



UPTURN BRANDS
RESEARCH LAB

वाक्

Vaak

India's Verified Civic Network

A public layer where speech carries identity, institutions carry authority, and civic attention becomes accountable action. White paper v1.0 — the pilot edition: the thesis, what is built, what comes next, and what must be true to proceed.

VERSION	DATE	STATUS	PREPARED BY
1.0 — Pilot Edition	31 July 2026	Phase 2 complete · Phase 3 gate	Upturn Brands Research Lab



01

The broken path from voice to consequence

India's deepest civic problem is not any single issue — roads, water, power, safety. It is the broken path through which a citizen's lived concern is supposed to become institutional action.

Public life is split across two incomplete systems. Commercial social platforms are immediate and culturally alive, but they reduce every expression to content competing for attention: a municipal office, a resident, and a bot look the same, likes measure response rather than standing, and a complaint evaporates with the feed. Government portals create formal records, but they are

organized around departmental procedures rather than the citizen's problem — and when they fail, they fail privately.

The result is a country that cannot hear itself. What citizens experience fragments across WhatsApp groups, phone calls, office visits and disconnected portals; the state sees these signals late, selectively, or only once they become politically visible.

Social media carries the conversation. Government systems carry the formal process. Nothing carries the public chain from expression to consequence.

02

The Vaak thesis

Vaak (वाक्, from Sanskrit vāc — speech) is civic infrastructure with social behaviour: a verified public square where speech can acquire provenance, standing, institutional response, and a durable path to action.

The Vāk — a new primitive

A Vāk is not a post. It is a **versioned, attributable, context-bound act of expression** that declares who is speaking, in what capacity, with what intent, about which subject, in which jurisdiction, supported by what evidence, and requesting what consequence. A conventional post is optimized for distribution; a Vāk is optimized for meaning, standing, and outcome.

The issue graph — the process owns the subject

Many Vāks become one durable civic process. An Issue aggregates corroboration, evidence, counterclaims, expert analysis, official responses, commitments and resident verification — separately attributable, never owned by the loudest speaker, never silently rewritten.

The authority graph — the office outlives the officeholder

Official speech is issued under verifiable delegation: institutions, offices, roles, terms. A commitment belongs to the institution, not to the person who happened to hold the chair when it was made.

Typed participation — not everything is a vote

A reaction, an affectedness claim, a petition signature, a consultation response and a commitment are different acts with different eligibility and consequence. Vaak never collapses them into one

number and calls it a mandate.

The mechanism

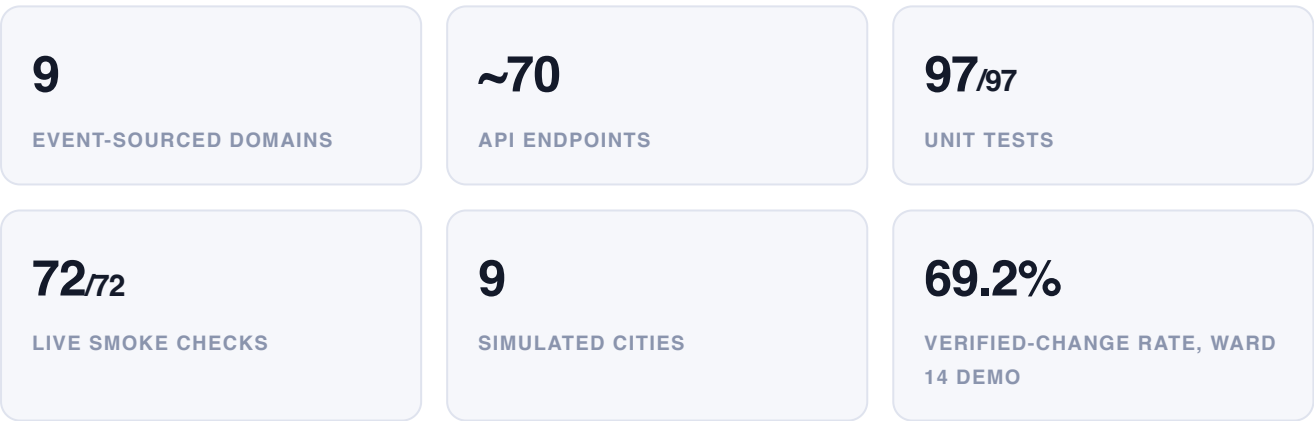


That mechanism applies to almost every national concern, because Vaak's domain is not any problem — it is **the public journey through which a problem becomes visible and change becomes accountable.**

03

Where we are now

This is not a proposal deck. The system described here exists, is running, and is verified by 97 unit tests and 72 live end-to-end checks.



The architecture

Scala 3 + Apache Pekko, event-sourced CQRS. Every civic object is a sharded, event-sourced actor; Cassandra holds the immutable journal; projections build purpose-shaped read models in PostgreSQL; a headless JSON+JWT API serves any client. Authorization is a domain fact enforced inside actors, not a gateway afterthought.

DOMAIN	WHAT IT PROVES
Vāk + Issue	The 13-state lifecycle: Raised → jurisdiction → acknowledged → response → commitment → work → completion → PublicVerification → Resolved Disputed. Closure is never unilateral.

Institution	The authority graph: offices, role assignments, live delegation checks on every official act.
Participation	Petitions whose thresholds create declared obligations; consultations with deadlines and per-person public responses.
Community + Messages	Group feeds and 1:1 direct messages with live delivery.
Moderation	Reasoned case files — evidence, notice, remedy, 14-day appeal — never invisible suppression.
Delivery outbox	External delivery with receipts: issues forwarded to existing government channels with reference numbers and honest failure.
Presence + notifications	Live WebSocket layer: who's online, what changed, who must know.
Authority directory	Imported public-record institutions with claimed / "Not participating on Vaak" status — the adoption ladder as a surface.
Analytics	The public civic pulse: ward-level verified-change rates, response times, activity — measured as resolved uncertainty, never engagement.

The interface

A framework-free TypeScript application: a 3D map canvas where India itself is the interaction surface — game-style intent markers, time-travel through the event history, focus mode that turns any record into a continuous document — plus a deliberately simple default mode for first-time users. Cards distinguish civic acts by design: reports, testimony, proposals, commitments, questions and official speech each carry their own visual identity.

04

The three worlds

The platform's adoption risk is made experienceable in the demo itself — three simulated wards, three possible outcomes.

Public only Mysuru

Citizens report, corroborate, organize — and the institution never answers. Issues freeze at JurisdictionProposed. Not a failure of the record: **the public civic docket** — documented, attributable, unanswered.

Government only

Shivamogga

A hyperactive institution posts notices, commitments and completion reports — into an empty room. Work stalls at PublicVerification forever: **authority without the governed cannot be verified.**

Both Koramangala

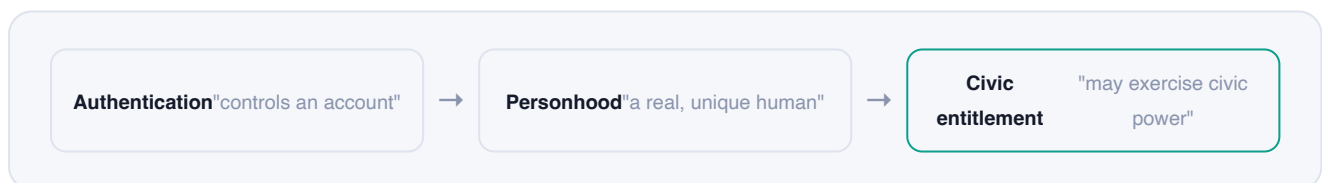
The complete loop: residents speak, the office accepts jurisdiction, commits, acts — and residents confirm reality changed. **The only outcome that is the whole thesis.**

Government silence does not stop citizens from creating the civic record. It only becomes visible as the missing part of that record.

05

Identity: authentication ≠ personhood ≠ entitlement

Vaak's promise is precise: people can be real without being publicly exposed, and no machine can manufacture civic mandate.



- **Public pseudonymity, private proof.** The public graph carries an opaque civic subject id — "Verified Resident, Ward 14" — never a legal identity. Identity evidence lives in a separated vault; today the platform holds no legal identity at all: **it cannot leak what it does not hold.**
- **Citizenship is a revocable, independently issued entitlement** — not an account attribute. The Civic Verification Service (v1, built) issues credentials through a reviewed flow with a salted-hash deduplication vault; raw document numbers are never stored.
- **Aadhaar is not the citizen gate.** Aadhaar can help establish uniqueness but is explicitly not proof of citizenship; it will be one optional route among several, never mandatory.
- **Declared automation only.** Bots never count as people: news wires and system adapters publish under a visibly declared declaredAgent capacity.

06

Trust, moderation, and honest absence

Vaak treats trust as something that emerges from inspectable behaviour, not something asserted by design.

- **Moderation is a case file** — reason, evidence, action, notice, and a 14-day appeal window. Restricted content is marked, never memory-holed.
- **The feed explains itself.** Every item carries a plain-language reason for being shown. A card without a reason is a bug.
- **Non-response is visible, not falsified.** The platform says "no official response recorded on Vaak" — never "the government did nothing."
- **Reports are not condition.** More reports don't mean a worse place; analytics always carry participation context.
- **The record can begin without permission; authority can never be fabricated.** Unclaimed institutions are impersonation-proof by construction.

07

What comes next

Phase 3 is not more features. It is one real ward, one real institution, and the first verified change in the real world.

1

Production deploy

Fat-jar Docker image, compose for prod, CI with the full test suite, secrets runbook, backup/restore drill.

2

The pilot ward

One municipality, one willing office, 20–50 verified residents, a published 48-hour acknowledgment SLA.

3

Identity rails

Keycloak as the authentication broker (passkeys, MFA, OIDC); DigiLocker Requester + MeriPehchaan partner onboarding in parallel; the manual verification cohort runs first.

4

Inclusion channels

Voice notes with BHASHINI transcription, low-bandwidth mode, assisted submission — the app cannot be the whole product in India.

5

Scale proof

Load testing, participation-set migration out of actor memory, multi-node cluster, the data.gov.in authority import at national scale.

Success is measured as**>60%**

VERIFIED-CHANGE RATE ON
PILOT CATEGORIES

>90%

ACKNOWLEDGMENT WITHIN
48H

≥20

ISSUES COMPLETING THE FULL
VERIFIED LOOP

08

The conditions required to move forward

Vaak becomes infrastructure only if these hold. They are governance conditions, not feature requests.

☒ **The record begins without permission**

Built and proven: citizens can create the complete public docket today, institution or not.

☐ **At least one institution completes the loop**

The pilot requires one office willing to accept jurisdiction, commit publicly, and submit to resident verification. Without it, Vaak is a beautifully structured archive.

☐ **Independence is preserved**

Independent operation, transparent moderation, appeal rights, published rules. The moment Vaak is state-owned or state-operated, the fear answer collapses and citizens stop posting.

☐ **Verification never becomes surveillance**

Identity-vault separation holds as volume grows: pseudonymity by default, audited vault access, no citizen-ranking, no political-loyalty graph.

☐ **Inclusion is real, not claimed**

Voice, language, low bandwidth, assisted access. A platform only the connected can use will mistake silence for health.

☐ **The operator stays replaceable**

Open protocol, data portability, verifiable exports. Vaak should become hard to replace as a civic function while its operator remains easy to replace.

09

Risks and honest limits

RISK	HONEST POSITION
Institutions never enroll	The docket still works; non-response becomes measurable. But consequence stays indirect until one office acts.
Identity verification is invasive or exclusionary	Manual-first cohort, multiple proof routes, pseudonymity preserved, Aadhaar never mandatory.
The graph becomes a target	Location masking, vault separation, DPDP-by-architecture. The most sensitive graph is the one we don't build.
Scale	Single node today; participation sets and projections need migration under real load. Engineering, not mystery.

Adoption

The ungraded exam. Google+ had engineering; WhatsApp had a use case. The pilot is the product.

A country gains the ability to hear itself, remember what it heard, assign responsibility, act publicly, and verify whether action changed reality. That is the whole offer.

