEM.

The investor sees: we are not selling fantasy. We understand the limitations of each phase. We spend money only when the previous phase has proven its viability. Phase 1 costs pennies — a position of strength.

DOCUMENT V. B2B REALITY: WHO PAYS AND WHY

Chapter 31. B2B Use Cases: What Business Pays For

Fintech and Banking A regional bank spends \$200K/month on contextual advertising for "apply for a mortgage." CAC is \$800–1,500, with 60% burned in vain.

Query to ForeMetric: a cohort of users with a high probability of applying for a mortgage in the next 14 days. Criteria: visited rate comparison sites, movements between banks, financial DNS queries.

Answer: 2,340 users, 18% in an active comparison phase, 67% cross-sell with auto insurance. CAC drops from \$1,200 to \$450. At 100 mortgages/month — \$75K in savings. Check: \$15K–25K/month.

Retail and E-Commerce Lost 40% of retargeting effectiveness after the death of cookies. \$500K/month on a non-working loyalty program.

Query: a cohort comparing laptops at \$800–1,500. Answer: 8,500 users, brands Dell 34% / HP 28% / Lenovo 22%, 59% researchers. Conversion is 12–18% vs. 2–3%. ROI 340%. Check: \$20K/month.

Web3 and DeFi \$2M airdrop → 85% claimed by bot farms, TVL drops 70% within a week.

Query: verify 50K users as real humans. Criteria: Proof-of-Behavior, Richness Score above median, 90+ days of stable patterns.

Result: 80% hold tokens for more than 30 days, TVL drops only 15% (vs. 70%). Check: \$25K–50K.

AI Laboratories: Defense Against Model Collapse 60% of the training corpus is synthetic content. The model degrades by 15–20% with each generation.

Federated Learning: base model → validation → distribution to 5K devices → local training (optimal state: charging, Wi-Fi) → Top-1% noisy gradients (Gaussian DP $\epsilon=1.0$) → Secure Aggregation in COCOON TDX.

The model improves intent prediction by 8–12%. For 100M users — \$50M–100M in additional revenue. Check: \$100K–500K per enterprise task.

Chapter 32. COCOON Mechanics

COCOON is an open-source network by Telegram for verifiable AI inference. Intel TDX nodes, tasks via TON contracts, payment in TON. Pay-per-compute, no fixed costs. A network of hundreds of operators, no single point of failure.

COCOON workers receive: (a) the B2B client's text query, (b) anonymized aggregated statistics. NEVER: DataKey, raw vectors, Blob A/B, identifying information. Enforced by data flow — a compile-time type error.

If Telegram ceases support — the code is open-source, a fork is possible, migration to alternative TEE networks, transition to self-hosted TDX.

Chapter 33. Comparison with Competitors

Parameter	Acxiom/ LiveRamp	Worldcoin	Grass/DePIN	ForeMetric
What they sell	Raw CSV/PII	Biometrics	Browsing history	Verified insights
Legal risk	Enormous (GDPR)	Medium	Enormous (PII)	Zero
Precision	Low	N/A	Low	High
Privacy	None	Partial	None	Hardware (TEE + DP)
Monetization	None	One-time airdrop	Inflation	Real Yield 80%
Sustainability	Dying	Controversial	Ponzi-like	Sustainable

Chapter 34. Unit Economics of a Single Query

Example: a fintech pays \$10,000 USDT for a predictive slice. The Revenue Splitter (80/10/10):

\$8,000 → DEX, buyback of \$HSIG, distribution to the cohort

\$1,000 → referral pool

\$1,000 → protocol treasury

If a contributing user has no referrer, the \$1,000 referral slice routes to the protocol treasury — the effective split becomes 80/20 (\$8,000 to users, \$2,000 to treasury).

This is encoded in the Revenue Splitter bytecode and cannot be changed.

User share formula: $I_{\text{user}} = (\text{Richness Score}_{\text{user}} / \sum_j \text{Richness Score}_j) \times (\text{Revenue}_{\text{B2B}} \times 0.80)$

These \$8,000 are not printed — they are bought back on the market. Every B2B payment creates demand for the token, not emission. Real Yield.

Chapter 35. Scaling Model

Parameter	Early Growth	Scaling	Global
MAU	50,000	1,000,000	20,000,000
B2B queries/day	10	250	5,000
Average check	\$1,000	\$2,500	\$5,000
Daily revenue	\$10,000	\$625,000	\$25,000,000
Users' share (80%)	\$8,000/day	\$500,000/day	\$20,000,000/day
Income per MAU/month	~\$4.80	~\$15	~\$30

All figures are illustrative and calibrate against real B2B revenue.

Chapter 37. Why This Cannot Be Replicated

Six months of verified behavioral history — an asset impossible to backdate.

The network effect of the referral network — a self-reinforcing loop, 10% forever, encoded in immutable SBT contracts.

Hardware TEE infrastructure + attestation chain — months of engineering work.

The immutable Revenue Splitter — 80/10/10 (80/20 without referrer) in TVM bytecode forever.

Value is determined not by the current price but by accumulated lived experience. The longer ForeMetric exists, the wider the moat.

DOCUMENT VI. HONEST BOUNDARIES: WHAT WE DO NOT PROMISE

Chapter 38. We Are Not Building Our Own Blockchain

We use TON: asynchronous, cheap gas, TVM. Smart contracts in Tolk, immutable. The blockchain is used only for Identity Vault, Merkle Drop, and Revenue Splitter. Heavy computations and storage are off-chain.

Chapter 39. We Are Not Inventing Our Own Hardware Enclave

AMD SEV-SNP (server core) — mass-produced EPYC processors, 100+ providers. Intel TDX / COCOON (AI inference) — open-source, no vendor lock-in. Multi-TEE: AMD SEV-SNP + Intel TDX with cross-verification.

Chapter 40. Phase 1 — Trusted Operator (Honestly)

Data is encrypted on the server, the key in AWS KMS, on-chain tamper-evidence. Not zero-trust — trust-but-verify. In Phase 2 — hardware-attested. We never present them as equivalent.

Chapter 41. No Token Staking for Nodes

\$HSIG has no mint(). Payouts come exclusively from real B2B revenue. Decentralization (Phase 3) is achieved through COCOON pay-per-compute and TON Storage provider nodes, not through inflationary staking. Chapter 42. We Do Not Promise 100,000 MAU in 2026

Q4 2026: alpha of 500 users. Q3 2027: target of 50K MAU. Phase 1 costs ~\$115–130/month. Gates are metrics of traction or revenue, not calendar dates.

Chapter 43. Honesty as Method

The evolution of trust is documented.

All figures are illustrative and calibrate against real data.

Fallback path: Traditional First, Organic Fallback — Phase 1 costs pennies, runway is measured in quarters.

Gates between phases are measurable.

DOCUMENT VII. THE CALL

Chapter 44. Manifesto of the Sovereign Individual

The capital of the 21st century is the Human — living, feeling, creating intentions, and living unique experience.

ForeMetric.ai links hardware privacy barriers (TEE), the TON blockchain, and the needs of the B2B/AI market to return to every human their inalienable digital sovereignty and material autonomy.

The smartphone is a portable hardware vault of sovereign capital. Behavioral capital travels across any borders. \$HSIG on the TON network is not subject to state seizure.

Chapter 45. Final Call

We do not create a new market — we liberate the existing one. We do not hand out alms — we pay for real value. We do not build a Death Star — we connect the best to protect the most important.

Join the protocol where every intent becomes part of your sovereign capital. In a world where AI computes everything, remain human.

APPENDICES

Appendix A. Investment Thesis

MACRO PROBLEM: THE POST-LABOR DEMAND CRISIS

Cognitive deflation: 300 million jobs under automation

Robots produce but do not consume — aggregate demand crisis

UBI has failed: Switzerland 77% against, programs die with budgets

Thesis: "UBI asks 'who will pay?' ForeMetric asks 'who will buy?'"

THE SOLUTION: SOVEREIGN SIGNAL YIELD (\$HSIG)

Arbitrage of \$900B+ data brokerage and AdTech markets

Proof-of-Experience: human behavior as Ground Truth for AI

Intent Economy: intent is 100–1,000× more expensive than attention

Real Yield: mint() absent, 80% of B2B revenue → users (80/20 when no referrer)

DataKey Dual-Encryption: Blob A (TON wallet) + Blob B (TEE)

Honest boundaries: we do not build our own blockchain, do not invent our own hardware, honest about Phase 1

Appendix B. Final Synthesis

Four fundamental conclusions:

Living unique human experience is the primary labor of the digital era.

B2B and AI laboratories directly purchase verified intentions. The money exists — we redirect it from intermediaries to creators.

TEE enclaves: data is decrypted only inside isolated RAM. Neither the founder, nor Amazon, nor hackers can peek.

burn_keys() — data is destroyed in 5 seconds. A cryptographic self-destruct button.

Appendix C. Technical Architecture (Summary)

The signal lifecycle — 5 protected stages:

Edge Ingestion: DNS Shield, AES-256-GCM, DataKey in Blob A + Blob B

TEE Ingestion: AMD SEV-SNP attestation, Qdrant SQ8 indexing

Private Analytics: Phi-3-mini NL→Qdrant, OpenDP Rényi DP $\epsilon=4.0$, COCOON TDX PDF

Revenue Splitter: USDT→DEX→80% to users (80/20 when no referrer), TWAP protection

User Wallet: \$HSIG in the TON wallet

Appendix D. Unit Economics and Yield

Formula: $I_{\text{user}} = (\text{Richness Score}_{\text{user}} / \sum_j \text{Richness Score}_j) \times (\text{Revenue}_{\text{B2B}} \times 0.80)$

See the Richness Score table in Chapter 20 and the scaling model in Chapter 35.

Appendix E. Risk Matrix

Risk Vector	Architectural Protection
Sybils and bot farms	TEE Attestation + Proof-of-Behavior 1D-CNN (12 features). Multiplicative weight

	(1 – P_bot)
Leak / authority requests	Zero Raw Storage + burn_keys(). Without a key — white noise. GDPR Recital 26
Model Collapse	Proof-of-Experience + Federated Learning. Gaussian DP $\epsilon=1.0$, Top-K sparsification, Secure Aggregation
Token selling pressure	Real Yield Demand Loop. Every B2B payment buys back on DEX. 0.1% burn on P2P
Regulatory (GDPR, CCPA, MiCA)	Privacy by architecture. Aggregated reports with DP. Crypto-Shredding SLA 24h
TEE compromise	Multi-TEE (AMD SEV-SNP + Intel TDX). Regular microcode updates. Backup circuits

Appendix F. GTM and Growth Loops

Loop 1 · B2C: Telegram Mini App

Entry via TON Connect in <30 seconds

Data Mining without Battery Drain (DNS Shield in the background)

Single-level referral: 10% of the referral's earnings, forever. No pyramid

Loop 2 · B2B: Direct Sales

Alternative data for hedge funds: \$1K–5K → \$10K–50K → \$100K–500K

Federated Learning for AI laboratories

Freemium for small business + Signal Passport

Loop 3 · B2D: Decentralized Compute

COCOON pay-per-compute + TON Storage provider nodes

No staking of \$HSIG — paid from real revenue

Synergy: more users → more data → better insights → more B2B queries → higher revenue → higher \$HSIG rate → more decentralization → more users.

Appendix G. Roadmap 2026–2028

Q3–Q4 2026: Phase 1 — TMA, alpha 500, B2B pilots \$1K–5K. Gate: retention $\geq 20\%$

Q1–Q2 2027: Phase 2 — AMD SEV-SNP bare-metal, COCOON, TGE \$HSIG. Gate: B2B

MRR $\geq$ \$3K Q3 2027+: Phase 3 — FL, 50K MAU. Gate: 5K opted-in + B2B MRR $>$ \$10K sustained