

Craig Payne on How the Sienna Provides Mobility for All

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We sat down with the Toyota Motor North America product development chief engineer who oversees the development of the Sienna, to learn how our customers influence the creation of our vehicles and how our engineers provide them with the independence and flexibility that they have come to expect.

Tell us about your work at Toyota.

Craig Payne: I'm currently the chief engineer in charge of development of the Toyota Sienna, which recently launched a new model change in 2021, but I've actually been with Toyota for longer than the Sienna has been in production.

I joined the company in 1996 as a team member working in body and chassis strength evaluation group. I moved to the product development team in 2005, where I worked on the original Toyota Venza, before moving on to the Sienna, the Highlander and other mid-size SUVs.

Overall, my team has responsibility for vehicle and product planning, and we collaborate with teams across the company to meet our customers' needs, whether it's working with sales to determine pricing and content or working with styling and manufacturing to help improve the customer experience.

What role does the customer play in the engineering and product development process?

The most important role. At Toyota, this is true for everyone – it doesn't matter what area of the company you work in – the customer is always the focus.

Much of our work involves determining what the customers want and incorporating that into our vehicles, so customer feedback is an essential step in our development process. If there's a new feature we are considering adding to the vehicle, we can create a mockup and share it with customer focus groups to get their thoughts before we get down to the true engineering.

Even though we hold multiple focus groups throughout the development process, we are also consumers ourselves. Many of us and along with our neighbors, friends and family members drive these vehicles, so we can talk to them or take a look to see how they are using them. We get a real view into things like how customers are using their seats, where customers are storing their keys and bags, or even how they're using their cupholders. Then we can take their words and our observations and turn them into something real.

As engineers, we try to consider as many aspects of our vehicles as possible, but customers continue to use our vehicles in different and unique ways, so that's why it's important to listen, watch and learn from them.

What are the features customers want most in future vehicles?

Today, an automobile has to be seamlessly connected to both our customers and the various technologies they rely on every day. This creates new expectations and challenges which also creates new opportunities to improve our customers' overall experience.

We know customers also want flexibility. They want to be able to make a vehicle their own, so we want to be able to offer them flexibility. The vehicle needs to complement their lives by giving them features they can make their own.

What excites you most about vehicle developments with the customer in mind?

The power of independence. The more we can give people that feeling of being independent, the more they gain increased mobility, whether it's a two-year-old who can climb into the car unaided, or a 12-year-old who can raise and lower the 3rd row seat with light and easy operational effort, or even an 80-year-old, who can get to

appointments without help from anybody else – those are things that will be important in the future and it's good to see that Toyota as a mobility company is working towards this goal.

Are there other new features in the Sienna that customers may not have noticed but help make their lives easier?

When we talk about mobility for our customers, we think about not just adults, but also children and multigenerational families. We include small touches like the assist grip in the back of the Sienna, because we know that two- or three-year-old children want to feel a sense of independence as they start to move around, so the assist grip makes it easier to get in and out of the vehicle.

For some of our older population, it can be harder for them to get in and out of the vehicle, so by providing a lower step-in height, we can help with that. It's those little touches that customers may not notice but are deliberately placed there to make it easier for them.

I'm also a huge fan of the center console redesign. The adoption of this style console changes the overall interior feel of the vehicle while keeping the huge functionality with the large functional opening and console box space needed in this type of vehicle.

One of the most significant new features on the Sienna is that it is exclusively a hybrid. Tell us a little about that engineering process.

One of the things I'm most proud of during my time here was the decision to transition the Sienna from a traditional V6 engine to a 100 percent hybrid engine. This is a natural evolution to ensure the fuel efficiency is improved and the environmental impact of the vehicle is reduced, which are important considerations for both our customers and our company. My team did a tremendous job in making sure the vehicle could still meet its performance targets using a new engine. We also were attentive to customer expectations for a certain driving dynamic – the way a car accelerates, the way the transmission feels on the road – that we really worked hard to ensure weren't lost in the transition.

For more information about the 2022 Toyota Sienna, please click [here](#).