



## How Arrival is Putting HMI at the Center of the Electric Vehicle Revolution

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Global technology company Arrival is transforming the automotive industry with its [entirely new method to design and vehicle assembly](#). The company is creating an equitable, integrated transportation system in order to create better mobility solutions for people of all walks of life, improving access to goods, healthcare, schools, work, and social opportunities.

One way Arrival is doing this is through its human-machine interface (HMI) screen on all its vehicles, which has been designed to consider cognitive abilities, physical ergonomics, and wellness in order to create an accessible experience for the driver.

Arrival is incorporating Cerence's voice technologies into the HMI system to be able to deliver a seamless experience for users - from voice-powered route guidance to interaction with key vehicle features - making it easier for drivers to interact with and control their vehicles.

We sat down with the HMI-UX Platform Team at Arrival to learn more about how they're using AI to create a safe and accessible experience for drivers.

### **Can you tell us a bit about how Arrival is leveraging Cerence technology in its HMI?**

At Arrival, we are committed to delivering safe and easy-to-use experiences. To achieve our goal, we use advanced technologies that support drivers whilst they're using their vehicles, as well as in-vehicle technologies to enhance the user experience for all occupants.

One of the ways we enhance the experience is by using a multi-modal framework, allowing the users to choose their interaction method. Cerence's technology is fundamental to our approach as it enhances our touchscreen technology and physical controls with natural, intuitive voice controls for key driver needs like navigation and control of certain in-car functions.

Generally, we enable our touchscreen and physical control interactions for the simpler use cases. For slightly complex use cases, like navigation, we utilise the power of Cerence's voice engine to minimise workload and be more efficient.

### **You've mentioned delivering a safe and easy-to-use experience is key to your efforts at Arrival. How is conversational AI central to that mission?**

Voice interaction is a key method of interaction in our vehicles as it provides safety, performance, and convenience benefits. To take full advantage of the voice interaction potential, we need a voice engine that excels on conversational AI, as our evidence shows that drivers prefer this kind of voice system for its natural, intuitive qualities.

A voice system with great natural language capabilities provides the drivers the sense of "co-pilot" that supports them in a variety of tasks.

### **How do you see AI and voice playing a role in the future of the car, bus, and delivery vehicle?**

We already mentioned the importance of AI and voice in minimising distraction and acting like a co-pilot to support the driver. Moreover, we see tremendous potential to enhance the user experience with non-driving tasks, more specifically with tasks that support work-related activities. There are also opportunities to utilise AI to support commercial drivers, and we are collaborating with Cerence to explore use cases that will support delivery van drivers within the delivery depot. We're excited about what the future can bring in this space.

### **When you think about an all-electric future, how will HMIs need to change to best support drivers?**

We do not foresee any significant change to the fundamentals of HMIs. However, there is a great opportunity for in-vehicle technology to surface EV-related information to the driver (e.g. charging opportunities, energy management, etc.). Also, the interoperability of HMI technology is very important to the overall experience, as it provides relevant information to the users.

Over the last decade, working with major automakers from across the globe, we at Cerence have seen the in-cabin experience emerge as the digital soul of the vehicle. We believe it will be paramount as the new generation of electric vehicles hit the streets. Arrival is leading a new kind of revolution in the automotive industry with its innovative line-up of zero-emission vehicles. We are proud to support Arrival in their efforts to not only deliver safe, intuitive, in-cabin experiences, but also create more sustainable and prosperous communities around the world. To learn more about Arrival, visit <https://arrival.com/us/en>.