
Lucid Reimagines the Luxury Car-Buying Experience with ZeroLight and VIVE



VIVE and ZeroLight help breakthrough brand Lucid Motors forever change the way people buy luxury electric vehicles with VR.

Even before the pandemic hit, the car buying process was undergoing radical changes. Instead of spending hours at a dealership exploring vehicles, shoppers were increasingly using the internet to conduct research, compare models, secure financing, and even finalize the purchase price. The lockdowns from the COVID-19 crisis significantly accelerated this trend.

Launching an entirely new vehicle brand amid these disruptions posed even more difficult challenges. One new entrant aimed to defy the odds by building a cloud-powered omnichannel customer journey that included next-level VR technology.

Lucid Motors was founded in 2016 to inspire consumers to adopt sustainable mobility through its luxury electric vehicles. Its first line, the Lucid Air, is built on a state-of-the-art luxury sedan platform. The line features a California-inspired design underpinned by race-proven technology.

Lucid is now making the car-buying experience as innovative as its vehicles.

The Lucid Air model line packs a powerful punch in the footprint of a mid-size car. It entralls drivers and passengers with an interior that exudes luxury and delivers a stellar performance. According to the company, the flagship 1,111-horsepower Lucid Air Dream Edition Performance can accelerate from 0 to 60 mph in less than 2.5 seconds, or cruise for 520 miles on a single charge with the Range model.

Lucid partnered with ZeroLight, real-time CGI specialists for automotive marketing and sales, to develop a holistic, end-to-end digital customer experience like no other. The path to purchase is personalized and designed for the forward-thinking luxury EV buyer by seamlessly bridging the virtual and physical worlds.

Creating an Innovative New CX

Lucid offers a stunning and user-friendly online vehicle configurator that enables shoppers to explore and build the car of their dreams. The Configurator, available on Lucid's desktop and mobile web platforms, lets shoppers create a personalized Air model by customizing their car's color, wheels, interior, and more.

These configuration tools are built with ZeroLight's industry-leading omnichannel configurator solution. Part of this solution is a 2D image turntable configurator powered by the cloud. With configuration options for the all-new Lucid Air, customers can explore and customize a vehicle on any device in real-time. The ZeroLight platform also includes a cloud-streamed 3D configurator with full freedom of movement. This experience provides unlimited configuration options, while also allowing users to explore a vehicle from any angle, on any device, with a range of fully animated interactions.

"We sync technology with the adoption process of the younger generation, in order to be there as a brand in a time and space that works for them. We use emerging tech as "infotainment" and "edutainment" to drive experiential engagement with the product and brand. In the end, customers buy a story—it's more than just here's a color palette and wheel selection. We're going to show you how

our design team made this vehicle with love," said Chad Ritsema, XR Manager, Lucid Motors Marketing & Retail.

Turning Motoring Dreams Into "Reality"

VR has proven extremely valuable for manufacturers in their concept design, iteration, and approval processes, but applying VR to the marketing and retail space is something entirely different. Lucid chose to establish a forward-thinking bias for VR in their customer experience at scale, securing full involvement across infrastructure, software, data analytics, deployment, technical and retail support, and hardware investment.

When shoppers are ready to visit a Lucid studio showroom, the true power of the VIVE PC-VR portfolio awaits them. Since it would be unfeasible to feature every possible configuration of the Lucid Air physically in each studio, Lucid saw an opportunity to empower prospective customers to experience all of these combinations virtually. Lucid's retail locations feature a physical vehicle simulator or 'buck,' with two Air seats, a steering wheel, and a dashboard/console to simulate the interior of the vehicle. Customers then situate themselves in their seats and don the VIVE Pro Eye or VIVE Pro 2 headset running a high-resolution VR configurator. It gives them the experience of a stunning visual interaction inside the exact vehicle they personalized using the online configurator.



Lucid Studio with VR Configurator

Traditionally, buying a car involves sitting behind the wheel, checking the engine and storage compartments, and reviewing the design features. To make the VR version just as interactive, the Lucid Sales Associates are equipped with a dedicated iPad for each participant, providing a guided demo experience where they can open doors, pop the trunk, and explore the luxury materials used within the cabin, etc. Just like in real life, this virtual guide helps customers to fully engage with their desired vehicle model. The VR environment is also multi-user, a market-leading feature, which allows two customers to enter the same virtual space to experience the Lucid Air together, at the same time. It is also multi-car, allowing customers to compare two different Lucid Air configurations alongside one another.

Lucid has recently begun to migrate to the VIVE Pro 2, designed to elevate virtual experiences using high-visual fidelity, balanced ergonomics, and sub-millimeter tracking accuracy. Featuring dual LCD screens, 5K resolution, 120° field of view, and 120Hz refresh rate, the headset delivers category-leading immersion for graphic-intensive PC-VR applications. Much like the VIVE Pro Eye, this provides a hyper-sensory approach to engaging with Lucid's vehicles. Customers can get up close to dashboard components, read gauges clearly, and examine the stitching of the interior, taking in the fine details that showcase the overall quality of the vehicle.

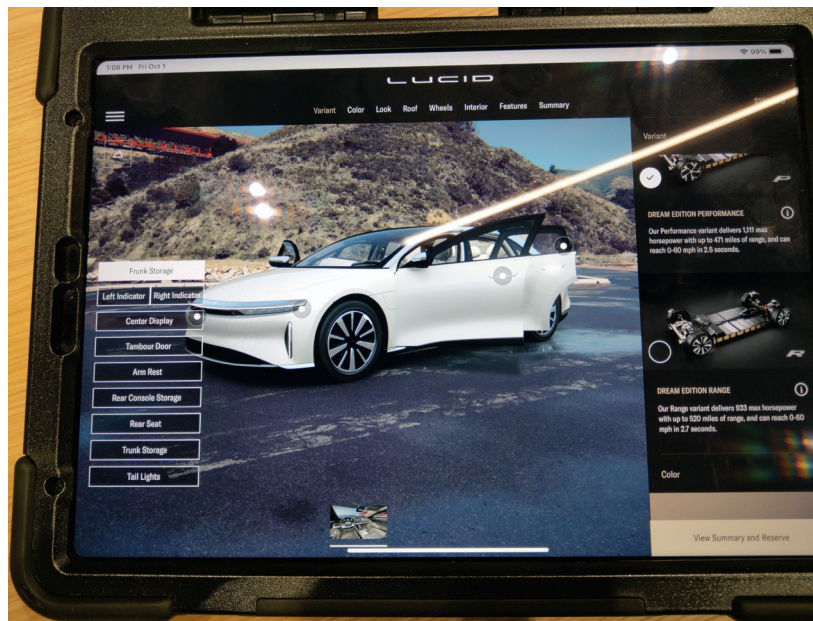
Virtual reality also enables Lucid to adjust the lighting, environment, and scenery in ways not possible in the real world. A Lucid Sales Associate can take people to different VR environments in California, like the Golden Gate Bridge, the Mojave Desert, and more. They can also place them in an empty studio environment with a lightbox to show how light falls off the vehicle. This provides customers with a complete understanding of the scale and size of the car, along with the ability to watch how the paint reacts to different light sources and settings.

Derek Jenkins, VP of Design at Lucid Motors, says: "The Lucid Air ushers in a new era of luxury mobility that delivers a distinctly elevated level of integrated design and technology. We have built a customer experience that mirrors this progress in every sense; and, in partnership with ZeroLight and HTC VIVE, we have created a uniquely rich journey where the customer has the freedom to explore, configure, and purchase the Lucid Air on their terms, at any time, on any device."

ZeroLight and HTC VIVE worked closely with NVIDIA to improve the look of the virtual reality experience by using variable-rate shading (VRS) and foveated rendering (FR). Together, VRS and FR offset a known weakness of many VR applications: they can become "pixel bound" on high-resolution displays with high frame rates. NVIDIA RTX GPU's, combined with VRS, improve the image quality by spending



Lucid Sales manager guides customer VR experience



more rendering resources on the portions of the display that the user sees most clearly. If the user has an eye-tracking headset such as the VIVE Pro Eye, FR can follow where a person's pupils are directed and instantaneously increase the shader sampling density in that area.

Driving Results That Promise a Bright Future

This innovative collaboration between Lucid and its technology partners has driven significant benefits. Lucid intended to launch the Air model line at the 2020 New York Auto Show, but with pandemic restrictions in place, the automaker shifted to an online launch. It proved to be a hit, with more than 436,000 configuration sessions recorded in the first 10 weeks after its debut. When A/B tested against an image-based configurator, Lucid's real-time 3D interactive configurator saw a 46 percent increase in car reservations and a 51 percent increase in revenue generated per session. "This is the world's most advanced car-buying journey, the benchmark against which all automotive shopping experiences will now be compared. By bringing Lucid Motors' vision to life, we have demonstrated how cloud-based 3D visualization can transform decades-old sales structures and modernize every aspect of the purchase journey. With the cloud, we are reshaping the way the world buys cars," said Darren Jobling, CEO of ZeroLight.

The company has also attributed a high degree of user engagement to the virtual demo. "The VR experience brings a lot of potential customers into the showroom. It's been extremely helpful for our people to customize and interact with the vehicles. It provides them with a much greater sense of the end product that they'll be receiving and aids in sales conversion. Our customers and our Sales Associates simply love it," said Zach Tonkin, Associate Studio Manager, Lucid Motors.

Throughout many industries, the pandemic has prompted changes in the way brands engage with customers. The automotive sector is a standout example of this trend. Forward-thinking brands such as Lucid Motors are successfully pivoting, delivering compelling new experiences that meet their customers' evolving needs. By leveraging breakthrough digital technology, Lucid is enabling customers to experience Lucid on their terms, while driving experiential engagement with the product and brand—enticing drivers to buy not only their product but their story.

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"Design Yours" experience allows customers to view car in different settings