

Toyota Virtual Plant Tours Open Window to the Wonders of the Line

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A towering robot, standing 20 feet tall, gently scoops up a truck cab high above the factory floor. In one fluid motion, the monster robot pivots and lowers the unpainted cab, weighing 1500 pounds, onto the moving line where team members wait to inspect it. Nothing stops, not even for a moment, as the choreographed precision of assembling a new Toyota Tundra contributes to the arrival of a finished vehicle off the line every minute.

The world of manufacturing new Toyota cars, trucks, SUVs and minivans is actually many worlds that all work together. Metal stamping, the paint shop, plastics shop, “dropping” or “lifting” the engine into the frame, installing seats and dashboards are just a few of them. Now, the processes and people of those worlds are available as virtual experiences through the new Toyota Motor North America (TMNA) Education Hub, launched in time for this year’s Manufacturing Month. Through the legendary Toyota Production System (TPS), the question, “How are cars made?” is answered.

In total, Toyota's 14 North American manufacturing facilities assemble nearly 70% of the vehicles Toyota sells in the U.S. The immersive online experience provides visitors with a fun and educational way to learn more about a few of the plants, as well as the science and core philosophies that go into each and every Toyota vehicle.

Go behind the scenes to see the transformation of metal into road-ready machines; all that's needed is a computer and curiosity. Count the layers of paint needed to coat one vehicle. Go inside the body weld shop as robots attach each part of the vehicle to create a shell body. Meet the "co-bots" that work alongside the human teammates—also known as industrial athletes—to make their jobs easier.



A Riveting Curriculum

[Virtual Plant Tours](#) are for everyone, student and automotive enthusiast alike. For visitors who have not yet chosen a career path, Toyota's commitment to engaging and inspiring the public to pursue careers in science, technology, engineering and mathematics (STEM), through advanced manufacturing is rooted in its mission to contribute to its local communities.

The tours aren't purely mechanical, though. Putting a human face on the work of each plant is also part of the experience.

In [Princeton, Indiana](#), Toyota Motor Manufacturing, Indiana President Leah Curry takes visitors on a virtual walk as she shows off the Toyota plant based in her hometown. The Toyota Indiana Experience Center features virtual reality opportunities so spectators can take an immersive look at the facility's paint booth and stamp shop in VR.

To assemble Tundras and Tacomas, [Toyota Motor Manufacturing, Texas](#) uses state-of-the-art technologies like Automated Guided Vehicles (AGVs), which deliver parts across the assembly floor. But the human eye and touch are critical to the production of quality vehicles. Technology assists, but there is no substitute for the trained, passionate members of the Toyota teams who assure that each car, truck, SUV or van that rolls off the line meets exacting standards.

And while the inner working of the plants are technological wonders, Toyota is much more than the vehicles it produces. Visitors can also tour the Toyota Experience Center at the automaker's headquarters in Plano, Texas, which features nine different galleries that share the history and innovations of Toyota through the years. Check out the Motorsports Gallery, which shares Toyota's racing history, and learn about the most current Toyota and Lexus models in the Here and Now Gallery.



Stepping up for STEM

In addition to the plant tours, the Education Hub includes a series of free STEM-based lessons and a curriculum through Toyota USA Foundation partners. [Virtual field trips](#), like “Toyota Under the Hood: The Science Behind Safe Driving,” provide an inside look at the innovation and teamwork that go into designing each Toyota or Lexus vehicle.

By promoting careers in STEM, Toyota hopes Education Hub programming will encourage and empower students to seek opportunities, including those who are underrepresented in tech, such as women and people of color, or those who live in communities where opportunities may be limited.

Education, exposure to career paths in manufacturing and Toyota’s longstanding commitment to workforce development in the U.S. are foundational to the company’s goal of mobility for all. After all, when you’re free to move, anything is possible. And that’s an idea even Godzilla can get behind.

Select a location below for an inside look at some of Toyota’s state-of-the-art automotive manufacturing plants:

[Princeton, Indiana](#)

Toyota Motor Manufacturing, Indiana (TMMI)

Production: [Highlander](#), [Sequoia](#) and [Sienna](#)

Ever stamp a picture of a car on a piece of paper? Now imagine stamping out a real-life car frame from sheets of metal — piece by piece. To produce over 6 million vehicles (and counting!), Toyota Indiana uses advanced technologies like Toyota’s New Global Architecture and robots to create smarter manufacturing, to help ensure quality and reduce fatigue. The Indiana facility also utilizes wearable technology (no, not a smart watch) to help employees move around safely and efficiently. For example, an exoskeleton — which looks like a harness — provides support and gives employees a boost to help them work on something that’s too high up.

[Huntsville, Alabama](#)

Toyota Motor Manufacturing, Alabama (TMMAL)

Production: Engines

As Toyota’s largest engine producer in North America, Toyota Alabama produces over 3,000 engines every single day — that’s more than 7 million engines since the plant opened in 2001. If each engine ever built in the plant powered a vehicle 200,000 miles, they would go from the earth to the sun and back over 7,500 times. The campus has expanded four times, growing to over 1,400 employees inside a 1,200,000-square-foot facility.

[San Antonio, Texas](#)

Toyota Motor Manufacturing, Texas (TMMTX)

Production: [Tacoma](#) and [Tundra](#)

Toyota Motor Manufacturing, Texas uses advanced manufacturing technologies to roll a new truck off the assembly line every 60 seconds! In one day, that’s approximately 1,000 trucks. As the fastest line of any North American vehicle plant, more than 3,000 employees, and an additional 4,000 employees at on-site suppliers, work together with their robot coworkers to assemble safe, quality trucks for Toyota customers. The weld shop is home to over 400 robots alone!

[Jackson, Tennessee](#)

Toyota Motor Manufacturing, Tennessee (TMMTN)

Production: Cylinder blocks and transmission components

Get a glimpse of the 200 acres of Toyota Tennessee, where the skilled team produces up to 1.7 million engine blocks every year. A [top 10 company](#) for diversity, the advanced manufacturing team in Tennessee embodies the Toyota pillar of continuous improvement.

[Georgetown, Kentucky](#)

Toyota Motor Manufacturing, Kentucky (TMMK)

Production: [Avalon](#), [Camry](#), [RAV4 Hybrid](#), [ES 350](#), engines and components

Virtual visitors to the plant in Georgetown, Kentucky won't get exhausted traveling the length of 156 football fields to get an overview of the almost 9 million-square-foot facility. While touring the largest Toyota manufacturing plant in the world, viewers will see the die manufacturing shop, which builds dies, or "cookie cutters" (sorry, you can't cook with them) for parts like doors and fenders, for Toyota plants across the country.

[Buffalo, West Virginia](#)

Toyota Motor Manufacturing, West Virginia (TMMWV)

Production: Engines and automatic transmissions

As the only North American plant to build engines, transmissions and hybrid transaxles under the same roof, Toyota West Virginia is one of the largest companies in the state. The nearly 2,000 employees complete more than a million engines and transmissions each year, rolling a new transmission off the assembly line about every 25 seconds — some of the fastest production times for Toyota globally.

[Blue Springs, Mississippi](#)

Toyota Motor Manufacturing, Mississippi (TMMMS)

Production: [Corolla](#)

Home of the Corolla, the Toyota facility in Blue Springs, Mississippi, has assembled nearly 2 million vehicles with the help of the Toyota Production System (TPS). It takes employees approximately 20 hours to build each Corolla. That's about as long as it takes to drive from Blue Springs to Boston. Luckily, employees at the Mississippi plant have a little help from "Godzilla." As strong as its namesake, the original king of the monsters, this large material-handling robot looks like a big metal arm and can work with loads up to one ton!

[Troy, Missouri](#)

Toyota Motor Manufacturing, Missouri (TMMMO)

Production: Cylinder heads

Toyota Missouri builds aluminum cylinder heads, the "lungs" of an engine, for every car, truck and SUV that Toyota assembles in North America. On the Missouri tour, go deep into the plant's casting facility and get a closer look at the steel molds and sand cores that help form the cylinder heads.

Interested in learning more?

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