

# SiteVoice: The Virtual Project Coordinator

## Consolidated Vision State Document

### 1. Executive Summary

SiteVoice is a high-integrity, voice-first "System of Intelligence" designed to eliminate information leakage, financial loss, and timeline deviations in construction projects. By transforming raw site communication into structured data, SiteVoice acts as an autonomous project assistant that automates follow-ups, predicts operational risks, and secures project finances. It moves the builder from "Management by Crisis" to "Management by Exception."

### 2. The Core Problem: The "Small Data" Leak

Construction communication is unstructured, multilingual, and transient. Builders typically lose 15–20% of their margin to "unrecorded small data":

- **Operational Leakage:** Forgotten follow-ups, unverified progress, and status checks that slip through the cracks.
- **Process Leakage:** Sequence deviations where finishing stages start before structural or safety gates are verified.
- **Financial Leakage:** Undocumented petty cash, unverified labour headcounts, and vendor price anomalies.

### 3. The Four Pillars of SiteVoice

#### I. Immutable Truth & Human Control

- **Immutable Audio:** The raw voice recording is the permanent, unalterable "System of Record" for dispute resolution.
- **Validation Gate:** A "creator-only" edit logic allows the site engineer to refine AI summaries once before they enter the project ledger, ensuring human-verified accuracy.
- **Stakeholder Trail:** Every approval, instruction, or status change is appended to a ledger-style interaction history, creating a 100% transparent audit trail.

#### II. Autonomous Site Orchestration (The Proactive Assistant)

- **The "Nagger" Engine:** SiteVoice autonomously triggers follow-ups. If a task is "In Progress" but its AI-suggested due date passes without a "Proof of Work" photo, the AI pings the assignee.
- **Project Staging & Blueprints:** AI suggests project milestones based on site type. The team refines these via voice, creating a dynamic baseline that the AI monitors in real-time.

- **Sequence Integrity:** The AI understands construction logic. It flags "Process Deviations"—such as reporting tile installation before plumbing pressure tests are logged—preventing costly re-work.

### III. Financial Integrity & Anomaly Engine

- **Voice-Based Ledger:** Natural language capture of all site spending:
  - **Purchases:** Material type, unit price, and vendor identification.
  - **Labour Payments:** Headcount-linked wage logs and daily payouts.
  - **Petty Expenses:** Tracking the "small cash" spend (tea, transport, tools) that usually vanishes.
- **Anomaly Detection:** The AI acts as a financial guardrail, highlighting unit-price spikes compared to city averages and cross-referencing labour payouts against morning headcount reports.

### IV. Frictionless Intelligence

- **Multilingual Translation:** Native processing of regional dialects and "Hinglish," presented to the builder in a structured English executive dashboard.
- **Natural Language Querying (RAG):** A "Project Brain" that allows builders to query history: *"What was the reason for the cement delay at the HSR site last week?"*
- **Daily Pulse 2.0:** Instead of simple logs, the AI generates a "Gap Analysis" report focusing on blockers, late deliveries, and financial burn.

## 4. Strategic Advantage

SiteVoice transforms a construction site from a black box into a predictable manufacturing process. It empowers builders to scale their operations across multiple sites without a proportional increase in overhead, relying on AI to act as the eyes, ears, and memory of the project.