



## The Evolution of Voice for Drivers in India

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Voice. It is the first sense we experience, even before we are born. As we develop, sound, smell, sight, touch, and taste enable us to receive and send sensory information. Of these, sound, and more specifically voice, has always been a core element of human-to-human communication. In fact, [research conducted at UC Berkeley](#) suggests that humans communicate as many as 24 emotions through voice.

While voice technology has been around for quite some time, innovation will lead us to a world in which, ideally, machines will be able to understand and communicate with humans in the same way that humans interact amongst themselves – and might even come close to understanding those 24 emotions conveyed through voice. Recent advancements in natural language processing (NLP) may prove to be the panacea for making machines understand our speech and react accordingly, with the potential to revolutionise human-machine interaction (HMI) in the coming years. In the future, voice combined with vision, touch, gesture and more will give way to a multi-modal experience that feels natural and effortless for users.

### India – a Flag Bearer for the Voice Tech Revolution?

India has all the key ingredients needed to support the growth of these new and booming technologies – a substantial population of young professionals, deep penetration of smartphones, cheap data, and massive scale. This combination has led to a quick rise in smart home assistants, which has fuelled rapid adoption of voice assistants in India and signalled the possibility of India emerging as hub for emotion AI and HMI innovations.

Just look at the numbers. In 2019, [the speech recognition market in India](#) was valued at \$20M and was projected to show significant growth of 40% year-over-year through 2025. In a [recent survey](#), Google India reported an explosive annual growth of 270% for voice search queries. As expected, higher penetration of the smartphone, 3x faster search with voice compared to text, and ease of use have been claimed as the pillars of this gargantuan growth. Interestingly, voice tech adoption isn't limited to metropolitan cities only: in a [survey conducted by Karvy Insights India](#), respondents coming from tier-II and tier-III cities shared that they use smart speakers for over 2.5 hours a day on average, with top use cases being listening to music, asking for info, general chit chat with the assistant, setting up alarms/reminders, and controlling their smart home. Due to penetration in non-metro cities, the need to converse in regional languages is rising concomitantly.

As consumers in India continue to grow their usage of voice assistants in the home, the car presents the logical next step in their adoption of voice-powered interaction. Given that users' hands and eyes are occupied when driving, the car provides the perfect breeding conditions for voice AI to flourish.

But to drive this adoption, deep understanding of the Indian consumer is key. With a rich history and an aggressive innovation roadmap, we at Cerence have put a focus on innovations that will serve Indian drivers as they look to adopt more voice-driven technologies. For example, in addition to Hindi and Indian English, we will be covering all major regional Indian languages by 2023 to serve a broader audience. We'll also be leveraging voice biometrics to enhance personalization, a critical element in India where typically the same car is driven by multiple family members. Voice biometrics helps preserve personalized settings ranging from seat height to favourite playlists by identifying the driver through his voice and loading the applicable settings.

We're also delivering new apps and services that bring a smartphone-like experience into the car. For example, Cerence Extend enables drivers to control a wide variety of smartphone apps through voice. Post-COVID as drivers yearn for travel, Cerence Tour Guide transforms the voice assistant into a smart tour guide. OEMs can even bring other third-party voice assistants into the car through Cerence Cognitive Arbitrator.

As voice technology continues to evolve, we look forward to seeing how drivers in India and worldwide continue to adopt these solutions. For more on what we're working on at Cerence, check out more of our [Latest Stories](#).