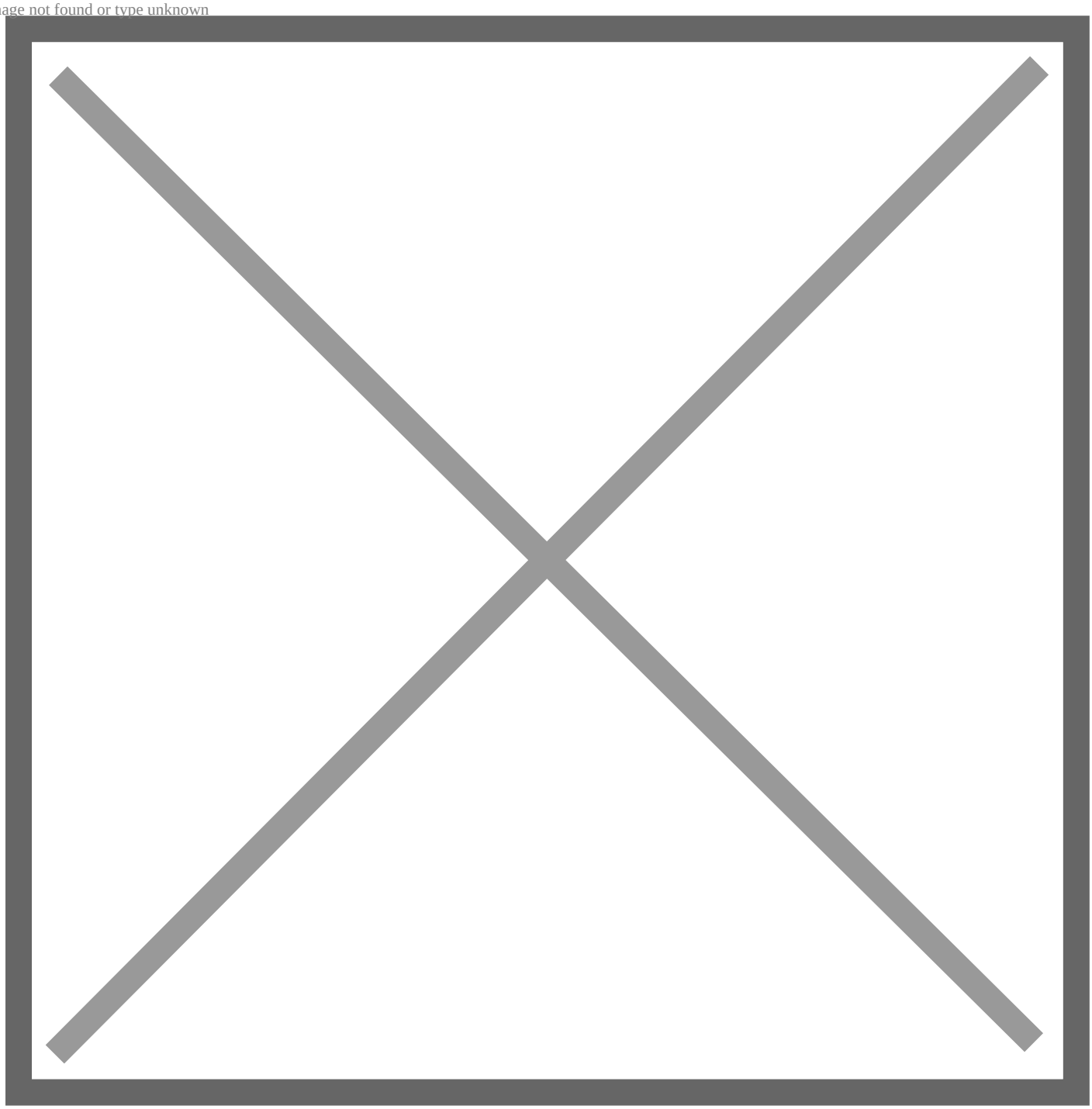
Toyota’s North American Hydrogen HQ Opens Its Doors to the Community

August 05, 2025

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Nestled within an otherwise inconspicuous neighborhood lies a cluster of office buildings tucked behind a fence where a passionate team is dedicated to research and development for some of the world's most cutting-edge technologies. The site is home to Toyota's North American Hydrogen Headquarters (H2HQ) located in Gardena, California, a place where a primary focus of the work is on hydrogen: how it can be used for cars, for energy generation, and so much more. Toyota has operated in the community since 1974, and the site has been key for developing future technologies for Toyota's global markets.

On July 11, Toyota welcomed nearly 550 guests from the surrounding local community to its first public event at the site in more than a decade. The immersive event showcased Toyota's hydrogen-powered fuel cell technology with interactive demonstrations and STEM activities for guests, which included families, community leaders and members, partner organizations and team members.

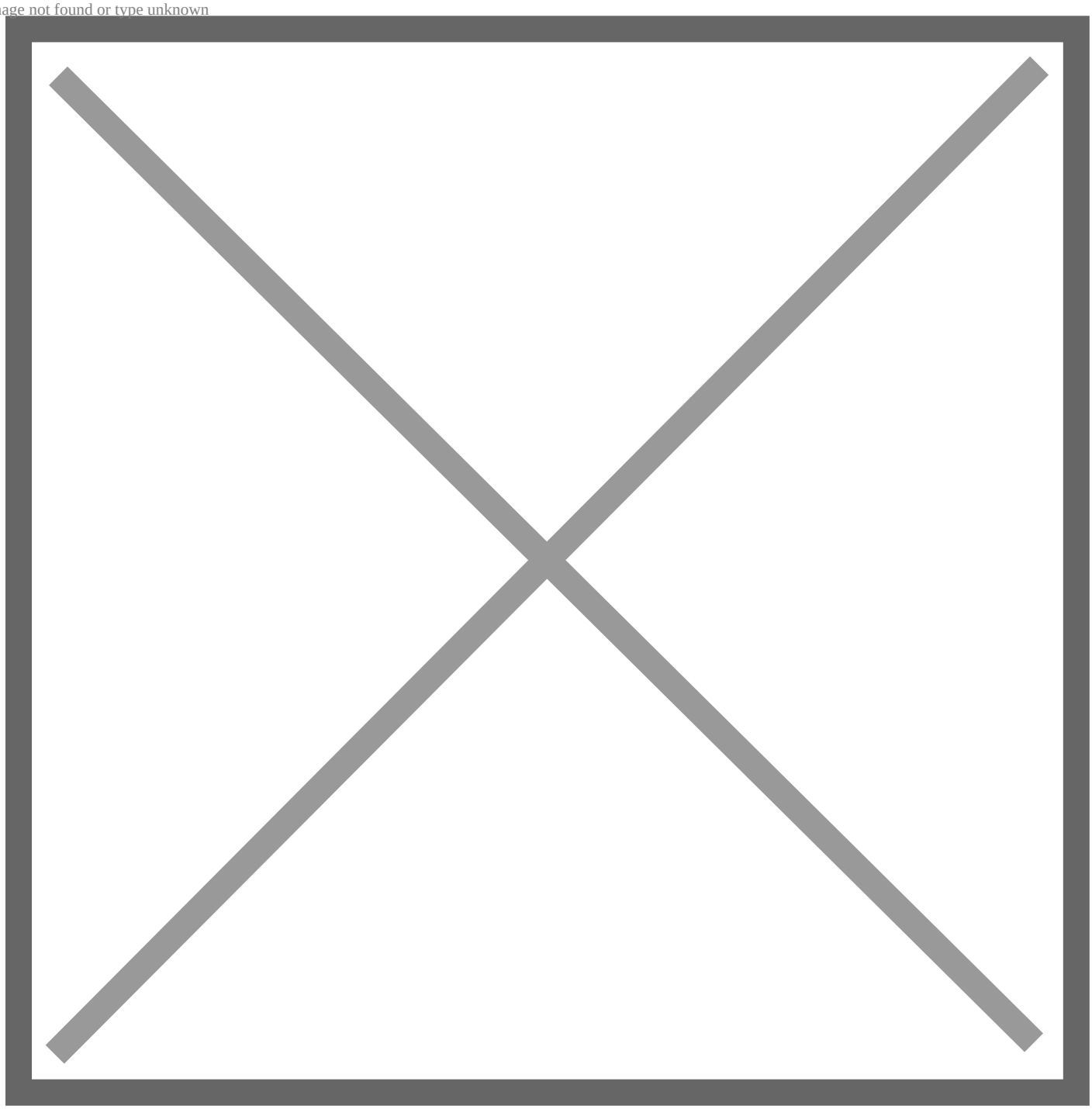
"It has been 15 years since Toyota held a public event here, making this a unique opportunity for visitors to get a glimpse of what happens inside H2HQ," said Jordan Choby, Toyota group vice president of Powertrain Engineering. "We're excited to share the work of our more than 100 team members, how our office connects to the community, and why hydrogen matters for our future."

For more information, please watch the video below.

H2HQ plays a crucial role in the planning, development, commercialization, and sales of hydrogen-related products and technologies, with an emphasis on fuel cells. Fuel cells generate electricity by combining hydrogen and oxygen with only water vapor as its emission. Fuel cells represent just one part of Toyota's global strategy and portfolio approach to carbon neutrality by 2050.

Inside the fuel cell garage, visitors experienced some applications of the technology: a stationary fuel cell generator, Toyota's Mirai fuel cell electric vehicle and a hydrogen fuel dispenser. Toyota's engineers were on hand to explain how hydrogen technology works and highlight their work at the facility.

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The event featured Hydrogen Grand Prix 1/10 scale remote-controlled car races organized by the nonprofit H2GP Foundation and Horizon Educational, the world's largest hydrogen education program. Unlike typical remote-controlled cars, these featured Mirai bodies powered by actual miniature hydrogen fuel cells.

California State University Dominguez Hills (CSUDH) brought its mobile Fab Lab, allowing guests to code and navigate Sphero balls, customize tote bags, and participate in a drone challenge.

Toyota and CSUDH have had a long-standing collaboration; Toyota has provided grants and donations totaling nearly $7 million. With help from Toyota, CSUDH built two centers on its campus:

The Toyota Center of Innovation in STEM, an 87,000-square-foot science building complete with stationery and mobile fabrication labs (Fab Labs), SMART classrooms, collaborative workspaces and an outdoor workspace. The facility has served more than 150,000 K-12 students over the past five years and provided teacher demos, training, and jobs for undergraduate students.

The Center for Resilient, Equitable, and Sustainable Transportation (CREST) offers affordable, accessible and reliable mobility options to students and 11 neighboring communities that have transportation challenges. Participants can drive a new Toyota BEV or HEV at a low cost via a mobile app.

“What’s amazing about the collaboration is not the funding, it’s the additional things like the time, energy, expertise, insight, guidance, and willingness from Toyota’s team members to help, step in and offer solutions and be with us every step of the way for the past 10 years,” said Dr. Kamal Hamdan, executive director of the Center of Innovation in STEM Education (CISE).

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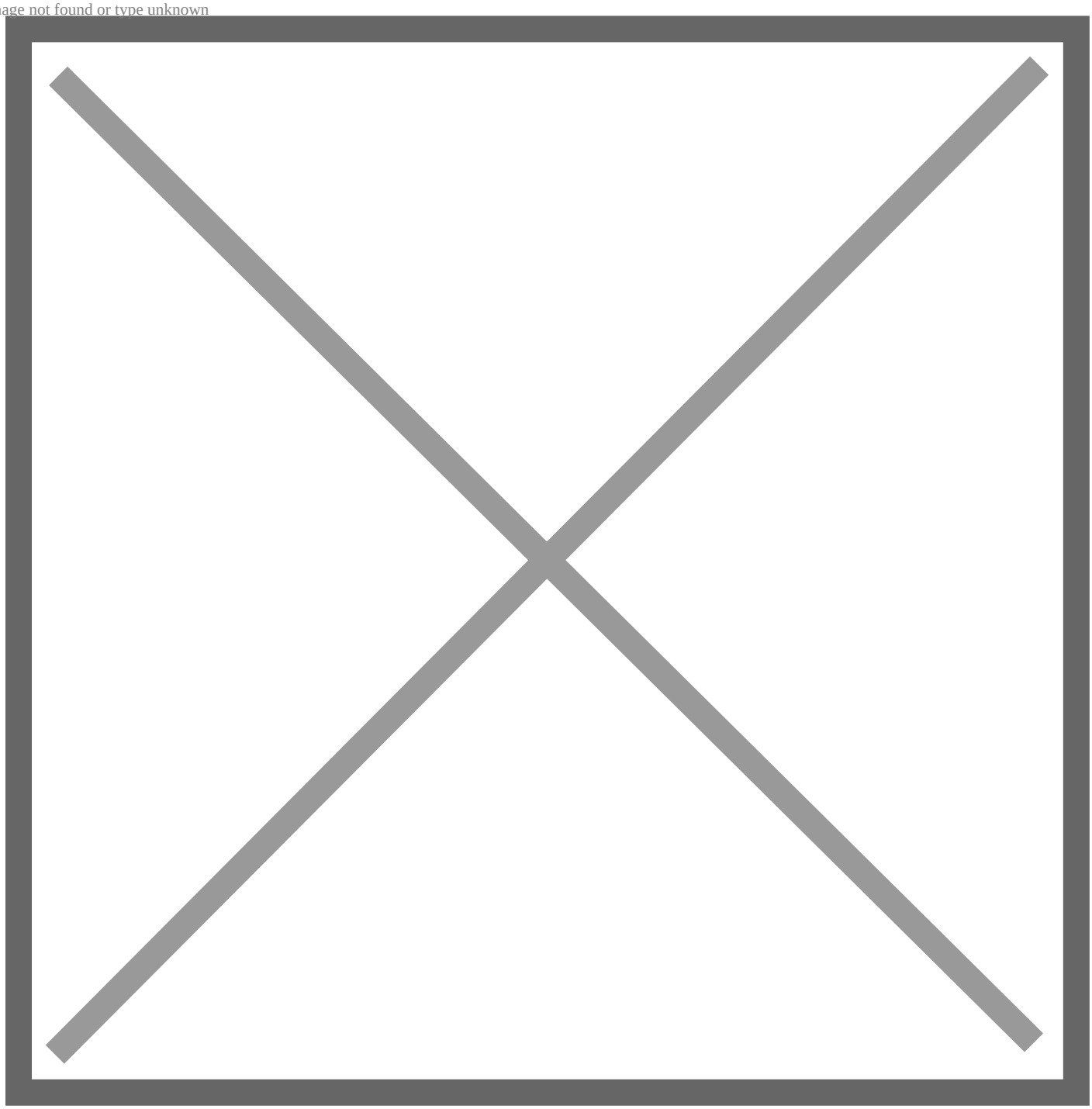
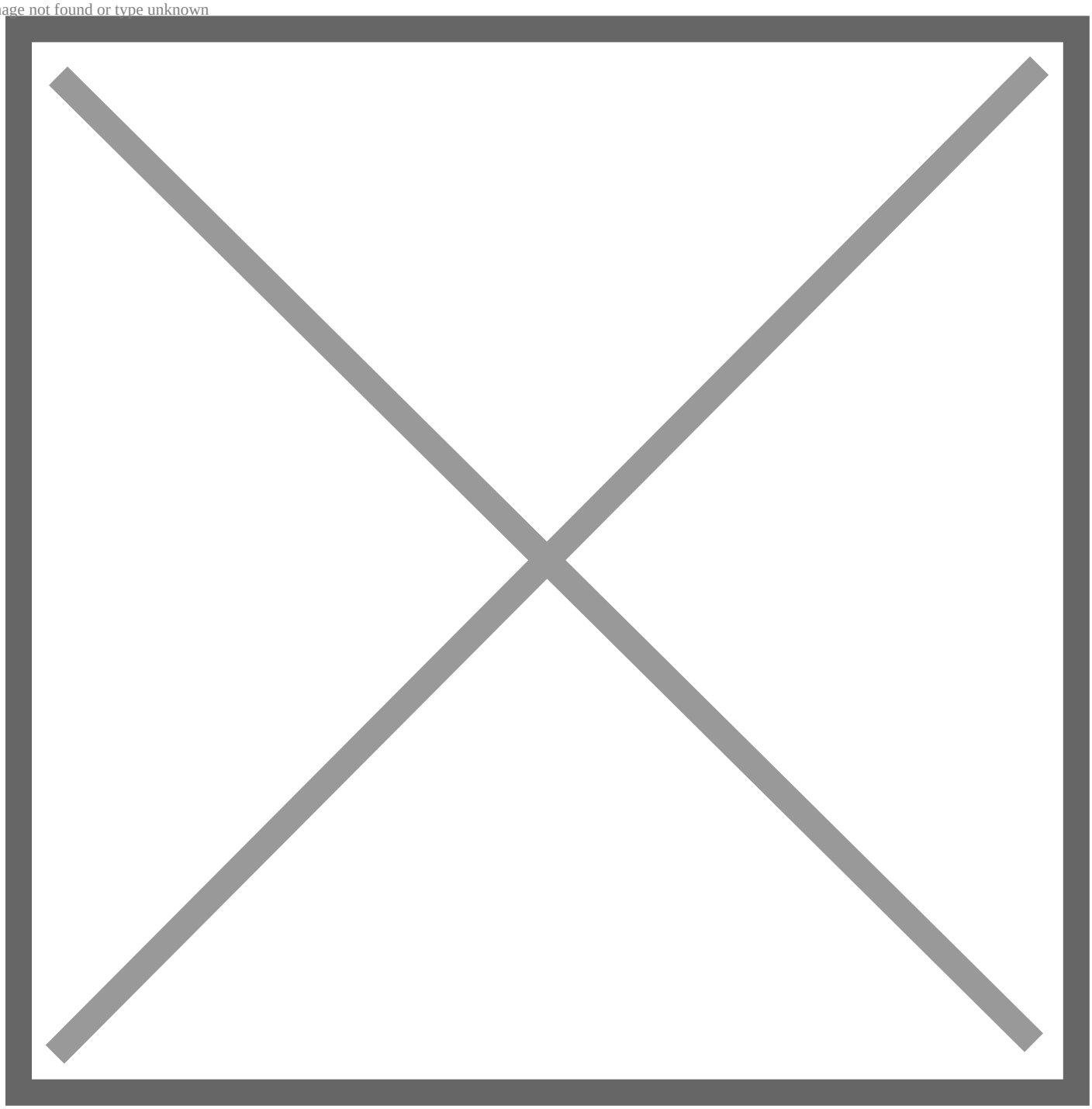


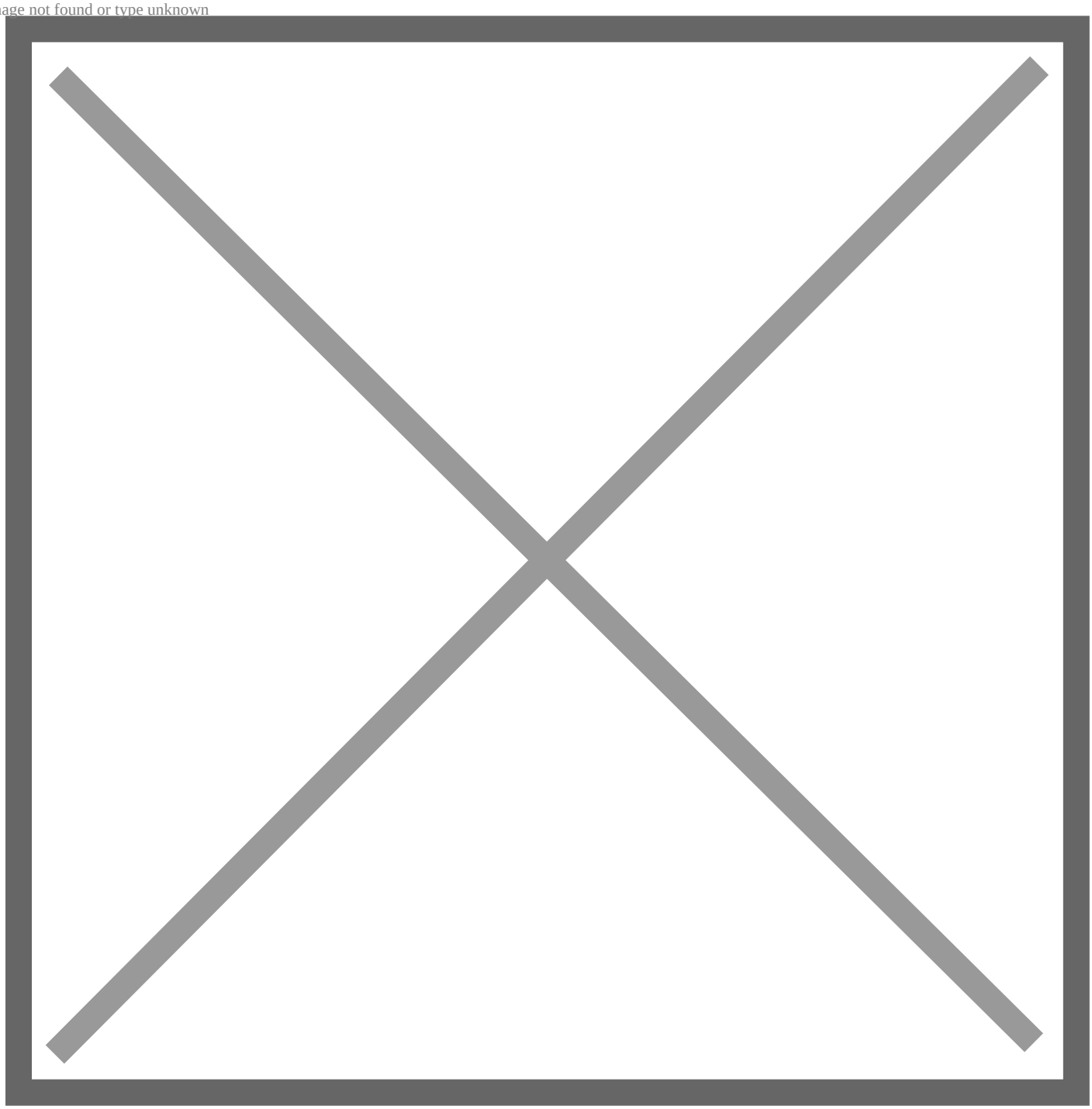
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The H2HQ open house also featured food trucks and bathroom trailers powered by a Toyota Fuel Cell Generator Tundra, which has a mobile zero-emissions power center built into its truck bed. Face painting for the kids and plenty of ice cream rounded out the event.

Toyota welcomed students and Principal Tony Aguilar of the 186th Street Elementary School, which is across the street from H2HQ and has benefited from the proximity of Toyota's engineers.

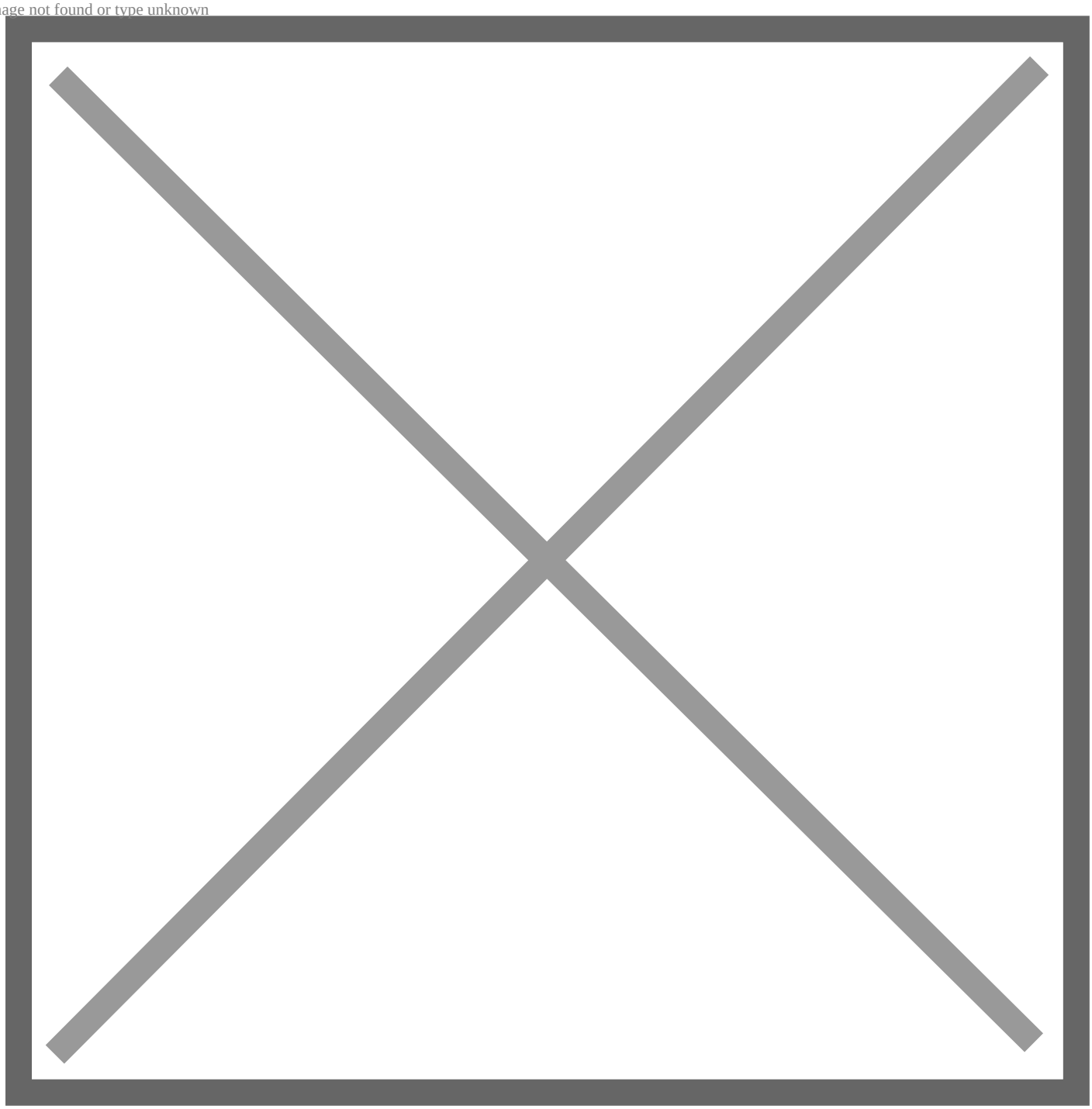
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“Our most popular program is A1, where engineers work hands-on with students to design and build their own vehicles and test them together,” Aguilar said. “In the past eight years, we have had about 800 fourth-grade students go through this program, and it has provided a pathway to see what they are interested in as they continue their education.”

For more than a decade, Toyota team members have volunteered extensively at the school, and Toyota Hydrogen Solutions and R&D have contributed more than $100,000 through annual STEM grants and equipment donations to support various educational programs such as field trips, coding projects and a STEM festival.

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Renamed the Toyota North American Hydrogen Headquarters (H2HQ) in 2024 after extensive renovations, the facility has been refining hydrogen fuel cell technologies since 2001. Accomplishments include helping to bring the Toyota Mirai FCEV to the North America market, the development of a California ZEP-certified fuel cell powertrain module for Class 8 heavy-duty trucks, and serving as a global flagship office for fuel cell and emissions-reducing technologies. H2HQ is home to Toyota’s largest dynamometer (1.2 MW), a scalable test bench for stationary applications, and a hydrogen fueling station capable of providing fuel for both light- and heavy-duty vehicles.

Beyond vehicles, Toyota has also been exploring other uses of its fuel cell technology and recently signed a supplier agreement with Rehlko to provide hydrogen fuel cells for use in generators to power stationary operations such as data centers and remote locations.

With a flexible microgrid project underway to demonstrate sustainable power generation, Toyota is committed to innovation with community engagement in mind. Future plans include a customer education center at the Gardena facility.

A local resident who attended the open house remarked, “I’ve lived here for over 50 years. I remember when Toyota moved in, but I never knew what was done here. Thank you so much for letting us see what you do.”

Similarly, from other guests:

- “I’ve lived in this neighborhood for 35 years and would see covered cars exiting and entering the Toyota facility and was always wondering what goes on in there. Also, I see the large semi-trucks parked and was curious about them. Now, I have an idea what goes on there. I really appreciate Toyota giving their neighbors an opportunity to look inside the facility. Thank you for hosting and reaching out to your neighbors.”
- “Honestly the tech behind the solutions is fascinating and makes me want to be a part of the change.”
- “I always wondered what happened here and had to bring my family. It’s great to see cool things happening in my backyard.”

And finally: “I loved seeing how excited my five-year-old son was when participating in activities.”

– ?Story by Brenda Garduno-Garcia. Photos by Dustin Dizon, Jose Sandoval, and Dewhurst Photography; video by Dewhurst Photography.