Toyota Sparks Interest in STEAM With a Hands-On Experience

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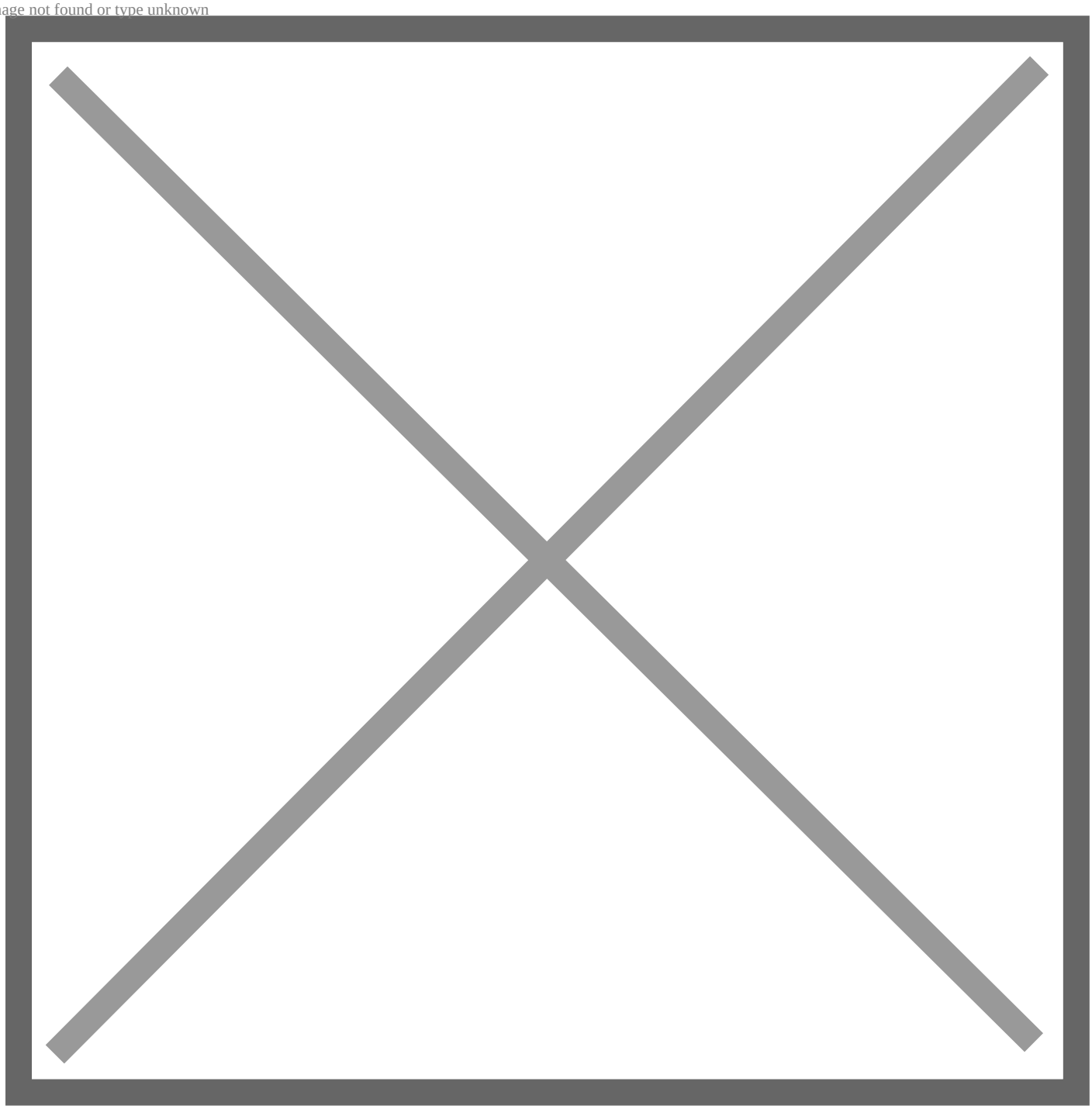
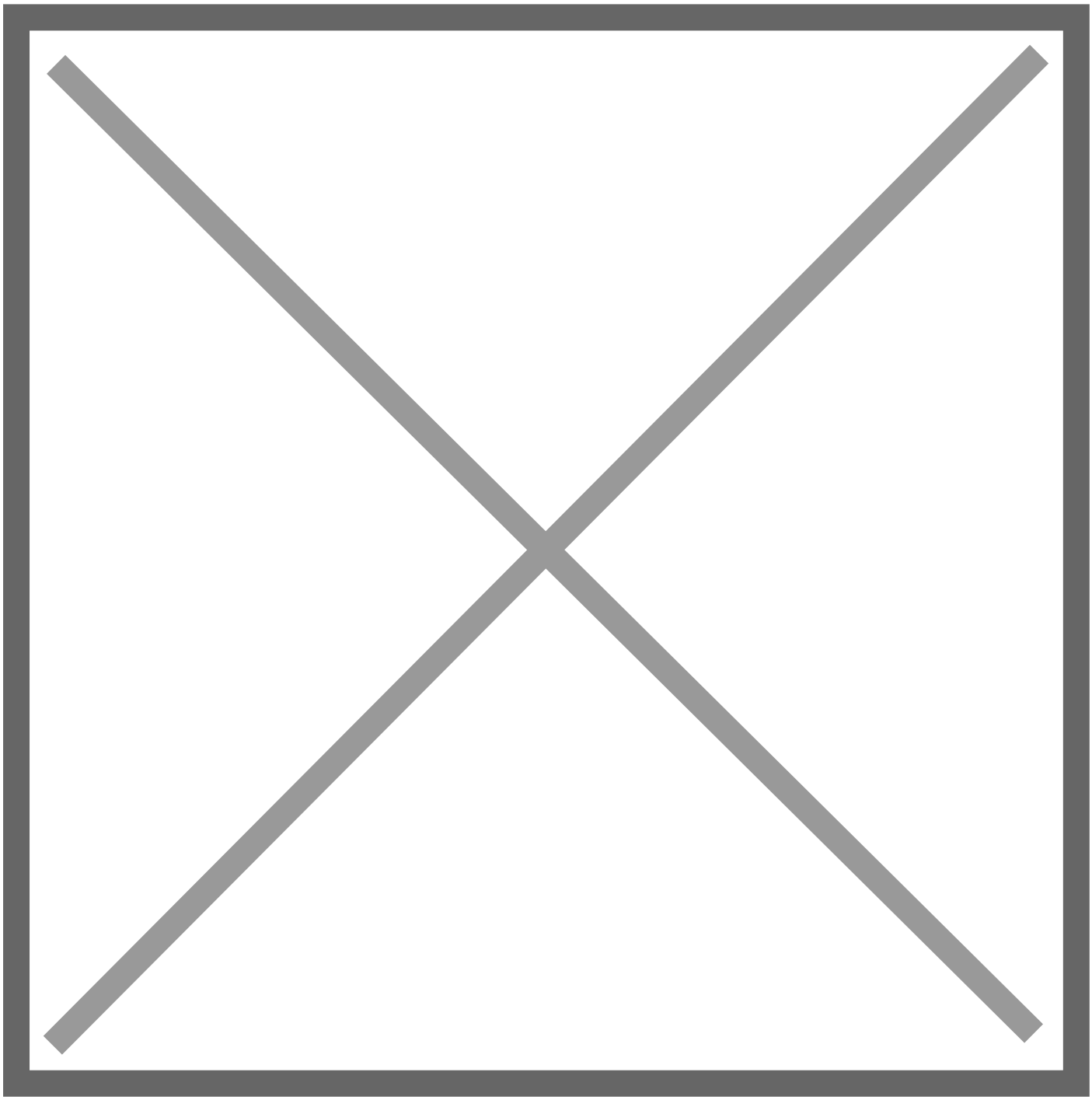


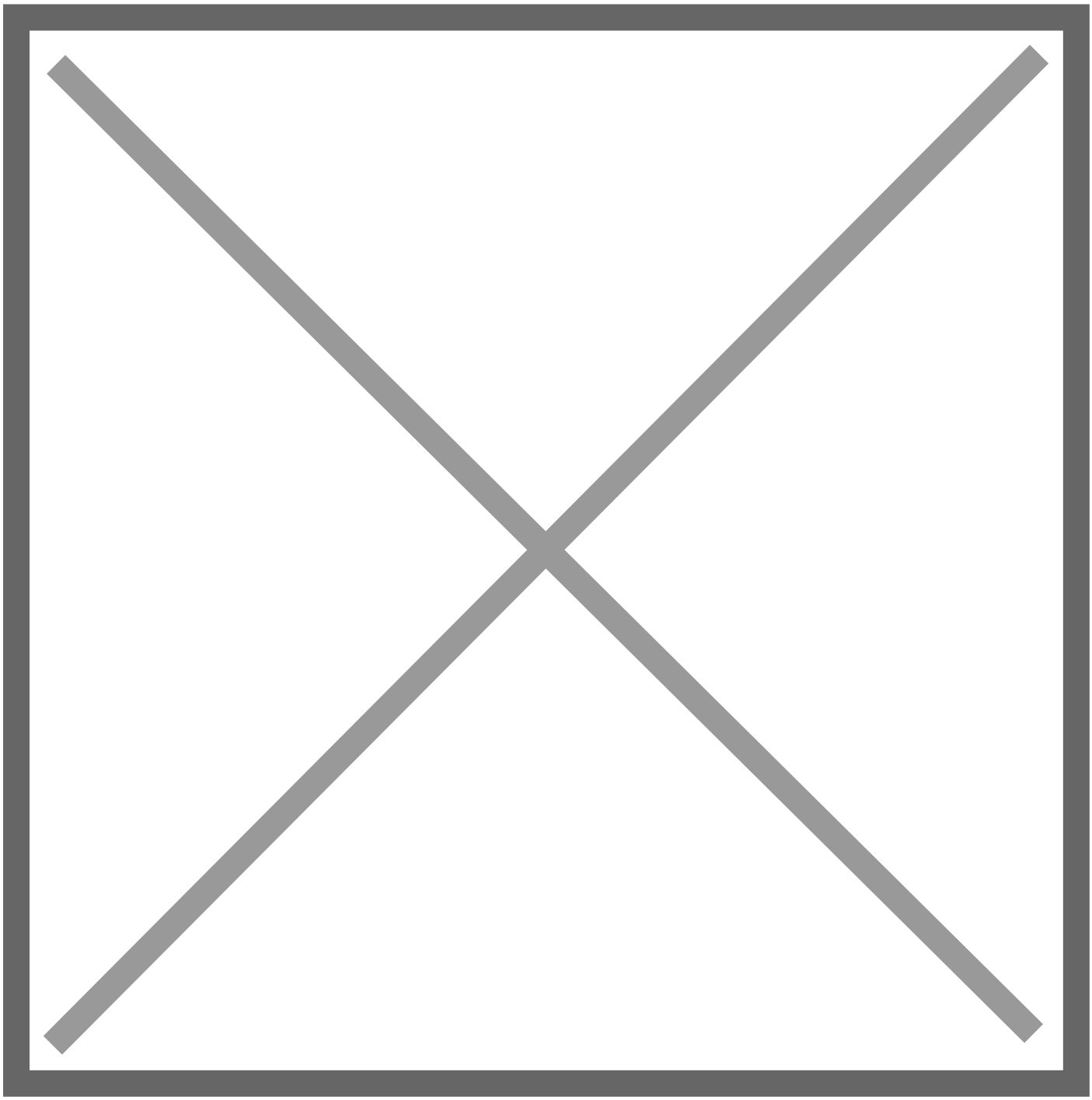
Achievements in science and art start with the same spark: wonder.

When the Ann Arbor Hands-On Museum asked a team of Toyota Motor North America Research & Development (TMNA R&D) employees what led them to become an engineer, scientist or researcher, each pointed to a moment of childhood wonder as the spark of curiosity that blossomed into a career. Now, these same catalysts to innovation have a new place to work their magic.

Introduced today, the Ann Arbor Hands-On Museum STEAM PARK was designed with the mission to help inspire the next generation of scientists, engineers, and artists. And while the future of innovation is assuredly high-tech, the root of inquiry rests with the analog world of the inner workings of machines.

STEAM PARK offers the increasingly rare tactile experience of interactive mechanical exhibits, which come with names that could come right out of a Jules Verne story, such as Window Maze Ball Machine, Airfoil, Propeller Chair and a first-in-the-world digital Roulette Curve. There is even a floor-to-ceiling, multi-interactive 17th-century clock for those who see mere cogs in the machine as priceless learning opportunities.





STEAMPARK ideation sketches

“It’s all mechanical and driven by the visitor. The visitor makes it work, and you look at all these pieces and parts, from levers to gears to pulleys and conveyors,” explains Mel Drumm, president and chief executive officer of the Ann Arbor Hands-On Museum.

From ideation to design, TMNA R&D engineers collaborated with the Ann Arbor Hands-On Museum to develop the space and the nearly two dozen exhibits for more than two years. STEAM PARK, which will be part of the museum’s permanent display, ensures a long line of future inventors will have the chance to get their hands on

the wheels of production.

Fueling Impactful Collaboration

For nearly two decades, TMNA R&D, headquartered in Michigan, has collaborated on several initiatives with Ann Arbor Hands-On Museum, which serves close to 400,000 visitors annually from across the state. Beginning in 2008, the company worked closely on the development of the STEAM exhibit, “Engineers on a Roll,” an immersive and interactive preschool experience mouse trap game designed specifically to inspire preschool-aged visitors to touch, see, and to learn through play.

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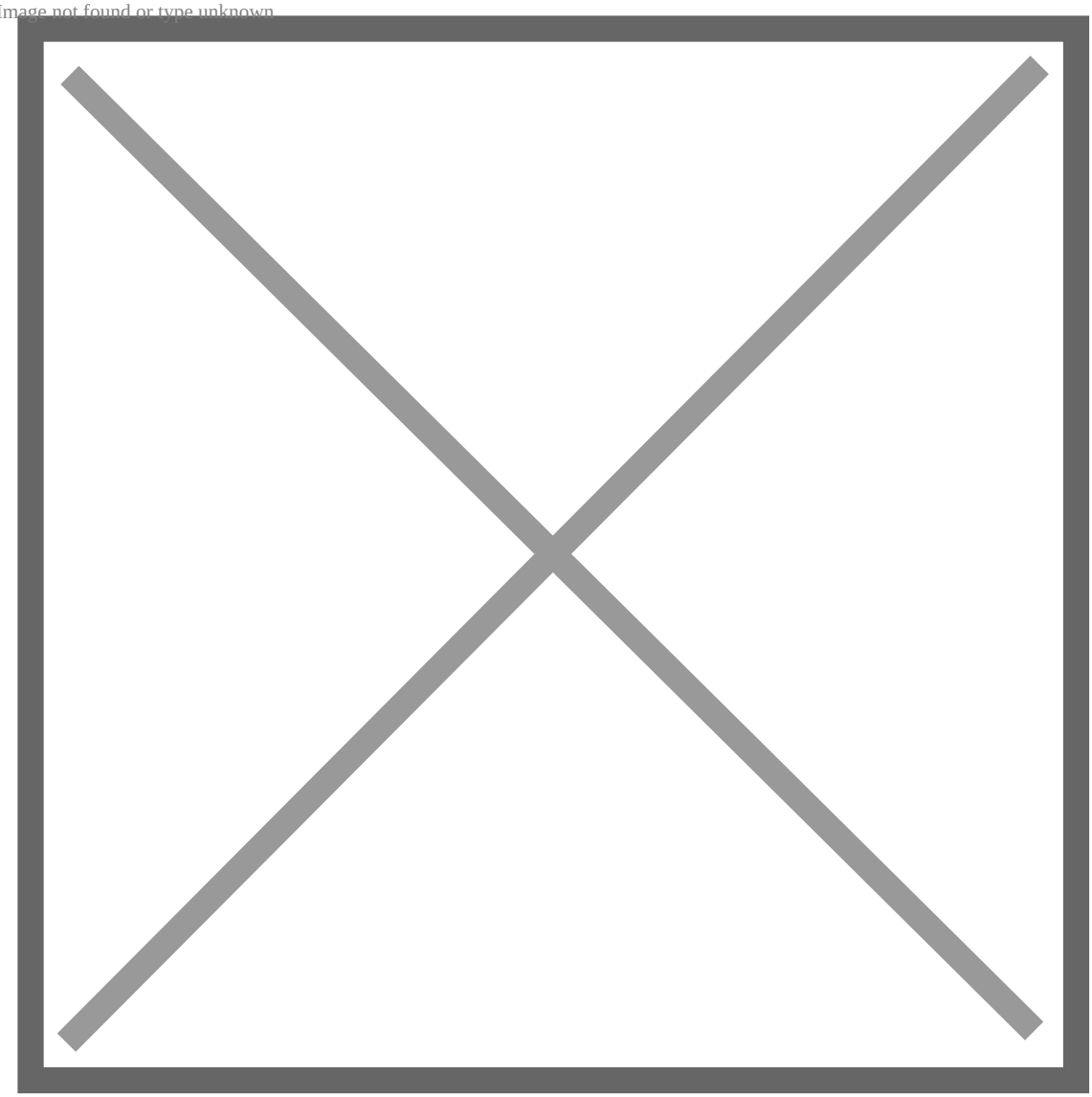
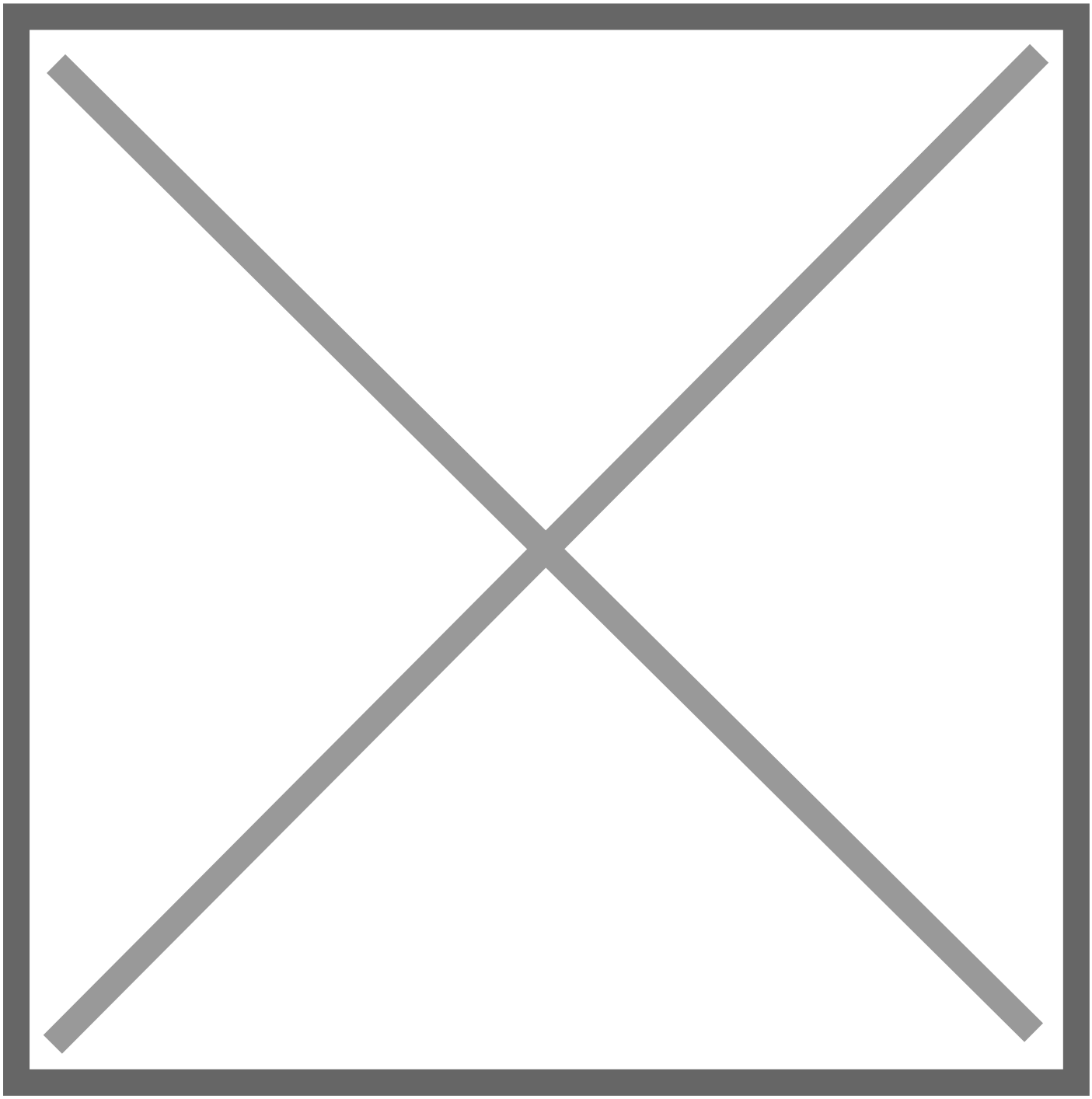


16-foot Window Maze Ball Machine

It’s not just about providing financial support; sharing knowledge and collaborating with the community is what successfully propels Toyota’s efforts forward. This long-standing collaboration underscores Toyota’s commitment to the communities it serves while inspiring students to become interested in STEAM. Driving curiosity and helping to bring this enriching and interactive gallery to life is part of Toyota’s core values.

“As Toyota transitions to a mobility company, we think that the STEAM PARK and these new exhibits really align with our fundamentals,” says Jeff Makarewicz, group vice president and Toyota USA Foundation board member. “Through new connected, automated and electrification technologies, we’re trying to solve some of the world’s most critical problems, but we can’t do it alone. We are going to need to inspire the next generation of innovators and problem solvers, and STEAM Park can help build tomorrow’s STEAM professionals.”

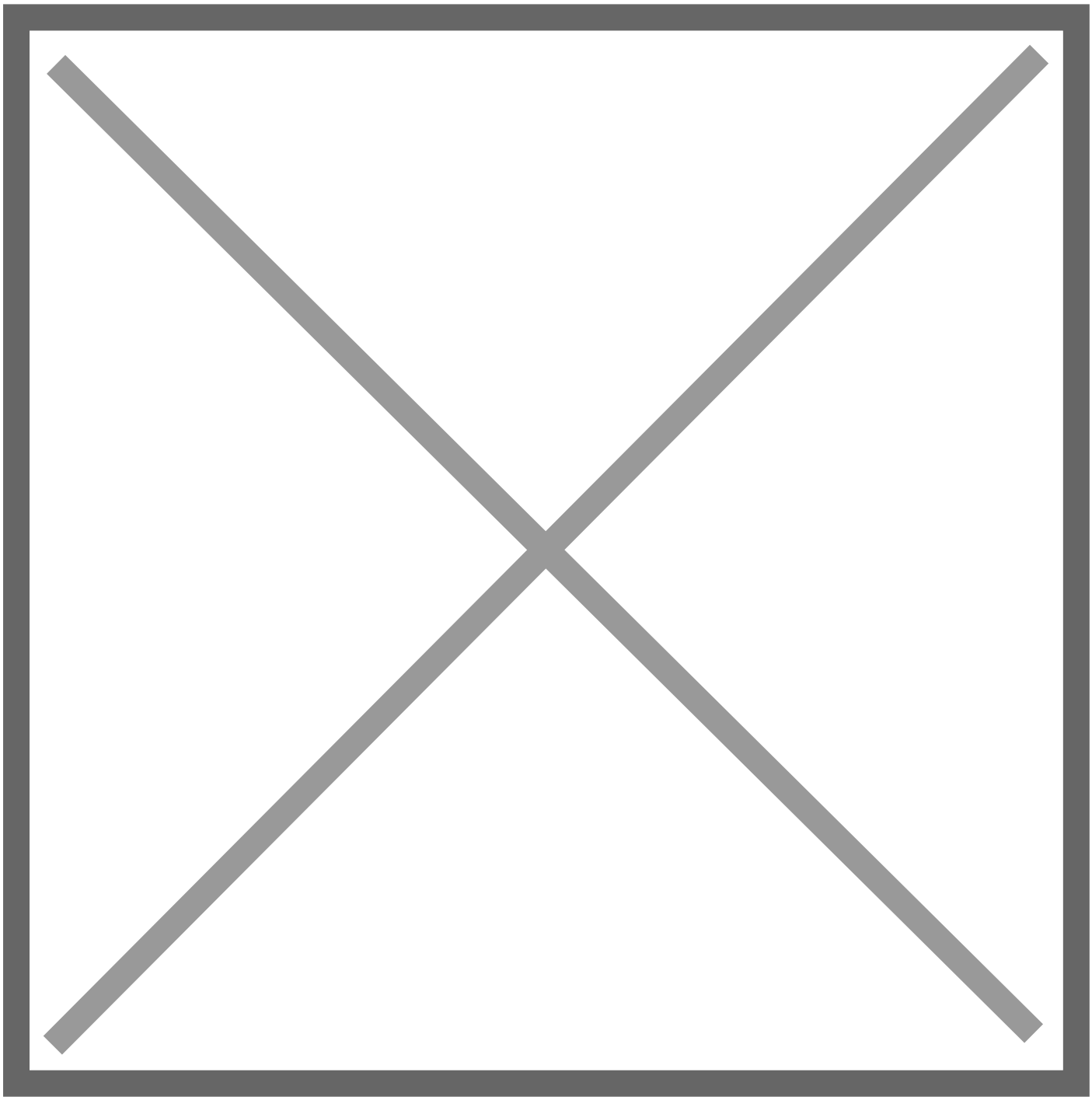


Toyota Engineer Carlos Briceno at the Air Foil exhibit with his family

STEAM PARK was made possible by grants from the Toyota USA Foundation and Toyota Motor North America totaling $1.5 million. This includes funding the renovations to the “Engineers on a Roll” exhibit, which will be refreshed and renamed STEAM PLAY, and the forthcoming outdoor environmental education experience STEAM PLACE.

Igniting Imaginations and Delightful Discoveries

In becoming a mobility company, Toyota is striving to improve people’s lives. To that end, STEAM PARK isn’t just for kids. It’s an engaging, multidimensional experience for people of all ages.



“One of the great things about the exhibit is that it is completely open-ended,” says Drumm. “You walk in, and there are multiple layers to every exhibit. So, if you’re a seasoned engineer, you’re going to approach the exhibits one way. If you’re a preschooler, you’re going to approach the exhibits another way. If you’re in middle school or upper elementary school, you’re going to see it differently, and then when it’s facilitated by our staff, you’ll see yet another layer of exhibits.”

“I think we all have a responsibility to try to spark the innovators of tomorrow, to try to show that we are all good stewards of the planet, to show that we’re all involved in trying to make the world a better place,” says

Drumm.

Ann Arbor Hands-On Museum collaboration with Toyota video