

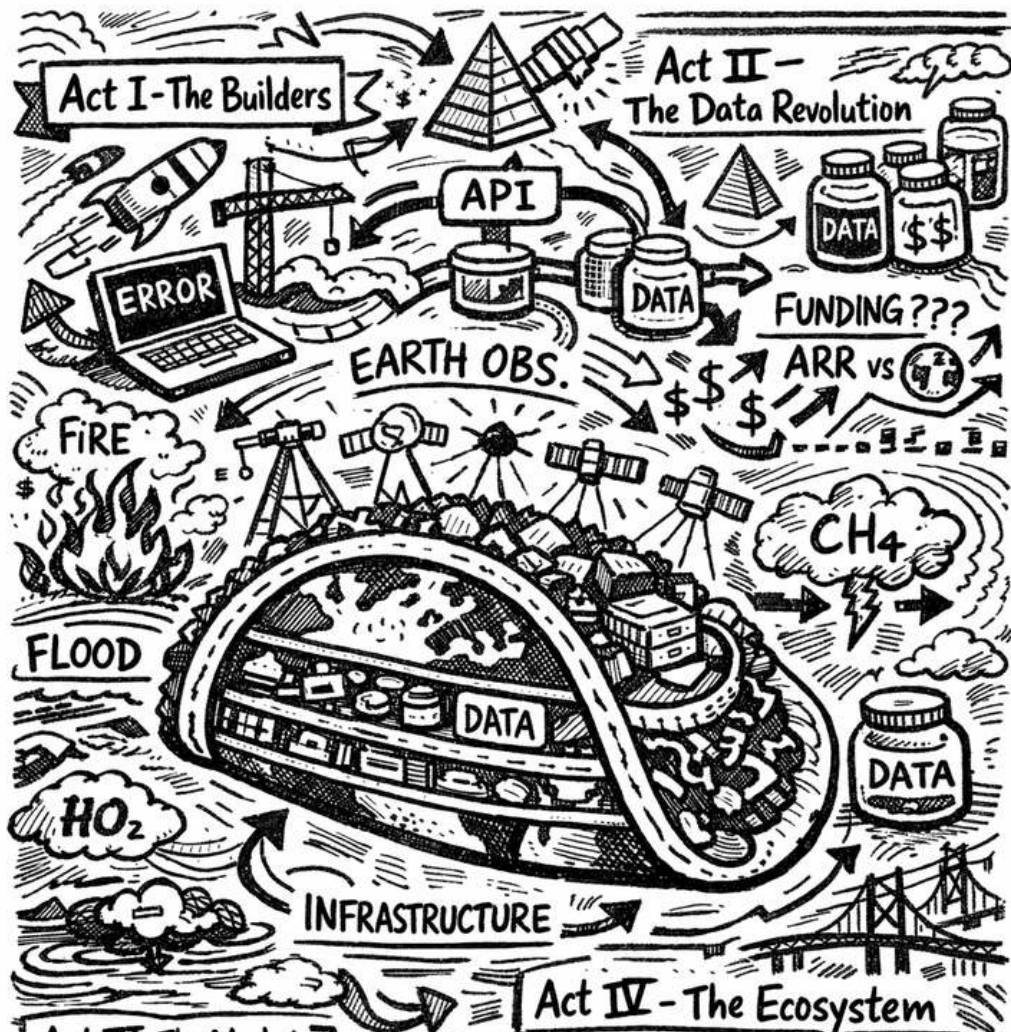
GEOAI, CLIMATE RISK, AND TACOS PLANETARY OS

SF EDITION



Act I-The Builders

Act II— The Data Revolution



Act III-The Market

Act IV - The Ecosystem



★ — ACT ONE — ★

★ THE BUILDERS ★



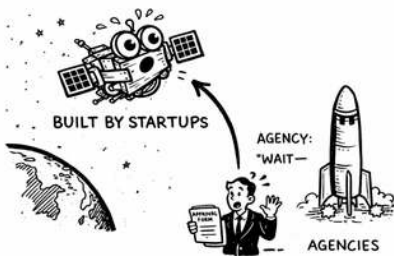


CLIMATE MONITORING INFRASTRUCTURE DIDN'T COME FROM LOCKHEED BOARDROOMS. IT CAME FROM FUCKING GRAD STUDENTS, HACKERS, AND PEOPLE IMPATIENT WITH 18-YEAR AEROSPACE TIMELINES.



Why did the Old Guard Miss it?

- PROCUREMENT CYCLES LONGER THAN STARTUP LIFESPANS
- PERFECTION CULTURE IN A WORLD THAT REWARDS ITERATION
- MISSION-FIRST THINKING VS MARKET-FIRST REALITY
- RISK MANAGEMENT THAT OPTIMIZED FOR NOT MOVING



What Broke the Old Model?

- RIDESHARE LAUNCHES TURNED ACCESS INTO A COMMODITY
- CUBESATS MADE SPACE ITERATIVE INSTEAD OF EXISTENTIAL
- CLOUD + APIS MADE EO DATA USABLE, NOT ARCHIVAL
- AGILE HARDWARE; BUILD FAST, LAUNCH FASTER, LEARN IN PUBLIC



WTF Is Happening NOW?!?!?!?

- CLIMATE INFRASTRUCTURE IS BEING BUILT BY STARTUPS, NOT AGENCIES
- VENTURE CAPITAL IS QUIETLY FUNDING PLANETARY SENSING SYSTEMS
- THE ROADMAP FOLLOWS REVENUE, NOT GOVERNANCE
- SPEED IS WINNING... WHETHER WE TRUST IT OR NOT



→ SPEED IS THE α , NOT THE MODEL. ←
 CAPITAL IS CHASING V , AND V IS EATING THE SLOW.
 WHILE THEY WRITE MEMOS, THE TACO TABLE IS ALREADY IN ORBIT.





The Dirty Secret of GeoAI

- AI models don't observe, they digest what sensors feed them
- No satellite pass = no fresh signal, just reheated pixels
- "Planetary intelligence" starts with orbital plumbing, not .py
- The sexiest model in the world still starves without data
- Intelligence is downstream of instrumentation



The Sensors no one Brags About

- SAR satellites quietly mapping through clouds like introverts at a rave
- Methane sensors doing the actual climate accountability work
- Hyperspectral cameras turning invisible chemistry into receipts
- LiDAR drones building 3D truth, one laser pulse at a time
- Hardware is the fieldwork AI pretends it doesn't need



The Great Delusion

- People talk about models like they conjure reality out of vibes
- Software is an interpreter, not a witness
- You can't prompt your way to missing data
- Training on stale or synthetic data = hallucinations with confidence
- The "AI layer" is only as real as the sensor layer beneath it



Why Hardware gets Ignored

- Hardware timelines move like glaciers, not sprints
- Capital intensity scares off the SaaS crowd
- Failure is physical, expensive, and occasionally explodes
- Iteration cycles are measured in launches, not deploys
- It's easier to fund dashboards than detection

GEOAI ISN'T SOFTWARE-FIRST, IT'S SENSOR-FIRST WITH A UX PROBLEM, AND THE REAL MOAT ISN'T CLEVER MODEL ARCHITECTURE BUT RELENTLESS DATA ACQUISITION. OWNING THE SENSOR MEANS OWNING THE GROUND TRUTH, FULL STOP. CLIMATE INTELLIGENCE ANSWERS TO PHYSICS, NOT COMPUTE BUDGETS OR GPU SWAGGER.





SPEED > PERFECTION

- The atmosphere is not waiting for your steering committee
- Methane leaks move faster than your approval workflow
- Eight-year timelines is eight years of unmeasured emissions
- Perfect models don't matter if they arrive too late
- Shipping beats theorizing, every GODDAMN time



Legacy Systems (A Tragedy in Slow Motion)

- Satellite programs that outlive their original assumptions
- Committees optimizing for consensus, not outcomes
- White papers that describe problems already evolving
- Funding cycles disconnected from atmospheric urgency
- Data arrives polished... and obsolete



Planet > Process



Startup Climate Stack

- The atmosphere does not respect governance
- Physics ignores your org chart
- Climate signals don't wait for alignment
- The system is live whether you are or not
- Nature runs continuous integration
- Launch early, even if it's fucking duct-taped together
- Collect messy, real-world data immediately
- Iterate based on what the planet actually does
- Fail fast, redeploy faster
- Treat orbit like a dev environment, not a cathedral



8 YEARS OF
UNMEASURED
EMISSIONS
8 YEARS TOO LONG



Speed is @ Bureaucracy is drag.

The planet doesn't wait for your approvals.
Messy, real-time data prints signal. Polished,
late data is just expensive noise.

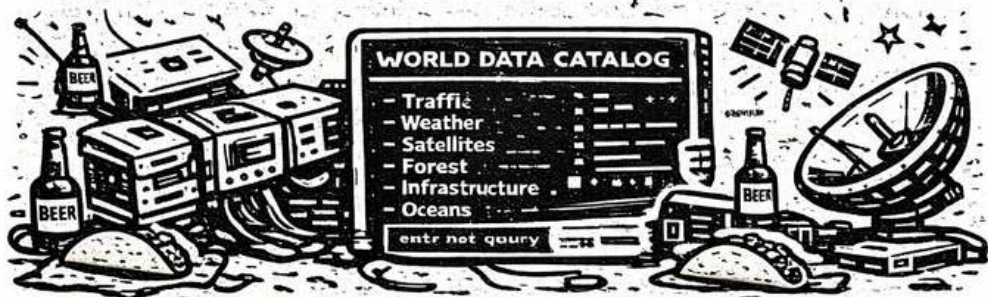
Feedback loops compound intelligence.
Static models decay. Ship fast or become irrelevant.





★ ACT TWO ★

THE DATA REVOLUTION



OPEN SOURCE



THE FUCKING WORLD

THE QUIET INFRASTRUCTURE TAKEOVER



- GOOGLE EARTH ENGINE TURNED PLANETARY ANALYSIS INTO A BROWSER TAB
- NASA EARTHDATA MADE DECADES OF SCIENCE DOWNLOADABLE AT 2AM
- MICROSOFT PLANETARY COMPUTER INDUSTRIALIZED ACCESS TO EO + AI
- APIS REPLACED GATEKEEPERS WITH ENDPOINTS THAT ANYONE COULD HIT
- "DOWNLOAD DATA" BECAME "QUERY THE PLANET"



WHO ACTUALLY WON



- NOT PRIMES, NOT AGENCIES, NOT THE USUAL GODDAMN SUSPECTS
- STARTUPS, NGOS, RESEARCHERS, AND SLEEP-DEPRIVED CLIMATE GREMLINS
- ANYONE WHO COULD WRITE A SQL QUERY SUDDENLY HAD A SUPERPOWER
- THE WEIRD GENERALIST WHO KNEW JUST ENOUGH GIS TO BE DANGEROUS
- THE PEOPLE WILLING TO DUCT-TAPE WORKFLOWS INSTEAD OF WAITING FOR "OK"



THE 3AM ECONOMY



- CLIMATE INSIGHTS NOW RUN ON CAFFEINE AND .PY
- A LAPTOP + OPEN DATA + CLAUDE CODE == GLOBAL MONITORING STACK
- GITHUB REPOS BECAME THE SHADOW INFRASTRUCTURE FOR REAL-WORLD DECISIONS
- ANALYSIS HAPPENS OFF THE CLOCK AND OUTSIDE OF A FUCKING ORG CHART
- THE BARRIER TO ENTRY COLLAPSED WHILE NO SUIT WAS PAYING ATTENTION



THE REAL HOT TAKE

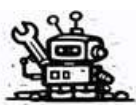
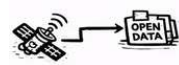


- OPEN DATA IS THE MOST IMPORTANT CLIMATE TECH OF THE DECADE
- IT SCALED FASTER THAN SATELLITES AND IOT DEVICES EVER COULD
- THE MARGINAL COST OF INSIGHT DROPPED FASTER THAN THE GOVERNANCE
- MOST "AI BREAKTHROUGHS" ARE JUST BETTER ACCESS TO ALREADY OPEN-SIGNALS
- WE BUILT A PLANETARY NERVOUS SYSTEM AND FORGOT TO BRAG ABOUT IT

OPEN DATA X HARDWARE (BETTER TOGETHER)



- SENSORS COLLECT THE SIGNAL, OPEN DATA LETS THE WORLD HEAR IT
- SATELLITES CREATE THE TRUTH, PLATFORMS MAKE IT USEABLE
- NO SENSOR MATTERS IF THE DATA DIES IN A PROPRIETARY VAULT
- NO OPEN DATASET EXISTS WITHOUT SOMEONE PUTTING A 18 BIRD UP
- HARDWARE AND OPEN DATA AREN'T RIVALS, THEY'RE A PIPELINE





THE WHOLE FUCKING EARTH DATA CATALOG



CATALOG → CODE → COGNITION

- WHOLE EARTH CATALOG WASN'T A MAGAZINE: IT WAS A USER MANUAL FOR REALITY
- "ACCESS TO TOOLS" QUIETLY BECAME "ACCESS TO PLANETARY DATA"
- THE INTERFACE CHANGED, THE MISSION DIDN'T
- WE SWAPPED PAPER PAGES FOR APIS AND TENSORS



THE LONG ARC OF SEEING

- ANALOG EARTH → DIGITAL EARTH → COMPUTED EARTH
- GOOGLE EARTH TAUGHT US TO ZOOM
- EARTH ENGINE TAUGHT US TO QUERY
- FOUNDATION MODELS ARE TEACHING US TO ASK BETTER QUESTIONS



VISION AS INFRASTRUCTURE

- SEEING THE PLANET ISN'T A FEATURE, IT'S A PREREQUISITE
- CLARITY SCALES FASTER THAN POLICY
- AWARENESS IS THE FIRST SUPPLY CHAIN
- YOU CAN'T FIX WHAT YOU CAN'T RESOLVE



THE QUIET BET

- IF ENOUGH PEOPLE CAN SEE THE SYSTEM...
- ...THEY MIGHT STOP OPTIMIZING THE WRONG PARTS
- ...THEY MIGHT NOTICE SECOND-ORDER EFFECTS
- ...THEY MIGHT ACTUALLY COORDINATE



FROM CATALOG TO NEURAL NET

- WHOLE EARTH CATALOG = CURATED HUMAN KNOWLEDGE
- EARTH ENGINE = INDEXED PLANETARY COMPUTATION
- FOUNDATION MODELS = COMPRESSED PLANETARY INTUITION
- THE CATALOG DIDN'T DIE, IT LEARNED TO THINK



A ChatGPT for the Earth

THE RISKS (WHERE THIS GETS SPICY FAST)

Hallucinations, but for weather and risk, not text

Synthetic training loops → “digital placelessness”

Black-box decisions steering billions in capital with limited interpretability

Over-centralization: a few models quietly shaping global climate narratives

Garbage in, gospel out... biased data becomes institutional truth at scale
False confidence > uncertainty... the model sounds certain, the planet is not

What Makes This Different

- Language models predict words; these predict reality states
- Inputs are physics-adjacent: temperature flux, & pressure
- Yime matters as much as space; sequences over snapshots
- Models learn relationships across systems, not just patterns
- Its interference across coupled systems, not isolated angles

The Training Problem (AKA Good Luck)

- Earth Data is sparse, biased and wildly inconsistent
- Ground truth is often.....vibes plus partial measurement
- Long tail events are exactly what we care about
- Simulation data fills gaps but risks synthetic drift
- Scale is brutal: petabytes of spatial/temporal spaghetti

What a “Planetary Reasoning Engine” Unlocks

- Asks “what happens if...” and actual get system level answers
- Forecasts that understand interaction, not just trends
- Real-time climate risk signals for Fin/Insurtech
- Policy becomes simulation-based, not spreadsheet kabuki
- Moves us from reactive mapping to => Anticipatory Intel

The Quiet Power Shift

- Whoever builds this owns the interface to planetary decision-making
- From dashboards to copilots for Earth-scale systems
- Climate intelligence becomes a programable infrastructure
- The moat isn't data alone, its learned relationships
- This is the OS layer for climate, not just another app





★ ACT THREE ★

THE MARKET



CLIMATE VC IS EATING THE WORLD



VENTURE SCALE ONLY



THE VC FILTER

- "Venture scale" becomes a gatekeeper for climate solutions
- Slow, local, messy problems get filtered out
- Adaptation struggles to compete with shiny mitigation tech
- Community resilience rarely fits a 10x return story
- If it can't scale globally, it's treated as niche

WHAT GETS BUILT

- "SaaS for carbon accounting instead of soil restoration
- Dashboards over dirt, platforms over people
- Optimization layers instead of physical intervention
- Software-first solutions to hardware-rooted problems
- Climate tech that looks suspiciously like fintech



WHAT GETS IGNORED

- Smallholder farmers and informal economies
- Region-specific risks that don't generalize cleanly
- Long-tail disasters that don't model neatly
- Maintenance, repair, and stewardship work
- Anything that requires patience instead of growth

INFRASTRUCTURE BY ACCIDENT



- Today's startup becomes tomorrow's default system
- APIs quietly turn into critical climate infrastructure
- Proprietary models become decision-making backbones
- Venture-backed tools shape regulatory expectations
- The stack hardens before we question it

THE UNCOMFORTABLE TRUTH

- Investors are de facto climate strategists
- ROI timelines compete with atmospheric timelines
- "Impact" often gets reverse-engineered from returns
- Entire risk categories remain invisible to capital
- The planet doesn't care about your exit multiple

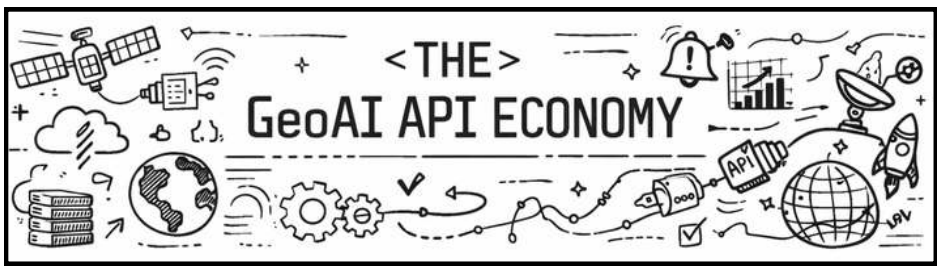
- ☒ 10X RETURN
- ☒ FAST EXIT
- ☐ PLANET ???



FUCKING TRUTH BOMB: CAPITAL DECIDES REALITY

MONEY DOESN'T JUST FOLLOW INNOVATION, IT SCRIPTS IT
IF IT'S FUNDABLE, IT'S "IMPORTANT" BY DEFAULT
CLIMATE PRIORITIES GET SHAPED IN PITCH ROOMS
CAPITAL ALLOCATION QUIETLY BECOMES PLANETARY GOVERNANCE
THE MAP OF INVESTMENT BECOMES THE MAP OF ACTION





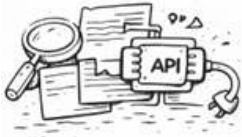
The Inevitable Stack Shift



- Every breakthrough starts as a product, ends as invisible infrastructure
- What feels novel today becomes default tomorrow
- Interfaces simplify, complexity buries itself in APIs
- The winners are not the flashiest, they're the most embedded
- If developers depend on you, you've already won



From Data to Decisions As a Service



- Starts as a product, ends as invisible infrastructure
- What feels novel today becomes default tomorrow
- Interfaces simplify, complexity buries itself in APIs
- The winners are not the flashiest, they're the most embedded
- If developers depend on you, you've already won

Pay as you Go EO



- Clean, reliable access to EO data becomes monetizable infrastructure
- Billing, usage tracking, and normalization are the real product
- Abstract away sensor differences, sell consistency
- Developers don't want satellites, they want answers
- Whoever owns access owns the ecosystem



Climate Endpoints

- Alerts become programmable, not passive
- "If flood risk > X, do Y" becomes a standard workflow
- Climate risk turns into event-driven architecture
- Notification speed becomes a competitive advantage

The Risk (Where this gets Weird)



- API monocultures create systemic fragility
- Black-box models obscure how decisions are made
- Over-abstraction disconnects users from physical reality
- Paywalled intelligence limits equitable access
- If the API goes down, so does your "understanding" of the planet





THE OPENING SLIDE PROBLEM

- The planet is on fire" has become fucking table stakes
- Existential crisis framed like a market opportunity feels... uncanny
- Founders are expected to quantify catastrophe in TAM language
- Urgency gets compressed into a 30-second/15 floor pitch
- Climate reality doesn't fit cleanly into slide-sized narratives



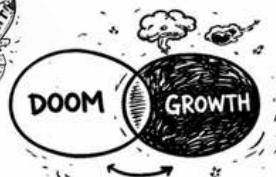
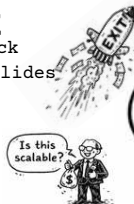
ARR VS ATMOSPHERE

- ARR grows quarterly, climate risk compounds fucking continuously
- SaaS metrics reward retention, not planetary stabilization
- Investors want predictable revenue, the planet delivers chaos
- Unit economics don't map cleanly to ecosystem collapse
- "Scalable" often means profitable, not impactful



THE COGNITIVE DISSONANCE ENGINE

- Founders toggle between doom and optimism mid-deck
- Fire → dashboards → hockey stick growth in 10 slides
- Emotional whiplash is baked into the format
- Climate grief gets translated into KPI language
- Everyone nods like this is normal



PLANETARY TIME VS STARTUP TIME

- Climate systems operate on decades to centuries
- Startups operate on 18-month runways
- Feedback loops in climate are slow and nonlinear
- Feedback loops in startups are fast and brutal
- Misalignment creates fragile solutions



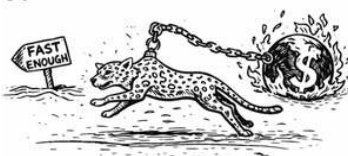
THE "VENTURE-SCALE" FILTER

- Only certain climate problems get funded
- Slow, systemic issues often get ignored
- Adaptation struggles more than mitigation
- Community-scale solutions rarely fit VC models
- What gets built is what gets funded



THE REAL QUESTION (NO EASY ANSWER)

- Can profit-driven models align with planetary needs?
- Does speed justify misalignment in incentives?
- Are we building solutions or just investable narratives?
- What happens when exits matter more than outcomes?
- If not VC... then what scales fast enough?





★ ACT FOUR ★

★ COMMUNITY ★





Where the Real Work happens

- The panel says one thing, the group chat says what's actually deployable
- Decisions get pre-decided in private threads before they ever hit a roadmap
- "Quick question..." messages routinely spawn entire products
- The fastest feedback loop in GeoAI isn't CI/CD, it's a spicy Slack reply
- If it hasn't been roasted in a group chat, it's not production-ready



Trust is the Real Infrastructure

- Access isn't about credentials, it's about who will answer your dumb question at 23 fucking 47
- Reputation compounds through replies, not resumes
- The people who share early become the ones everyone calls later
- Trust networks move faster than any formal partnership agreement
- One "this is broken" from the right person > 10 polished whitepapers

Open Source...but Make it Fucking Social

- Code is the artifact, conversation is the engine
- GitHub repos are just the visible tip of a much messier iceberg
- The real roadmap lives in comments, issues, and "wait, what if..." threads
- Forking isn't just technical, it's cultural
- The best contributions start as half-baked takes, not perfect PRs



whisper Networks > Press Releases

- The biggest deals are known weeks before they're announced
- Everyone knows which models actually work, they just don't say it publicly
- "Off the record" is where strategy actually forms
- The market narrative is downstream of private consensus
- If you rely on LinkedIn for truth, you're already late

Chaos as a Feature Not a Bug

- No hierarchy means ideas compete on merit... and meme quality
- Signal and noise are intertwined, and that's the point
- The weirdest conversations often produce the sharpest insights
- Speed beats polish, every time
- It looks messy on the outside because its alive



THE NEW MAPMAKERS

CARTOGRAPHY LEFT THE BUILDING

- Mapmaking is no longer owned by governments or legacy institutions
- Anyone with compute, data, and a decent model can redraw reality
- The barrier to entry collapsed, the stakes did not
- The map is now a product, not a document
- Geography stopped being published and started being updated

THE MAP HAS LEFT THE BUILDING

- Every map is versioned, forked, and subject to breaking changes
- “Ground truth” is increasingly a function of pipeline design
- APIs decide what gets seen, not just what exists
- Updates propagate like software releases, not atlases
- Bugs in maps now behave like bugs in code... with real-world consequences

POWER IS IN THE LAYER STACK

- Whoever controls the base layer controls the narrative
- Derived layers shape decisions more than raw data ever could
- Visibility is curated, not neutral
- Default settings quietly become global assumptions
- The stack is political, even when it pretends not to be

COUNTER MAPS ARE HAVING A MOMENT

- Indigenous and community-led mapping is challenging legacy authority
- Local knowledge is being encoded into systems that used to ignore it
- Competing maps now coexist instead of being overwritten
- “Official” is losing its monopoly on truth
- The map is becoming a site of negotiation, not declaration

TRUTH IS NOW A MERGE CONFLICT

- Multiple realities can exist until someone resolves them
- Data disagreements are no longer edge cases, they’re the norm
- Consensus is built, not assumed
- Validation is social as much as technical
- The final map is less about accuracy and more about alignment



WHY COMPETITION BREAKS IN CLIMATE GEOAI

- THE MARKET ISN'T SATURATED, IT'S UNDERBUILT
- HOARDING DATA SLOWS SIGNAL, NOT RIVALS
- FRAGMENTATION CREATES BLIND SPOTS IN RISK MODELS
- CLIMATE TIMELINES DON'T WAIT FOR MARKET DOMINANCE
- EVERYONE LOSES WHEN INSIGHT IS DELAYED



THE HOARDING PROBLEM



- PROPRIETARY DATA = DUPLICATED EFFORT EVERYWHERE
- SMALL PLAYERS CAN'T ACCESS CRITICAL INPUTS
- MODELS TRAINED ON PARTIAL TRUTH = BAD DECISIONS
- REINVENTING PIPELINES INSTEAD OF IMPROVING THEM
- INNOVATION STALLS IN PRIVATE SILOS

SHARED INFRASTRUCTURE AS A FORCE MULTIPLIER



- ONE DATASET → HUNDREDS OF DOWNSTREAM APPLICATIONS
- FASTER ITERATION ACROSS THE ENTIRE ECOSYSTEM
- LOWER BARRIER TO ENTRY FOR NEW PLAYERS
- MORE EYES = BETTER ANOMALY DETECTION
- COLLECTIVE INTELLIGENCE BEATS ISOLATED BRILLIANCE



WHY CLIMATE CHANGES THE RULES

- THE "MARKET" IS THE ENTIRE PLANET
- DELAYED INSIGHT = REAL-WORLD DAMAGE
- NO SINGLE COMPANY CAN MODEL EARTH ALONE
- EXTERNALITIES DON'T RESPECT BUSINESS MODELS
- URGENCY REWRITES THE PLAYBOOK



NETWORK EFFECTS, BUT MAKE IT FUCKING PLANETARY



- MORE CONTRIBUTORS → RICHER DATASETS
- BETTER DATA → STRONGER MODELS
- STRONGER MODELS → FASTER ACTION
- FASTER ACTION → REAL IMPACT
- THE LOOP ONLY WORKS IF IT'S OPEN

THE TACO PROTOCOL

**SHARE EARLY,
EVEN IF IT'S MESSY**

SHOW YOUR WORK, OPEN YOUR DATA,
GET TO FUCKIN' ITERATION ONE.
HOLD IT LIGHTLY.



**COLLABORATE BEFORE YOU
"OPTIMIZE"**

FUCKIN' SHARE, LEARN & CROSSPOLINATE FIRST.
BUILD FOR COMMUNITY, NOT JUST THE SUIT WHOSE
NAME IS ON THE TERM SHEET.



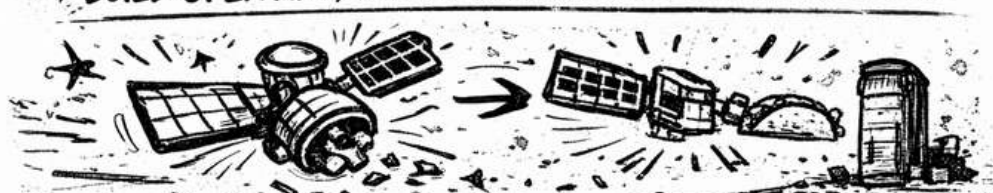
**TREAT COMPETITORS
LIKE FUTURE PARTNERS**

DON'T FUCKIN' OBSESS ABOUT
'COMPETITIVE ADVANTAGE'.
BUILD AN ECOSYSTEM WHERE
EVERYONE CAN WIN.



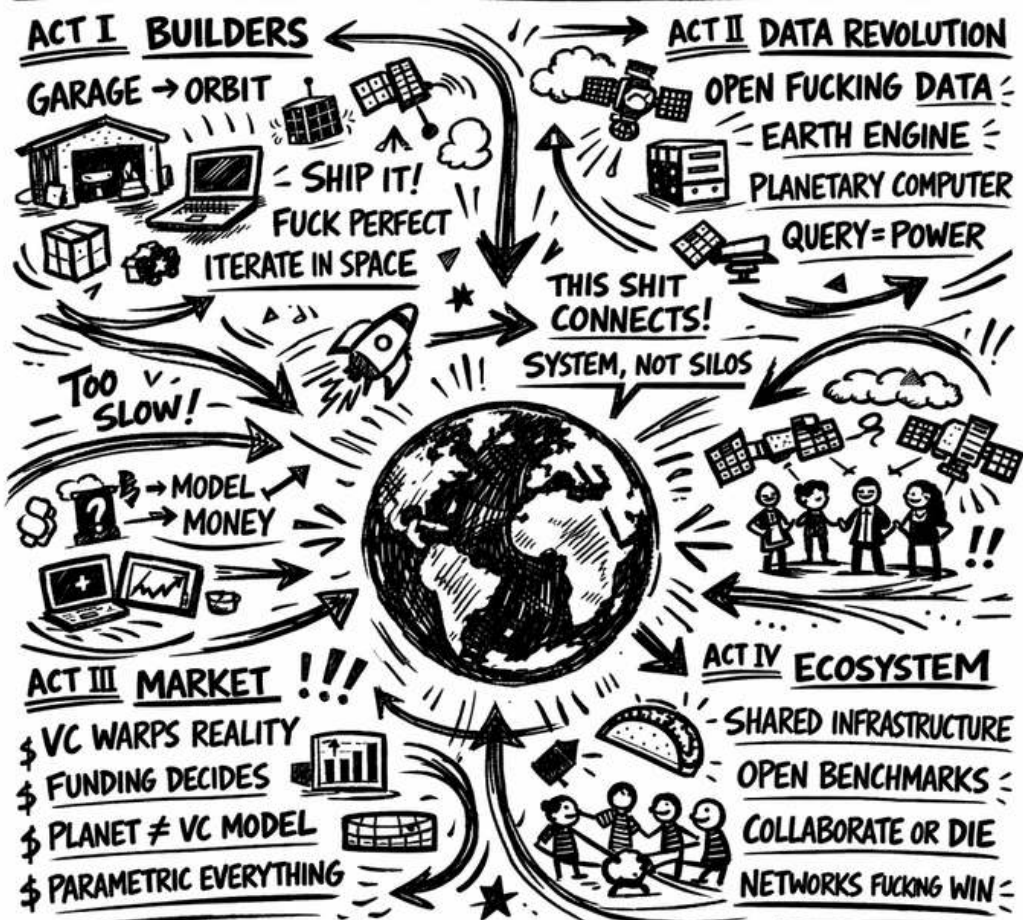
BUILD TOOLS OTHERS CAN PLUG INTO

CREATE SHARED INFRASTRUCTURE NOT CLOSED SYSTEMS.
BUILD OPEN APIS, BENCHMARKS & FUCKIN' FEEDBACK LOOPS.



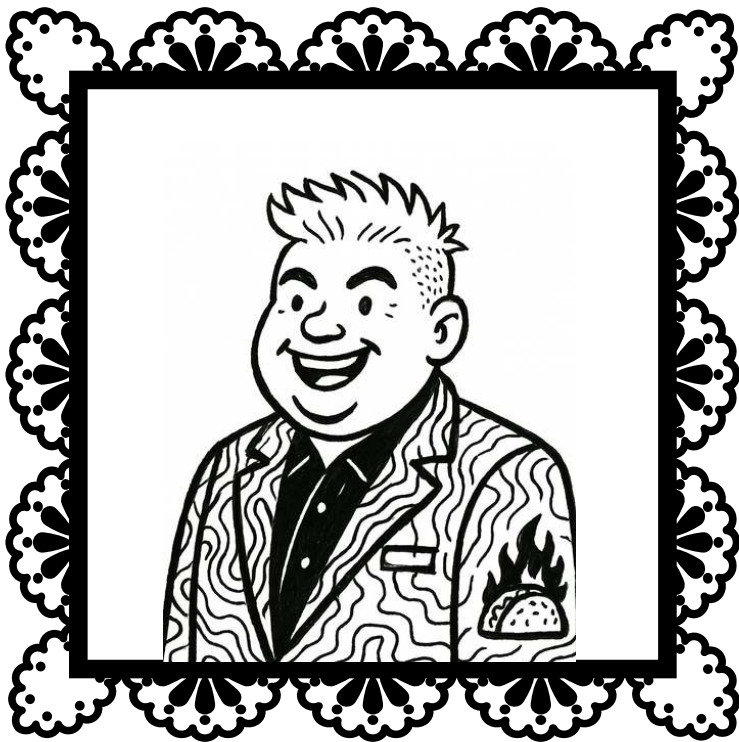
**REMEMBER: SATELLITES SHARING TACOS
> SILOS HOARDING CRUMBS.**

SO...WHAT THE FUCK DID YOU JUST FUCKIN READ?



**PLANETARY PROBLEMS DON'T SCALE
LIKE FUCKING STARTUPS.**

BUILD NETWORKS. NOT MONOPOLIES.



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