

October 2016 | Fourth Quarter

# THE MISSISSIPPI Advantage

A QUARTERLY PUBLICATION OF THE MISSISSIPPI DEVELOPMENT AUTHORITY

## MISSISSIPPI IS GLOBAL

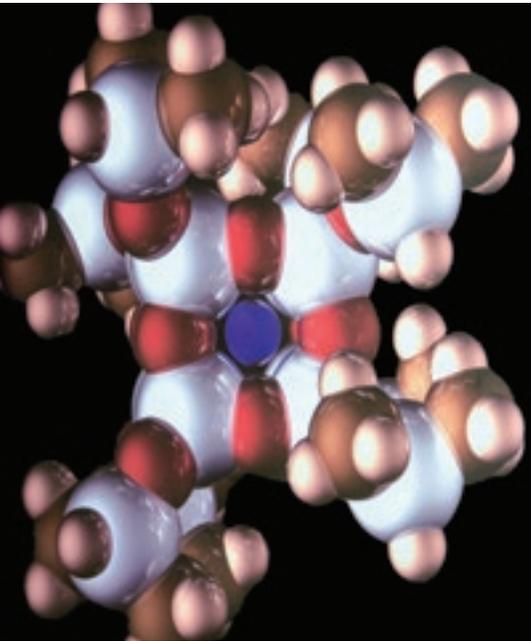
Foreign Direct Investment  
Spurs State's Growth

## INTERVIEW Q&A

with Bethanie Humphries  
Toyota Mississippi

## NANOTECHNOLOGY

The Big Business of Thinking Small



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## 6 COVER STORY

Top 10 Nanotechnology company Hybrid Plastics achieves larger global footprint in Mississippi

WRITE YOUR  
SUCCESS STORY  
IN MISSISSIPPI



## 1 Governor's Welcome

A Message from Governor Phil Bryant

## 2 Mississippi Is Global

Foreign Investment Spurs State's Growth

## 3 Incentives Spotlight

Sales and Use Tax Exemption

## 4 Advantage Mississippi

Recent Locations & Expansions

## 11 Powering Mississippi's Economy

by Glenn McCullough, Jr., MDA Exec. Director

## 12 Interview Q&A

with Bethanie Humphries, Toyota Mississippi





*Welcome from* **Governor Phil Bryant**

As governor of Mississippi, one of my most important jobs is being a salesman for our state. For anyone who might not be familiar with all the great things Mississippi has to offer, here are a few things others have to say about us.

CNBC says we're the No. 1 state in the nation for the cost of doing business, and *Area Development* magazine says Mississippi is a Top 10 state overall for doing business, competitive labor costs, speed of permitting, favorable regulator environment and corporate tax environment. Simply stated, businesses in Mississippi get started quicker and don't have to spend as much money to generate the goods and services they sell.

*Business Facilities*, a magazine and website specializing in the site selection marketplace, ranks Mississippi as a Top 10 state for automotive manufacturing, based on the state's existing industries, workforce, training, renewable energy and other factors.

Mississippi maintains a nationally recognized community college system primed to design an industry specific, tailor-made training program for incoming and expanding manufacturers. Meanwhile, our research universities consistently graduate students with the combination of knowledge and leadership skills critical to business success.

Mississippi has the business climate, the infrastructure and the talent companies need. Whether it's access to major highways, ports or airports, we have the location. Most of all, Mississippi has the talent to make the things America - and the world - needs.

Verifiable results - that's what we are selling in Mississippi. Give my team at the Mississippi Development Authority a call. It's the best business decision you'll make today.

Sincerely,

A handwritten signature in black ink that reads "Phil Bryant". The signature is written in a cursive, flowing style.

# MISSISSIPPI GLOBAL

## Foreign Direct Investment Spurs State's Growth



Foreign direct investment is defined as an investment made to acquire lasting or long-term interest in enterprises operating outside of the economy of the investor.

In Mississippi, foreign direct investment means jobs.

Since the beginning of January 2012, foreign direct investment is pumping nearly \$3 billion into the state's economy through projects assisted by the Mississippi Development Authority, accounting for nearly 60 percent of all announced corporate investment in state-aided economic development. Those investments also account for more than 35 percent of jobs announced in Mississippi. The nearly 10,000 jobs announced through foreign capital into the state are an important contribution to Mississippi's economy.

Perhaps just as important, however, is the manner foreign

direct investment can be a stabilizing force, both for the state's economy and for the communities targeted for new or expanding foreign-owned industry.

**“Perhaps the best testament to investing in Mississippi is our track record.”**

From DeSoto and Tishomingo counties in the north to Jackson and Harrison counties in the south, foreign direct investment has bolstered the local spending power throughout the state. In the last five years, state-assisted foreign direct investment generated new career opportunities in 24 Mississippi counties.

“Any new or expanding company adds a spark to the economy and in local pride, but when the new jobs are generated through foreign direct

### Top Countries with Foreign Direct Investment in Mississippi

1. Japan
2. France
3. Germany
4. United Kingdom

investment, it's literally new money coming in," said Glenn McCullough, Jr., MDA's Executive Director. "The greater spending power can have a ripple effect throughout a community and the state as a whole."

"With our shovel-ready sites and transportation infrastructure, job-ready workforce and training mechanisms, and business-friendly environment and political stability, Mississippi is a prime target for foreign direct investment," he said. "Perhaps the best testament to investing in Mississippi is our track record. Companies like Nissan, Toyota, Roxul, Yokohama, and most recently, Continental Tire coming to Mississippi have helped us establish momentum. We are determined to build more."

When German tire manufacturer Continental Tire announced in February a plan to invest \$1.45 billion into a new facility in Hinds County, the company credited many of Mississippi's selling points.

"As we plan our growth, we have found this site provides significant advantages for a future tire plant in terms of its large skilled workforce, as well as its ideal location and infrastructure," said Paul Williams, Executive Vice President, Continental Commercial Vehicle Tires, the Americas. "The state of Mississippi has developed an outstanding business climate, and this site met all of our needs for projected growth in the near as well as in the longer term." ■

## Incentives Spotlight

### Sales and Use Tax Exemption

Mississippi offers a one-half or full sales and use tax exemption to the Mississippi Development Authority-certified manufacturers and custom processors, as well as data and information processing companies and technology-intensive enterprises. The exemption applies to component building materials, equipment and machinery and is available from the start of construction on the new or expanded facility through three months after the initial start up of the facility.

The amount of the exemption depends on the county in which the business is locating or expanding. Businesses in the state's most developed and moderately developed counties – counties ranked Tier I and Tier II by the Mississippi Department of Revenue – may receive a one-half exemption. Businesses in the state's Tier III counties may receive a full exemption.

In Mississippi, a contractor's tax – 3.5 percent of a contractor's gross receipts – is assessed on the construction of commercial real property. While contractor's tax has no exemptions under state law, eligible businesses may receive the sales and use tax exemption provided they purchase the materials, equipment and machinery directly. For more information, contact [financial@mississippi.org](mailto:financial@mississippi.org).

# MISSISSIPPI Locations & Expansions

July - September 2016

July 18

**AIA Countertops - Baldwyn**  
\$600,000 Capital Investment,  
60 New Jobs



AIA Countertops is expanding operations into Baldwyn, Miss., in Lee County, investing \$600,000 and creating 60 new jobs. AIA's operations will locate in an existing 110,000-square-foot building in the Harry A. Martin North Lee Industrial Complex.

July 20

**Leggett & Platt -  
Tupelo**  
\$967,000 Capital Investment, 25 New Jobs



Investing \$967,000 and creating 25 new jobs, Leggett & Platt, Incorporated, is expanding operations in Tupelo, Miss. Manufacturing of products for a diverse group of industries, Leggett & Platt's expansion supports the launch of a new business venture, which will make and distribute products for the mattress industry.

July 27

**McNeely Plastics - Hazlehurst**  
\$6.5 Million Capital Investment,  
25 New Jobs



Plastic products manufacturer McNeely Plastics is investing \$6.5 million and creating 25 new jobs at the company's new operations in Hazlehurst, Miss., at an existing 59,000-square-foot, county-owned facility in the Copiah County Industrial Park. McNeely Plastics is a manufacturer of plastic, flexible packaging for a wide range of markets.

August 3

**Nelson Wholesale  
Service - Columbia**  
\$2 Million Capital Investment, 20 New Jobs



Nelson Wholesale Service, Inc., is relocating a pet food and pet product distribution operation from Hammond, La., to a facility in Marion County's Columbia, Miss. Investing \$2 million and creating 20 new jobs, the company will operate in a 100,000-square-foot facility previously occupied by Orleans Furniture.

August 9

**Seemann Composites -  
Gulfport**  
\$4.6 Million Capital Investment, 42 New Jobs



Seemann Composites, Inc., is expanding operations in Gulfport, Miss., investing \$4.6 million and creating 42 new jobs to accommodate a contract with the U.S. Navy. Located in the Bayou Bernard Industrial Park, Seemann Composites will construct a 25,600-square-foot building to produce bow domes for the Navy's Ohio Class Replacement Submarine Program.

August 16

**Skyline Steel - Iuka**  
\$15 Million Capital  
Investment, 15 New Jobs



Skyline Steel, a Nucor company, is expanding operations in Iuka, Miss. The Iuka location currently manufactures large diameter spiral-welded pipe for foundations, bridges, wharves, piers and more. The expansion, with an investment of \$15 million and the creation of 15 new jobs, involves the addition of new equipment, enabling the company to produce straight-seam electric resistance welded pipe for the same purposes.

August 23  
**iMold Plastics –  
 Waynesboro**



\$4 Million Capital Investment, 33 New Jobs

Plastic container manufacturer iMold Plastics, a subsidiary of iSpice Foods, is locating operations in Waynesboro, Miss., investing \$4 million and creating 33 jobs. iMold Plastics will locate in a 50,000-square-foot build-to-suit facility in the new Meadowlands Industrial Park. The company, the first to locate in the industrial park, will lease the facility from Wayne County. iMold Plastics' Waynesboro location will supply containers to the iSpice Foods facility in Jackson, Ala.

August 25  
**Standard Industrial  
 Clarksdale**



\$1.357 Million Capital Investment, 25 New Jobs

Standard Industrial, manufacturer of press brakes, shears and hydraulic presses, is expanding in Clarksdale, Miss. Creating 25 jobs with its \$1.357 million investment, Standard Industrial is expanding within an existing facility in the Leonard Pharr Industrial Park to accommodate a new production line. The company plans to start construction on a new production line in December.

August 31  
**Plum Creek  
 Environmental Technologies – West Point**



\$825,000 Capital Investment, 50 New Jobs

Plum Creek Environmental, manufacturer and distributor of waste and recycling containers and equipment, is expanding in North Mississippi. Founded in Columbus, Miss., Plum Creek Environmental is investing \$825,000 and creating 50 jobs with an expansion into a larger facility previously occupied by Long Branch in West Point.

August 31  
**Southern Motion  
 Baldwyn**



\$20 Million Capital Investment, 600 New Jobs

Reclining furniture manufacturer Southern Motion is expanding in Baldwyn, Miss., in Lee County, investing \$20 million and creating 600 jobs. Southern Motion is expanding into the former Hancock Fabrics location in Harry A. Martin North Lee Industrial Park. The company's new site includes 64.5 acres and a 758,000-square-foot facility.

September 15  
**Premium Waters  
 Hinds County**



\$25 Million Capital Investment, 42 New Jobs

Private-label water bottling company Premium Waters, Inc., is locating operations in Hinds County, Miss. Premium Waters will construct a 210,000-square-foot facility in the J.C. "Sonny" McDonald Industrial Park to house water bottle manufacturing and filling operations, creating 42 jobs with an investment of \$25 million.

September 26  
**Polo Custom Products –  
 Louisville**



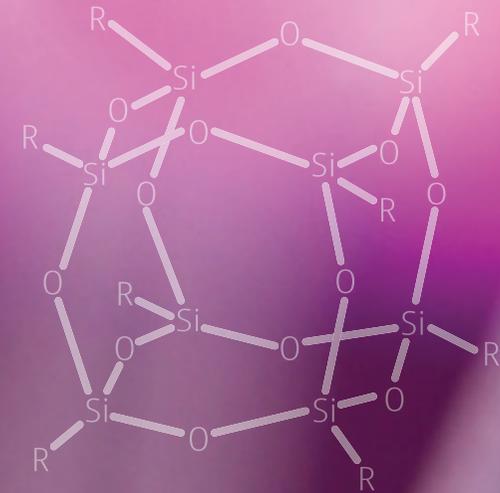
\$150,000 Capital Investment  
 30 New Jobs

Polo Custom Products' Louisville, Miss., manufacturing facility, specializing in custom sewing, film and fabric welding and custom fabric and foam thermoformed products, is expanding. Investing \$150,000 and creating 30 jobs, the company's expansion will accommodate the addition of new business contracts, as well as growth with several long-term customers.

# NANOTECHNOLOGY

The Big Business Of Thinking Small

Hattiesburg, Mississippi is home to one of the nation's Top 10 nanotechnology companies. In 2011, Hybrid Plastics' patented molecule made the world's first synthetic organ transplant possible.



In a small conference room, just down the hall from the lobby decorated with numerous brass plaques, Joe Lichtenhan points out the details on a diagram of the tiny collection of molecules capable of big business.

The artwork depicts POSS - an acronym for "polyhedral oligomeric silsesquioxane" - the carefully arranged collection of silicon, oxygen, hydrocarbons and hydrogen, now being used in everything from firearm cleaning solutions to protective clear plastic covers for mobile phones and from nail polishes to skin-care products. These products are the core of Lichtenhan's business, Hybrid Plastics.

**Dr. Joe Lichtenhan**  
has 67 U.S. and  
foreign patents  
and 14 trademarks  
Hattiesburg, Miss.

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With 67 U.S. and foreign patents and 14 trademarks, Lichtenhan does his research. He applied some of those skills when making the decision to move to Hattiesburg, Miss.

“We visited University of Akron in Akron, Ohio, the University of Massachusetts in Amherst, and the University of Southern Mississippi and looked at the various incentive programs,” Lichtenhan said. “The characteristic that really made all the difference for USM and for Mississippi was that everyone at the local, state and all the way up to the federal level seemed to really be supportive and welcoming to Hybrid Plastics.”

**“The characteristic that really made all the difference for USM and for Mississippi was that everyone at the local, state and all the way up to the federal level seemed to really be supportive and welcoming”**

**Dr. Joe Lichtenhan has 67 U.S. and foreign patents and 14 trademarks.**



One of the initial calls Lichtenhan made was to Shelby Thames, former president at USM and, at the time, a distinguished university research professor of polymer science at USM's School of Polymers and High Performance Materials.

“He called me and told me what his business was,” Thames said. “He said, ‘I want to come to an institution where I can get some support and some good students, good employees.”

“I wasn't really sure what we could do, but I was familiar with the area of polymer science,” Thames said. “I decided it would be better to ask for forgiveness than permission, so we allowed him to let his people work alongside ours in the labs until we could get a place for him to move into.”

From its current location on W.L. Runnels Industrial Drive, Hybrid Plastics has maintained a relationship with USM's School of Polymers and High Performance Materials. On any given day, one of the graduate students is likely working on a project at Hybrid Plastics. Just as likely, Lichtenhan is somewhere near.

“If you really sit down and look at the talent that comes out of those three schools – and those are the only three schools actually accredited in polymer science and engineering – all of those schools put out good product, but the program at USM is very industrially focused, very applications focused,” he said. “It's not a theory school. That's not to say the kids don't have some theory, but they're thinking of how to apply theory in a real world, instead of a textbook world. They have been forced to calculate the costs of what they've been working on. They get an idea about affordability and practicality.”

Lichtenhan received a long lesson on

**“For the business environment, the move to Mississippi was the right move. We’re in an area that embraces manufacturing, an area where people are trained and want careers in manufacturing.”**



affordability, practicality and patience as he developed what would become Hybrid Plastic’s signature molecule.

Bound for Kansas State with the intent of getting a law degree, he wound up with a chemistry degree, eventually leading to a post-doctorate degree from Cal State Irvine.

“Out of graduate school, I got a job at Edwards Air Force Base,” Lichtenhan said. “We were working on rockets and space vehicle materials, and we needed to make them lighter and fly faster and less detectable, and that’s got plastics and polymers written all over it.”

That’s where the precursors to POSS took off.

“Almost immediately, we started having some interest from some of the military’s captive contractors, and we started getting some interest from outside the Department of Defense,” he said. “Once we started talking about what these new chemical additives were, we started getting interest from the medical area, from the coating area, from the broader plastics industry because they really hadn’t had anything new, at that point, for about 40 to 50 years.

“We had something new, and we were the new kids on the block.”

However, there was a big problem.

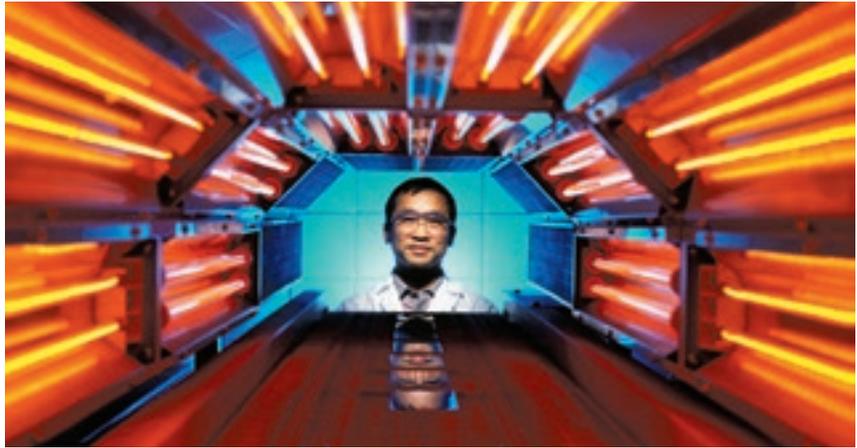
At the time, the company could only make about a thumbnail-size quantity of the product. The process also took about three years to complete.

Over the years, the time and quantity problem was resolved. Lichtenhan and his team started a very small pilot plant at the Air Force base to supply contractors. The group looked for three years to license the technology to someone in the chemical industry or to a toll manufacturer. There were no takers.

“Ultimately, we decided to set up a small, independent company to manufacture this,” he said. “It made sense for the military, because they needed this, and it made sense that this company could probably survive because of all of the other outside interests.”

Spin-offs are uncommon for the Department of Defense. There were only three case studies to show how to legally set up the new operation. The path Lichtenhan followed was based on a case

The Mississippi Polymer Institute (MPI) at the University of Southern Mississippi is a national leader in the study of composites, advanced materials, polymers and plastics. The institute has one of the most advanced rapid prototyping systems in the world.



study of a spin-off business milking black widow spiders for spider venom.

"When we left the government, we had to the ability to make research quantities on a pretty reliable basis," he said.

"The challenge we had was, for most engineering applications, you need about a pound of material. And that was a bigger challenge for us. We needed equipment, we needed some engineering knowledge, and we needed some better infrastructure to manufacture on this scale."

In 2002, while still in California, Lichtenhan's work won a statewide competition, which enabled him to get some commercialization assistance. The initial plan was to expand the operation in California.

**"The Department of Defense recognized Hybrid Plastic's product as critical to the economic and strategic interest of the United States."**

"We then very quickly realized that was not going to be a good decision, because the costs of setting up a chemical manufacturing business in Southern California was not ever going to work out for us," he said. "So we began a three-year process to look at different places to move the company. We needed a manufacturing-friendly zone and also a place that would have the labor force that would be appropriate for us."

In 2005, the Department of Defense recognized Hybrid Plastic's product as critical to the economic and strategic interest of the United States, allowing Lichtenhan to put in infrastructure necessary to manufacture products on a sufficient scale.

"The move to Mississippi was the right move for a lot of reasons," he said. "High tech is portable, and it can be shipped anywhere it needs to be at any time of the day. Old business models don't matter in high tech."

"For the business environment, the move to Mississippi was the right move. We're in an area that embraces manufacturing, an area where people are trained and want careers in manufacturing." ■

# Powering Mississippi's Economy

## Our Energy Products Draw Worldwide Attention

Mississippi's abundant and wide array of energy resources means we pay less than the national average for residential, commercial and industrial electricity. At the same time, Mississippi's renewable energy resources put our people to work, processing the raw materials and restoring the forestland.

Mississippi's 19.8 million acres of forestland fuels a thriving forest product industry, generating a \$12.3 billion economic impact and 70,000 jobs, according to the Mississippi Forestry Commission.

A U.S. Energy Information Administration report shows Mississippi generated nearly 2.3 percent of its electricity from renewable energy resources during 2015, with wood and wood waste accounting for almost all of the state's renewable electricity generation. Renewable energy sources contributed 56.5 trillion Btu toward the state's overall energy production, ranking fourth, after crude oil, nuclear energy and natural gas.

The performance of Mississippi's energy products draws worldwide attention. For example, Drax Biomass Incorporated's Amite BioEnergy facility in Gloster produces a softwood pellet used by a British power company. The power company uses Mississippi-made pellets as a cleaner alternative to coal.

The wood pellets are formed from low-quality soft pine harvested as part of trimming the stock of quality wood. Not long ago, much of this material would have gone unused. Today, they contribute

to Mississippi's energy profile, fueling economic growth. With the Gloster mill working in concert with a sister Drax facility in Louisiana, the companies are capable of producing 450,000 tons of wood pellets a year. Turning material once considered a natural waste product into a valuable export fuel creates career opportunities and builds a stronger economy for Mississippi.

A study by Duke University and North Carolina State University found the increasing demand for wood pellets from the United Kingdom and European Union has increased U.S. forested areas and investments in U.S. forestry. This is a direct result of more effective and intense management by forest owners who strive to increase the value of their forests and optimize biomass production and use. This increased demand is welcomed news in Mississippi, the No. 1 ranked state in the U.S. for the number of tree farms.

In a 2013 *Area Development* survey, executives ranked energy availability and costs as one of the top-10 factors in site selection. Paired with existing energy sources ranging from nuclear power to reserves of natural gas to a robust transmission system within the state's borders, Mississippi's renewable energy is one of the selling points used to attract career-producing companies here.

As a mega energy state, Mississippi can leverage its energy and natural resource strengths to attract investment, boost the economy and improve the overall quality of life.



by **Glenn McCullough, Jr.**

MDA Executive Director



*Interview with*  
**Bethanie  
Humphries**  
Toyota Mississippi

Training &  
Development  
Specialist

**Q: What kind of skills are needed to work at Toyota?**

**A:** Two of the major skill sets that anyone needs when entering the workforce are a strong work ethic and a desire to learn. At Toyota, the Toyota Way teaches Team Members a continuous improvement mindset. This means we are constantly looking for ways to improve our business and production process.

**Q: What is one advantage Toyota Mississippi has found with its Blue Springs facility?**

**A:** One of the best resources we have in the state of Mississippi is a strong network of community colleges. By working with Itawamba Community College and other members of the

Mississippi Corridor Consortium, Toyota is able to provide Team Member training and customize programs for workforce development.

**Q: How does the Beldin Center at ICC fit into Toyota's job training needs?**

**A:** One of the advantages of the Beldin Center is the similarity of the equipment used to train and educate students. The equipment is very similar to, if not the same as, the equipment used in Toyota's production process. When students have the opportunity to combine classroom learning and lab activities with on the job training at Toyota, they make an easy transition into the workforce because they're working with the same equipment.

# Interview

## Q&A

**Q: How are you working with your community college partner to build a sustainable workforce?**

**A:** One of the most critical skill sets for Toyota is multi-skilled maintenance team members. We need people who are skilled in a number of areas; electricity, fluid power, mechanics, fabrication and robotics.

Through our partnership with ICC, and other members of the Mississippi Corridor Consortium, we have been able to implement the Advanced Manufacturing Technician Program. This program trains students to ensure each graduate has the skills we're looking for at the facility in Blue Springs.

Partnerships with community colleges are instrumental in helping Toyota Mississippi have a sustainable workforce and remain competitive in the marketplace.

**Q: What about the advanced manufacturing technician program sets it apart?**

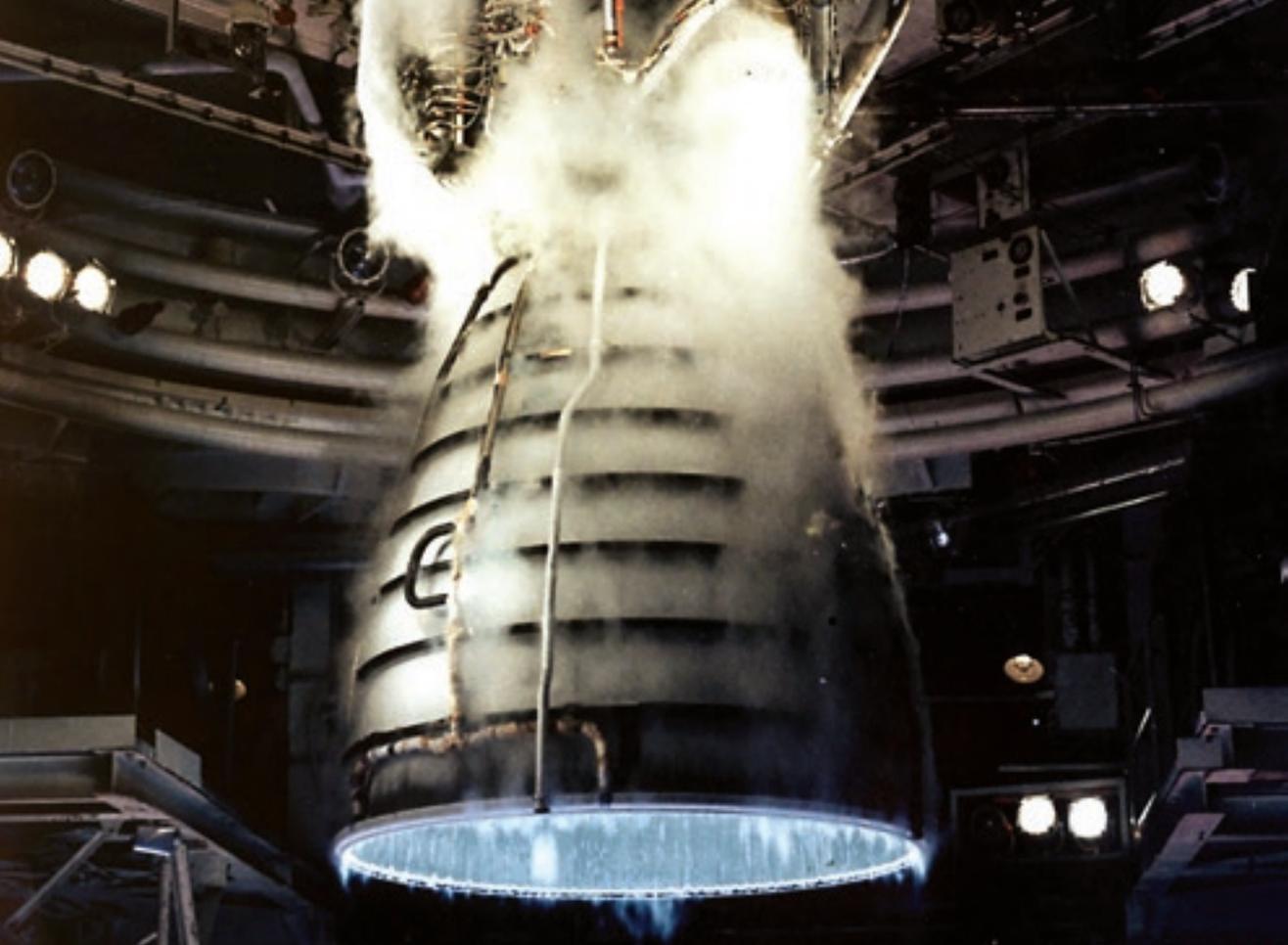
**A:** The AMT program, or advanced manufacturing technician, is designed as an innovative manufacturing degree that spans five semesters of classroom instruction and

paid, hands-on experience at Toyota's Blue Springs automotive assembly plant.

The AMT program sets students up to compete for skilled positions at Toyota, its suppliers or any manufacturer across the country.

**Q: What would you tell an industry deciding whether to locate operations in Mississippi?**

**A:** Toyota has had great support from the state of MS and our local officials. Any industry considering locating in Mississippi should do its due diligence with local economic development agencies as well as community colleges to establish a presence and partnership. These organizations will help determine if physical, human and economic location of industry factors are favorable for a company needs; community colleges will also help you prepare your future workforce.



# ROCKET SCIENCE

Whether it's as big as a battleship or visible only with a microscope, Mississippi manufactures it. If it's going into outer space or coming in from overseas, Mississippians make it move.

Companies collaborate with our respected community college system for workforce training and utilize the nationally recognized centers of excellence at our universities for R&D. Mississippi is building one success story after another. That's why companies like Rolls Royce, SpaceX, Northrop Grumman, NASA, Huntington Ingalls, GE Aviation, Airbus Helicopters, Aurora Flight Sciences and Raytheon have operations in Mississippi.

**Write your success story in Mississippi.**

**MISSISSIPPI**  
**LEADING**

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**MISSISSIPPI**