

# Once-Renowned Car Factory Becomes Hotbed of Tech Research, Lifts Small City



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Innovation from A State that Works [FULL BIO](#) ✓

By Abigail Bassett

South Bend was once a company town whose success was fueled by one of the most successful American automotive manufacturers of the 20<sup>th</sup> century.

That iconic company, Studebaker, was the only carmaker to successfully make the transition from horse-drawn carriages to automobiles, and its workforce totaled more than 20,000 employees across three locations in and around the Indiana city.

But after surviving the Great Depression and two World Wars, the Indiana Studebaker factory succumbed to business pressures and closed in 1963. Outside the shuttered gates, South Bend felt the consequences.

The fallout carried forward into modern times, but revitalization is taking hold in the Midwestern town. Where the great Studebaker factory buildings once stood, planners envision a new neighborhood that's been dubbed the Renaissance District.

Nearby is Ignition Park, a 180-acre expanse that officials from the city and Notre Dame University see as the next hotbed of tech innovation.

The old Studebaker factories are being torn down here, and new buildings housing startups and research facilities are moving in.

At the heart of Ignition Park is the home of the Notre Dame Turbomachinery Laboratory, widely regarded as a harbinger of the city's high-tech economy.

The lab stands where Studebaker had stored lumber when the company made horse-drawn carriages. The site later became the Studebaker engineering department, whose innovations — including seat belts, roll bars and caliper brakes — are still used by carmakers today.

"Studebaker was to cars what Coca-Cola is to soft drinks. It was a household name back in the day," said Andrew Beckman, archivist for the Studebaker National Museum. "In fact, many of the safety features that we take for granted in modern-day automobiles came originally from Studebaker's engineering department."

## Running Tests For NASA and GE

The turbomachinery lab occupies 25,000 square feet in Ignition Park, a considerably larger footprint than its former 5,000 square feet on the Notre Dame campus, said Dr. Joshua Cameron, an assistant research professor in the Department of Aerospace and Mechanical Engineering. Cameron runs the lab.

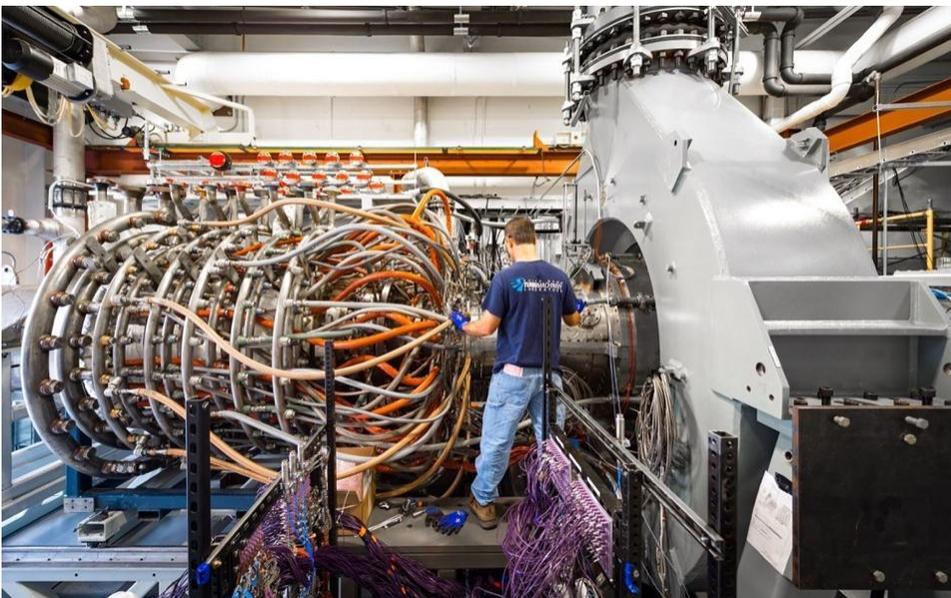


*The site in the 1940s of the Studebaker engineering building (right) is now home to the Notre Dame Turbomachinery Laboratory. Credit: Studebaker National Museum*

"The turbo lab had been running for the last decade. Now we have a lot more space, more employees and more chances to grow," he said. "We'll be able to run 10 to 20 major programs each year."

Those programs will deal with everything that uses a turbomachine, essentially anything that uses spinning blades to push water or air.

"Turbomachinery touches every single part of our lives, every single day," Cameron said. "Whether it's the power and gas we use to heat and light our homes, the water we take from the tap, or how our food gets to our table, turbomachinery is at the heart of it."



*A turbomachinery technician installs instrumentation on a turbine rig as it is prepared for testing. Credit: Notre Dame University*

Cameron said that innovating around the technology is crucial in order for industry to make the machines more efficient, more powerful and cleaner. The lab works with major companies and government agencies, including Pratt & Whitney, GE, Honeywell, Siemens, NASA and the U.S. Air Force.

Currently the lab employs 40 full-time staff, but Cameron said the research could have a tremendous impact on local and national economies.

"The U.S. is a leader in aerospace, and this industry is a major component of our economy," he said. "If we can find ways to create more efficient turbomachinery in this new space at Ignition Park, the jobs impact could be huge."

### **Innovation Built On Legacy**

Much has changed in the 13 years since Cameron arrived at Notre Dame to pursue his doctorate.

"Five years ago, I used to drive by this site, and it was a dilapidated, broken-down factory," he said. "Now it's one of the coolest, modern-looking campuses around, and people are really excited about it."

He's noticed a change in the way people feel about South Bend, too.

"There are new high-tech jobs in town, and people are coming here and buying houses. The restaurant scene has changed significantly over the last few years. There's a real civic pride that's grown up around locally made goods, services and food," he said.

But even as the area experiences a renaissance, the heart of the old Studebaker factory and automotive brand still beats.

"I think the Studebakers would have been overjoyed with Ignition Park and some of the incredible technology and research companies that are moving in there," Beckman said. "They would have seen it as a continuation of the innovation that was core to the company as a whole."

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<https://www.forbes.com/sites/indiana/2016/12/08/once-renowned-car-factory-becomes-hotbed-of-tech-research-lifts-small-city/#7817f8fb7974>