



AI-First Telephony Infrastructure

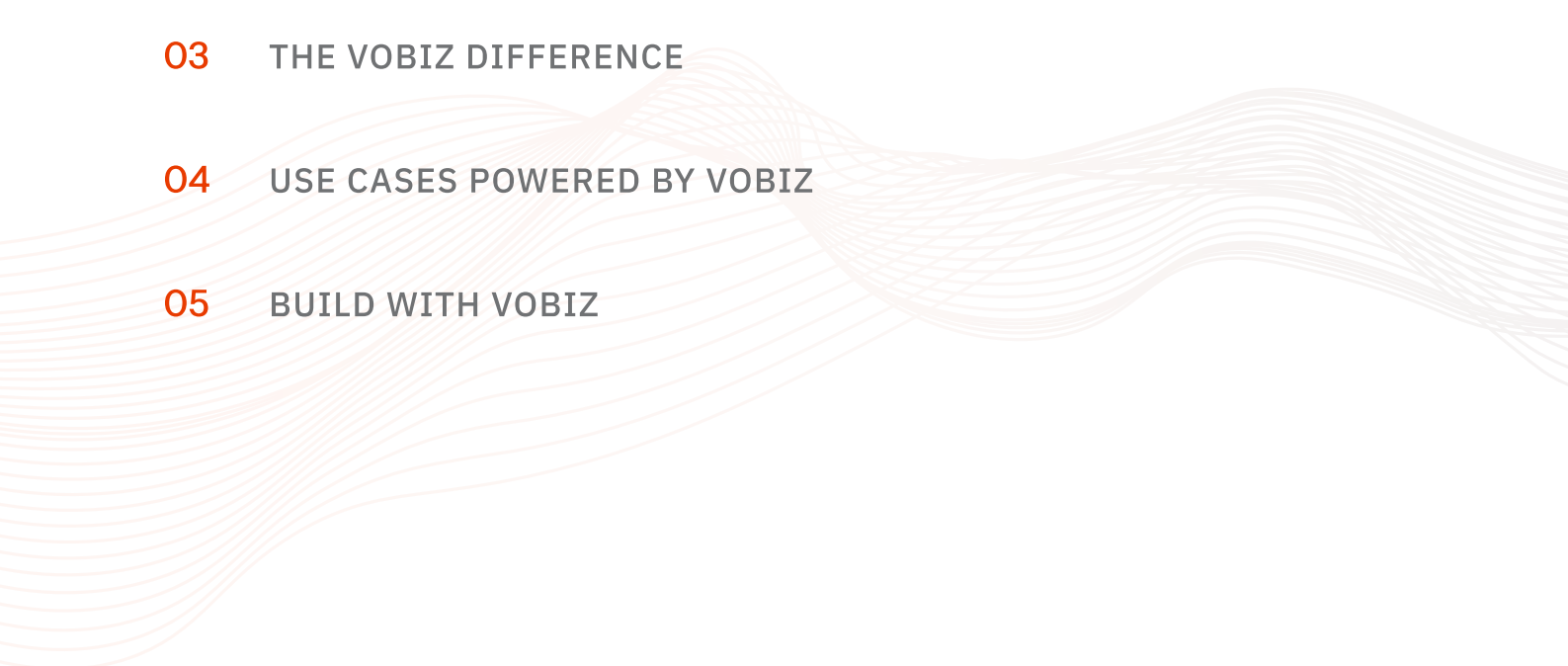
The Telephony Layer Playbook

A guide to production-grade telephony for
Voice AI teams



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The Telephony Layer Playbook

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Four layers stand between your customer and a great conversation

Every voice AI interaction travels through four distinct processing layers. Each one shapes the experience, but not all of them are in your control.



"The telephony layer is the first and last thing every call touches and the one most builders treat as an afterthought."

— Suman Gandham, Founder & CEO, Vobiz.ai

The telephony layer controls more than you think

Most voice AI failures trace back to the telephony layer, not the model. Here’s what each layer actually controls.

Who Controls What?	Telephony	STT	LLM	TTS
Call Latency				
Audio Quality				
Word Error Rate (Accuracy)				
Real-Time Control				
Human Escalation / Handoff				
Compliance & Number Trust				
Conversation Intelligence				
Natural Voice Output				

Primary control Contributes Minimal influence

"The telephony layer is the foundation every other layer depends on. If it's broken, the best model in the world can't save the call."

— Vikash Srivastava, Co-Founder & CTO, Vobiz.ai

Legacy telephony ≠ Voice AI infrastructure

Traditional CPaaS platforms were built for BPO-era human agents. Using them for voice AI creates fundamental mismatches in latency, programmability, and deployment speed.



High Latency

300–400ms

Telephony latency alone makes voice AI agents sound broken and unnatural. End-to-end call latency often exceeds 1.5s.



Provisioning Friction

4–8 weeks

Multiple touch points, including paperwork and manual KYC with high vendor dependence lead to slow onboarding and provisioning.



Long Integration Timelines

3–4 weeks

Weeks-long integration with poor ecosystem support and multiple disconnected vendor touch points for one production call.

The cost isn't technical debt. It's lost users.

Every infrastructure gap compounds into a worse customer experience, a slower team, and a harder time reaching production.



Compliance Gaps

No one owns compliance

TRAI, INR billing, DPDP gaps. No 140/160, DLT, or PII handling. Regulatory complexity falls entirely on the builder.



Zero Programmability

No real-time call control

No native real-time call control. No barge-in, live context injection, mid-call routing, or event webhooks after a call goes live.



No AI-Native Media Processing

40-50% WER

Raw, noisy PSTN audio hits STT models unprocessed. No noise cancellation, echo removal, or codec optimization.

40% ↓
CX Score

8 Wks+
Time-to-Market

30% ↓
Adoption Rate

The real cost of building voice AI on infrastructure not built for it.

From API key to live call in minutes

Vobiz is built so that any developer can go from zero to a production-ready voice call without paperwork, vendor calls, or fragmented tooling.

-  **Sign Up**
Create account at vobiz.ai. Get free credit instantly. No sales call required.
-  **Get Your API Credentials Instantly**
Auth ID + Auth Token available on dashboard. Ready to embed in your first API request.
-  **Complete Instant KYC**
No KYC wait. No paperwork. Complete your eKYC process online in minutes.
-  **Buy a Phone Number**
Go to DID section → Filter by region → Purchase. [Instant provisioning](#).
-  **Set Up SIP Trunk or XML Application and Make Calls**
Set up inbound and outbound calls. Link number to your AI platform's SIP URI or set webhook URL → Vobiz calls it on every inbound call. Control call behavior with XML using the interactive [XML Builder](#).

< 10 minutes

from API key to first live call

Control your calls. Own your workflows.

Beyond setup, Vobiz gives builders the speed, control and flexibility to launch intelligent voice workflows at scale, with confidence



LATENCY

Sub 80ms Telephony Latency

Single-hop, event-driven architecture. Your AI agent sounds like it's thinking, not lagging.



PROVISIONING

Self-Serve, Instant Provisioning

Provision numbers, DIDs, and APIs after eKYC. No 2–4 week onboarding cycle.



MEDIA

AI-Native Media & Codec

WebSocket bidirectional streaming, 24kHz audio. Native noise cancellation and voice isolation built into the layer.



PROGRAMMABILITY

Real-Time Call Controls

Live context injection, event webhooks, barge-in, transfer, whisper. Full control while the call is live.



COMPLIANCE

Built-In Compliance

TRAI 140/160, DLT, DPDP, GDPR, HIPAA, INR billing. Compliance by design — not bolted on.



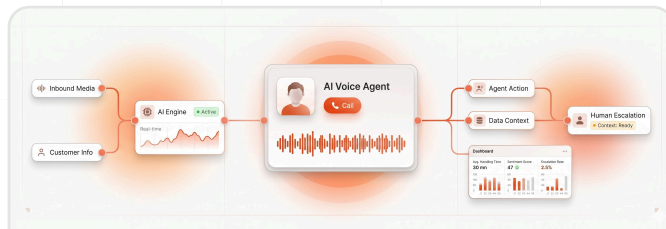
SPEED

Go-Live in Minutes

API key → live call in one session. Fully integrated stack. No multi-vendor glue required.

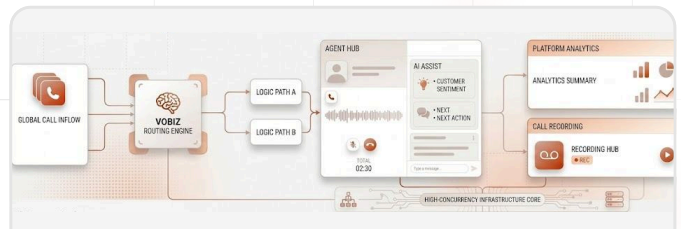
Powered by Vobiz

Builders use Vobiz to launch, manage, and scale complex voice workflows with ease.



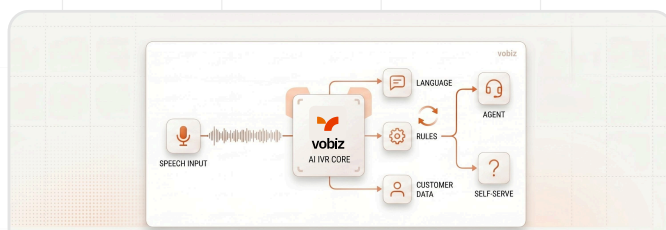
AI Voice Agents

Inbound and outbound AI voice agents with low-latency media handling, real-time call control, and full-context human escalation.



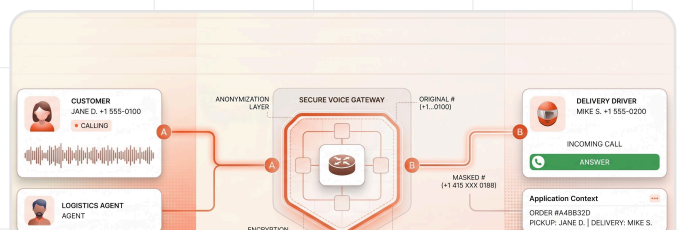
Call Center Platform

Modern call center experiences with programmable routing, live monitoring, recording, agent assist, and high-concurrency infrastructure.



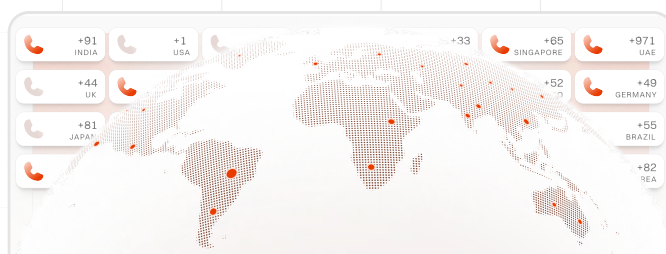
IVR

Smart IVR flows with dynamic logic, AI-assisted routing, speech-ready call handling, and fast iteration cycles.



Call Forwarding/Masking

Call forwarding, number masking, and session-level call control for marketplaces, logistics, and privacy-sensitive workflows.



International Expansion

New market launches with global number provisioning, outbound connectivity, and one platform across all regions.



Post-Call Intelligence

Transcription + noise-cancelled stereo recordings for sentiment analysis, compliance flags, and CX insights.

Your voice AI deserves infrastructure built for it.

Stop fighting your telephony stack.

Vobiz gives you the rails to ship fast, sound great, and scale with confidence.

FOR DEVELOPERS

Start Free

Get free credits.
API key instantly.

console.vobiz.ai →

FOR STARTUPS & TEAMS

Talk to Us

Tell us what you're building.
We'll help you ship it.

vobiz.ai/contact-us →

FOR ENTERPRISES

Book a Pilot

POC to production in under
2 weeks.

vobiz.ai/contact-us →

About Vobiz

Vobiz.ai is an AI-first, API-driven telephony infrastructure platform designed for next-generation voice applications. Founded by Suman Gandham (ex-Finin) and Vikash Srivastava (ex-Plivo), Vobiz emerged from the founders' firsthand experience building voice AI products, where legacy telecom—built for human calls and retrofitted for agents—proved the biggest bottleneck. Purpose-built from the ground up, it offers instant DID provisioning, low-latency SIP trunking, real-time streaming, noise cancellation, and compliance automation, enabling developers to integrate voice AI in minutes.

★ Platform uptime: 99.99%

★ Telephony Latency: <80ms

★ Scale: 3M+ calls/day

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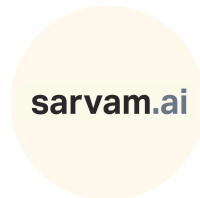
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Trusted by the builders shipping the best voice AI experiences



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