



Voice-Powered Assistants Make Way for Integrated, Intuitive Co-Pilots

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As the automotive industry continues to advance toward a connected and autonomous future, AI-powered voice assistants are poised to play a key role, serving as the bridge between drivers' connected lives and their in-car experiences. [In-car assistants will transform into intelligent, multimodal co-pilots](#) able to anticipate what the driver needs and wants and – equally importantly – know when the time is appropriate to deliver them that information. Read on to learn how the well-known and well-used in-car voice assistants of today are making way for these co-pilots of the future – and what sorts of capabilities they'll have.

The why: there is no better environment for AI-powered voice assistants than the car.

While voice assistants have become ubiquitous in our everyday lives, from calling our bank to changing the music in our living rooms, their role in the car is one of the most powerful when we think about safety, productivity, and ease of use. While many of our interactions with voice assistants today – both inside and outside the car – are command and response, advancements in natural language understanding (NLU) and in-car sensor technology like gesture and gaze detection are ushering in a new concept: proactivity. An integrated, proactive voice assistant can connect what's happening outside the car to what's happening inside the cabin, serving drivers in ways they never thought possible and further enhancing the in-car experience.

The co-pilot of the future will learn drivers' preferences to create personalized experiences.

One of the benefits of employing AI is gaining an opportunity to continuously learn about a driver's needs and preferences and build a better experience as a result. AI systems can learn, for example, that you prefer covered parking options that offer credit card payment as opposed to cash or understand that you enjoy a certain cuisine and point you to relevant dining when driving in a new city. These kinds of experiences can be powerful, but must be designed to learn preferences over time, validating those assumptions with the driver to avoid false positives and driver frustration. In the next five to ten years, we will start to see the role of the driver changing as cars become more autonomous, and the co-pilot's role will evolve too. The capabilities that typically have been disabled while in motion will become more flexible from interacting with maps and creating a shopping list to starting a meeting and talking with family and friends.

The key to in-car commerce is getting drivers engaged.

Recent surveys point to in-car commerce being a low priority when it comes to what capabilities drivers want today. From where we sit, the reason behind this is simple: in most cases, drivers are not even aware that they have this type of technology or of its capabilities. In-car commerce platforms that are designed so drivers are able to easily discover and start securely using systems as part of what they are already doing in the car will grow adoption. That's why, for example, [Cerence Pay](#) is designed to be fully integrated from top to bottom with the car's existing systems. It leverages data from the car's sensors and integrates directly with the in-car co-pilot to let a driver know fuel is low, direct them to the nearest gas station and offer an option to pay through secure voice authentication. The commerce experience is anchored in what the driver is already engaging the car's system for, and thus more likely to be used.

Hybrid cloud and 5G are fueling the future.

Hybrid architectures that leverage both cloud and embedded technologies are key to enabling the connected experiences consumers are demanding, and 5G is poised to make them even better with incredibly low response time. And while these integrated architecture systems running in parallel require more onboard compute power, it still does not even come up on the curve when charting battery power consumption. These advancements, combined with consumer expectations for new features in their cars every three to six months are pushing automakers to step up when it comes to getting solutions out on the road faster than ever before.

I recently had the pleasure of sitting down to discuss this topic with Dave Zoia, Senior Director of Content at Informa Tech Automotive Group, in a fireside chat at Automotive Tech Week in Novi, Michigan, an event that brought together experts in automotive tech. We talked about the future in-car experience and the important role voice will have in getting there. If you want to tune into the full session and learn more about what the future intuitive co-pilot will look like, check out [this video](#).