

## TECH OFFER

### Localised, Multi-Lingual, and Effective Voice AI Agents for Seamless, Human-Like Interactions



#### KEY INFORMATION

TECHNOLOGY CATEGORY:

Infocomm - Artificial Intelligence

Infocomm - Speech/Audio Analysis & Speech Recognition

TECHNOLOGY READINESS LEVEL (TRL): **TRL8**

COUNTRY: **SINGAPORE**

ID NUMBER: **TO175335**

#### OVERVIEW

In a world where consumers expect fast, intuitive, and personalised interactions, traditional phone-based customer service systems often fall short—plagued by long wait times, clunky menus, and impersonal scripts. This Generative Voice AI technology offers a transformative alternative: highly localised, low-latency AI Voice Agents that communicate with human-like fluency, **adapted to regional languages and accents including Singlish, Mandarin, Bahasa, and Malay.**

Built on a proprietary orchestration layer that integrates multiple advanced AI models—such as speech recognition, large language models, and natural speech synthesis—this solution delivers seamless, real-time voice interactions with remarkable accuracy and responsiveness. Not only can Voice AI Agents reduce call wait times to zero and improve customer satisfaction for companies, it can also do outbound sales and lead qualification to generate higher revenue.

Beyond traditional roles, these Voice AI Agents are also redefining interactive experiences across industries. Imagine a multilingual guide replacing static audio tours in museums and travel hotspots, or a virtual assistant enhancing patient navigation

in healthcare settings. In gaming, they enable real-time, unscripted conversations with non-player characters (NPCs), adding depth and realism to gameplay and storytelling. These are not just voice interfaces—they're intelligent conversational agents.

The tech owner seeks industry partners and system integrators to embed their proprietary technology into pre-existing software to add value and transform customer experience in sectors such as F&B, Healthcare, Marketing, Tourism, E-Commerce, Hospitality, Insurance, Financial Services, Gaming etc.

## TECHNOLOGY FEATURES & SPECIFICATIONS

- **Cascading ASR System:** Integrates speech-to-text, LLMs, text-to-speech, and contextual models to simulate intelligent, fluent conversation.
- **Telephony-Optimised:** Ensures high call quality and response accuracy over phone lines.
- **Proven Outcomes:**
  - Over 60% cost savings over human agents.
  - Average 30% improvement in customer satisfaction.
  - 10x increase in lead qualification and revenue-driving interactions.

## POTENTIAL APPLICATIONS

### Customer Support & Sales

Across industries such as financial services, insurance, e-commerce, education, BPOs, marketing, and hospitality, the AI Voice Agent automates high-volume interactions with natural, real-time conversations. It handles inbound support, outbound lead qualification, appointment setting, policy inquiries, and product recommendations—reducing manpower cost while improving satisfaction and conversion rates.

### Interactivity Enhancement

The technology also opens up opportunities beyond conventional customer service, enhancing user engagement in more immersive and context-specific environments:

- **Healthcare:** Acts as a multilingual virtual assistant for patients—offering appointment reminders, explaining medical procedures in simple terms, guiding post-treatment care, and supporting chronic condition management. In clinical settings, it can function as a digital triage or nurse assistant, freeing up staff for higher-value tasks.
- **Hospitality:** Powers smart concierge agents capable of handling guest queries, local recommendations, service requests,

and upselling—available 24/7 in the guest's preferred language.

- **Tourism:** Replaces static audio tours with dynamic, conversational voice guides that adapt to visitor interests, languages, and local context.
- **Education:** Supports learning through AI-driven teaching assistants that respond to student queries, reinforce concepts, and provide explanations tailored to individual learning styles.
- **Gaming:** Enables interactive, unscripted voice conversations with non-player characters (NPCs), making game environments more immersive, responsive, and emotionally resonant.

## UNIQUE VALUE PROPOSITION

Where many voice bot platforms require deep technical know-how and still deliver robotic-sounding results, this Voice AI Agent flips the script. Its proprietary orchestration layer brings together the best of today's AI ecosystem—streamlining complexity to deliver a natural-sounding, adaptive voice that feels like a real person on the other end.

Unlike process-driven bots, this solution handles unstructured queries with intelligence, personality, and local linguistic flair—whether in **Singlish, Mandarin, Bahasa**, or beyond. It's optimised for real-world usage, delivering results not just in ideal lab conditions, but on live phone calls with diverse users.