

ALABAMA

2021 ECONOMIC DEVELOPMENT GUIDE

A comprehensive resource for site selection

ALABAMA'S SEAPORT: GATEWAY TO WORLD TRADE

INSIDE

Development Incentives
Success Stories
Economic Sectors
International Trade
Business Resources
Statewide & Regional Economies
Economic Development Agencies

FROM THE PUBLISHER OF



MAGAZINE

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ON THE COVER: APM Terminals is upgrading its container facilities at the Alabama State Port Authority's Port of Mobile. Super Post-Panamax cranes alongside a 45-foot-deep channel, soon to be 50 feet deep, allow for ready commerce with the world. *Photo by Mike Kittrell*

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GOVERNOR'S LETTER



Greetings from the great State of Alabama

I am pleased to introduce the 2021 Alabama Economic Development Guide.

Alabama is the location of choice for all emerging sectors of the economy, specifically automotive manufacture, aerospace, biotechnology and information technology.

Companies and industry leaders throughout the world choose Alabama for our infrastructure, workers, worker training and skills development, and Southern hospitality. You will be amazed at the many advantages that the State of Alabama has to offer.

Alabama is consistently ranked as one of the top states for doing business, and we have sharpened our focus on high-tech and knowledge-based jobs. By partnering with our research universities, Alabama aims to imagine, develop and design products to be competitive around the world. Companies quickly find that our hard-working citizens are our greatest asset. You will not find a more loyal, dedicated and motivated workforce.

Companies that choose Alabama know that our state is a great place to live and work. From the white sandy beaches of the Gulf Coast to the rustic mountain terrain of Northern Alabama, I encourage you to visit and experience all that Alabama The Beautiful has to offer.

Sincerely,

Kay Ivey
Governor

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STATEWIDE ECONOMIC OVERVIEW

An \$830 million investment in a major auto plant before it even opened. A 200-person workforce jump at a single company. Three new auto supplier plants plus expansions at others. A \$250 million expansion at a cement plant. A \$215 million electric arc furnace opening at one steel plant and one in the works at another.

A brand new rocket engine factory. The first steps on a \$500 million met coal mine plus a \$50 million barge facility to load the coal. The first completed vessel at a new South Alabama shipyard.

A new \$82 million agricultural plant and a \$151 million food processing plant. A massive solar project in the Shoals. A significant rocket launching contract with the brand new Space Force.

Not bad for the pandemic year of 2020.

But that's a quick overview of economic development in Alabama, during a time when economic development was mighty difficult worldwide.

Mazda Toyota Manufacturing announced plans in the summer to invest

another \$830 million in the plant they are building in Huntsville, which, when complete, will bring their investment to \$2.3 billion.

And despite the pandemic, auto supplier firms announced new plants and expansions of existing plants, joining Alabama's robust automotive industry. It all started some 25 years ago when Mercedes-Benz opened a plant in Tuscaloosa County, followed a few years later by a Hyundai plant in Montgomery, a Honda plant in Lincoln and a Toyota engine plant in Huntsville. All of those plants have grown over the years, until Honda's and Hyundai's investments each top \$2 billion, Mercedes' has surpassed \$6 billion and Toyota's engine plant investment is well over \$1 billion. Automotive products are Alabama's strongest export and now the Port of Mobile is building a roll on/roll off facility to make that export business even easier.

Alabama's contribution to the nation's ground transportation doesn't stop at cars and SUVs. We build railroad cars, buses and trucks, too.

Hankering to move cargo? We build ships, too. Mobile has been a shipbuilding hub for centuries. Today Austal USA dominates the Mobile waterfront, building aluminum-hulled ships for the U.S. Navy and now planning for steel ships. And our Port of Mobile is among the busiest in the nation.

Want to get there faster? We build airplanes, too. Mobile is home to the only U.S. final assembly line for European aircraft giant Airbus. The plant has been delivering A320 family commercial jets to airlines in the U.S. and abroad since 2015, and this year delivered its first of the new smaller, economical A220 jets.

And if you need to get there really, really fast — think Huntsville and Decatur. That's where we build rockets. The workaday rockets that take most of America's payloads to space are crafted at United Launch Alliance in Decatur and the spacecraft of the future at NASA in Huntsville with key elements coming from an array of the nation's biggest space and defense contractors — Boeing, Lockheed Martin and Raytheon along with newcomers like Blue Origin and Sierra Nevada.

Info tech and biotech thrive here, too. Google and Facebook both have data centers here, as does DC Blox. And the Gunter Annex at Maxwell Air Force Base is home to that service's information technology experts.

The University of Alabama at Birmingham and its neighbor, Southern Research, have teamed to provide cancer drugs, COVID-19 possibilities and more. HudsonAlpha Institute for Biotechnology in Huntsville provides cutting-edge research in genetics and encourages the commercialization of those discoveries so that their work converts quickly from research to remedy.

Defense industries flex their muscle in north Alabama, clustered around Redstone Arsenal in Huntsville. The missiles to protect America from threats are designed and built there and in Pike County, while other contractors create

Key elements of a Mercedes-Benz SUV come together in Tuscaloosa County. The MBUSI plant jumped started Alabama's economy in the mid-1990s.



THE ROAD AHEAD

IS PAVED IN ALABAMA.



Despite today's challenges, Alabama is ready for the future. Our automotive industry is growing, with over 6,000 jobs on the way and an expanding production lineup that includes electric vehicles. We're also powering the aerospace industry to new horizons with Alabama-built rockets and engines. And we're invested in tomorrow's technologies and training programs that prepare our workers for what's next. No matter where you look, the future is being made in Alabama.

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ECONOMIC OVERVIEW

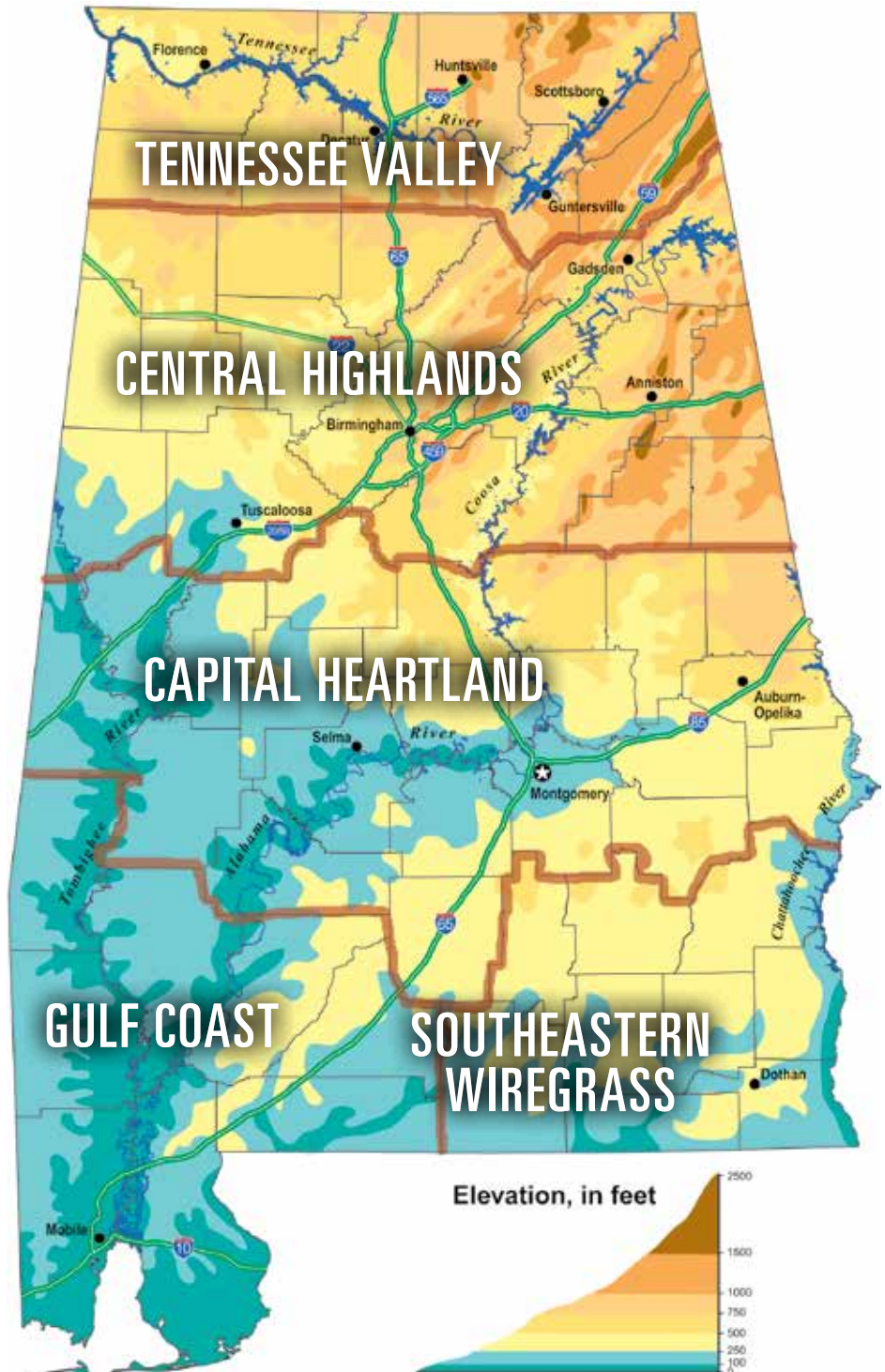
high-tech gear to protect and train military personnel. Dynetics, for example, is hard at work developing the first real ray gun for the military — one that can roll into position on the back of a standard military vehicle. Military folks also tend to the maintenance of land vehicles in Anniston and to helicopters in Dothan. The old Fort McClellan in Anniston now trains the nation's first responders for whatever catastrophe may arise — from an Ebola outbreak to an earthquake. And the Coast Guard trains its aviators in Mobile, ready to thwart drug smugglers, protect ports and rescue those stranded on the high seas or in flooded communities.

For decades, Alabama's universities have built football legends, but the Alabama university system is much more than sports. Arts, law, medicine, pharmacy, business — all help today's students flourish as tomorrow's leaders. Working in partnership with the state's college and universities and with its industrial sector, the Alabama Community College System prepares students to follow a pathway to a higher degree or a high-tech industrial career.

For all that Alabamians build, create, blast off, launch or study, the state's roots run deeper still. Crops thrive on farms rich with Black Belt soil; cotton creates a landscape of white; trees soar to the skies. Seafood thrives in the Gulf waters, while catfish swim in inland ponds. And Alabama chickens feed millions here and abroad. Beneath the surface there's coal — Alabama shipped \$2 billion worth of metallurgical coal overseas in 2018, while overall exports topped \$21 billion. Warrior Met Coal just this year announced plans for a new \$500 million mine and a \$50 million barge loading facility to take that coal to market.

All the while that manufacturing thrums, commerce hums, research expands our horizons and agriculture grows, Alabama continues to attract more and more people who just want to enjoy — staring in awe at the rockets towering overhead at the U.S. Space and Rocket Center, thrilling to the zoom of NASCAR at Talladega, fishing, hunting, hiking, canoeing, watching Shakespeare or just lolling on the sugar white sand of Alabama's Gulf Coast beaches.

REGIONAL OVERVIEW





TENNESSEE VALLEY

Rockets rule, autos roll and commerce in Alabama’s northern tier rocks on.

Alabama aims for the stars.

For nearly three-quarters of a century, scientists have worked diligently in Huntsville to convert dreams of space exploration into the realities of rockets, satellites, telescopes and propulsion systems.

In the mid 1950s, the federal government brought a team of former German rocket scientists to the nearly defunct Redstone Arsenal.

From that quiet start, the U.S. leaped into the space race — an effort that continues today as NASA and a host of other

companies big and small work to develop the mighty new Space Launch System. No longer aiming just for the moon but also to the planets beyond, the Space Launch System will be bigger and faster, able once again to carry humankind beyond the known.

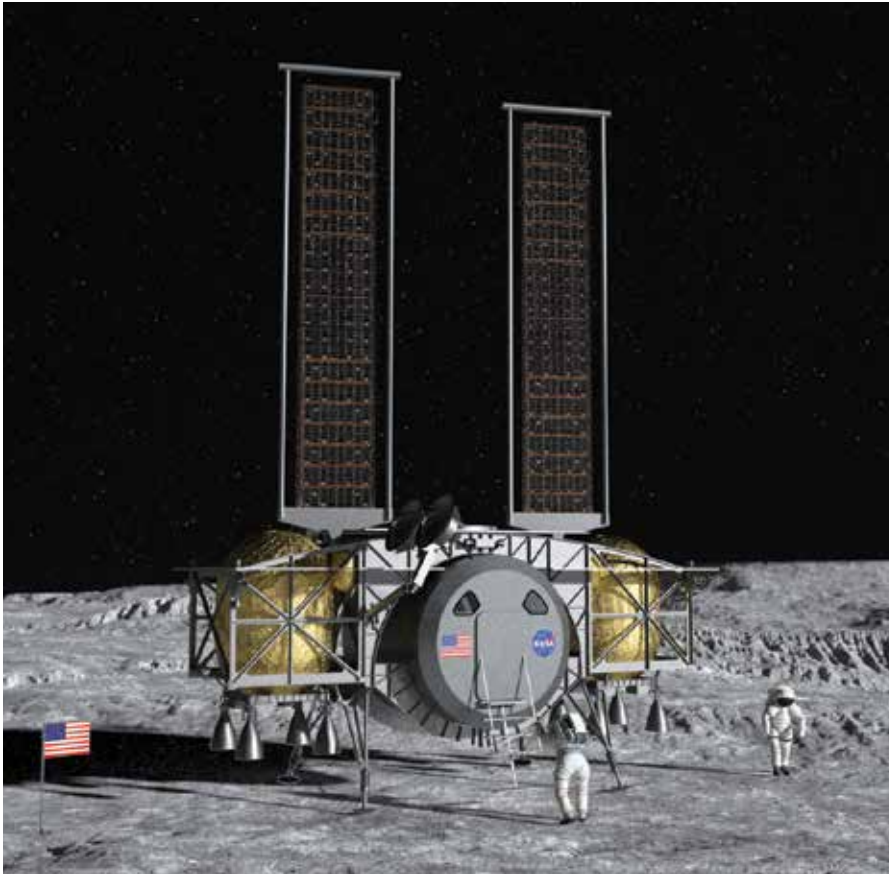
Working alongside NASA are firms like Boeing and Lockheed Martin, who design elements of the Space Launch System in Huntsville, along with smaller firms like BWX Technologies, which is working on a nuclear propulsion system that can whittle months off the flight time between the moon and Mars.

Even as they work on the newest of rockets in Huntsville,



Above, left: A United Launch Alliance rocket prepares for space flight. ULA, a joint venture between Boeing and Lockheed Martin, just won a major Space Force contract. Right: Toyota’s Huntsville plant makes engines for almost every Toyota model.

REGIONAL PROFILE



Huntsville's Dynetics hopes its creative design for the next lunar lander will be chosen to do the job.

Boeing and Lockheed Martin team in a joint venture called United Launch Alliance in nearby Decatur, building the Atlas and Delta rockets that have long been the mainstays of U.S. spaceflight. Blue Origin is newest to the flock, chosen to develop a new engine for those ULA rockets — one that will replace the Russian-made version. And Aerojet Rocketdyne has now joined the mix. And in the fall, ULA was tapped to provide the majority of the launches for the new Space Force.

Always at the cutting edge, Huntsville is also working with Sierra Nevada Corp., hoping the firm's Dream Chaser space craft will one day land on the workaday runways at Huntsville International Airport.

As glamorous as its rocketry may be, the northernmost region of Alabama has many more facets. National defense goes hand in hand with Huntsville's space science. Clustered around Redstone Arsenal are firms that design and build missiles to protect the country and simulations to help soldiers learn to make the right

decision in an instant.

Cummings Research Park, one of the largest in the nation, and the newer Redstone Gateway are home to an array of defense firms like those that encircle the Pentagon. The synergy of space science and defense engineering has attracted an array of scientific minds to Alabama's northern tier — not limited to those original fields.

Rockets and defense notwithstanding, auto-making was the biggest headline maker in northern Alabama when Huntsville was chosen in 2018 for a Toyota-Mazda joint venture that many another state had coveted. The plant is set to open in 2021, employing 4,000 workers and crafting 300,000 vehicles a year. But even before it opened, the team announced another \$830 million investment.

Mazda Toyota has attracted its own supplier firms, just as the state's other major automakers — Mercedes-Benz, Honda, Hyundai and Toyota — have done over the past two decades. Toyota

Boshoku has kicked off a \$50 million plant to make seat systems. Y-tec Keylex Toyotetsu broke ground for a \$220 million plant to make body stampings and assemblies plus functional and chassis parts. Vuteq USA announced a \$60 million plant to make interior and exterior plastic injection parts. And Daikyo-Nishikawa US broke ground for a \$110 million plant to make large resin parts like bumpers and instrument panels.

At the same time, Toyota announced a \$288 million investment in its existing engine plant in Huntsville, which was already the only one in the country building 4-cylinder, V-6 and V-8 engines. Big truck maker Navistar announced plans for a \$125 million investment in its Huntsville plant to produce next-generation big-bore powertrains with partner Traton.

Another newcomer to Huntsville is Facebook, which announced plans last year for a massive data center. Meanwhile, ground was broken for a Google data center in Jackson County, at the northeast corner of the state. The Google site is a creative re-use of a former TVA power plant.

The Tennessee Valley is also home to some of the state's brightest lights in biotechnology.

HudsonAlpha Institute for Biotechnology focuses on encouraging biomedical researchers and entrepreneurs to work together so that new developments can come efficiently to the marketplace. The Institute is making a name for itself and for Alabama in the intricate world of genetic research.

The northern tier's other industry is as varied as your imagination. Constellium makes the sheet metal for food and beverage containers in the Shoals and its new furnace can recycle 20 billion aluminum cans a year. Carpenter Technologies has added a \$52 million research center in Athens, where it works on additive manufacturing technology. GE makes appliances and Ascend Performance Materials makes high tech plastics.

Keeping the workforce up to date, Alabama's new robotics center at Calhoun Community College trains workers in how to operate and maintain the high-tech machines, while offering space for industry to design and test robotic components.



Agriculture is strong here, too. Marshall County leads the state in poultry processing and ranks second for producing poultry for processing.

The northern counties offer fashion and fun, too — outdoor opportunities abound along the Tennessee River, music is nearly as fundamental to the Shoals as the water itself. This is the home of Muscle Shoals Sound and FAME Recording Studios, where some of the biggest names in pop music recorded — from Aretha Franklin to the Rolling Stones. Fashionistas can enjoy the home-town spaces of designers Billy Reid and Alabama Chanin in the northwest, and every winter brings the opportunity for snow skiing up in Mentone.

And baseball is on the horizon when Madison can open its ballpark as home to the Los Angeles Angels Double-A team.



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Above left: Hikers enjoy Chapman Mountain Nature Preserve in Huntsville. Top right: 1818 Farms offers home-made products and farm experiences. DURA is the newest automotive supplier, headed for the Shoals.

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CENTRAL HIGHLANDS

From foundation industries like coal and steel to newcomers in technology and biotech, they are all in the Central Highlands.

Health care, insurance, banking, higher education and information technology — all built on a foundation of coal and steel. That’s Alabama’s Central Highlands, centered in Birmingham and stretching from the University of Alabama in the west to the Appalachian foothills in the east with the world famous Talladega Superspeedway in between.

Already the largest city in Alabama, Birmingham — heartbeat of the Central Highlands — is breathing new life into its foundation industries like coal and steel while making major strides in info tech and internet commerce.

Newcomer DC Blox has completed the first stages of its technology and innovation campus,

Gadsden has developed its waterfront into Coosa Landing, with event space, commercial activity and river access.



starting small but with plans for growing into a \$785 million flagship data center. Target purchased Birmingham-born shopping service Shipt last year, but the Shipt name still blazes on the Birmingham skyline because the company maintains its headquarters here. An Amazon fulfillment center, with an anticipated 1,500 employees, is up and running in suburban Bessemer, while a FedEx Ground facility is just kicking off nearby.

The changes prompted Forbes Magazine to ponder recently whether Birmingham may earn a new moniker as “the Southern Silicon Valley.”

The updated image is another tribute to the adaptability of Alabama’s Central Highlands.

Birmingham and the 19 counties that surround it are home to the state’s flagship university and two of the automotive plants that revved up Alabama’s economy just a quarter-century ago.

Born in the steel industry, Birmingham still counts major manufacturers like American Cast Iron Pipe Co., U.S. Pipe and Foundry, McWane Inc. and O’Neal Industries among the stalwarts of its economy. U.S. Steel is at work even now on a \$215 million electric arc furnace in Fairfield.

Banking gives Alabama its own homegrown Fortune 500 company — Regions Financial. Downtown is also home to Infinity Property & Casualty, now part of Kemper, and to ProAssurance, as well as the U.S. headquarters of Protective Life, recently purchased as a U.S. foothold for Dai-Ichi Life of Japan.

Biotechnology is a major player here, too. Nurtured by the University of Alabama at Birmingham and Southern Research, medical care is offered for those in need today while teams of scientists search for the causes and cures for ills still hard to treat. New medicines and medical devices are always in development. Seven current FDA-approved cancer drugs were developed at Southern Research, while UAB is launching the state’s first proton therapy option for advanced cancer care. Both have been major players in the fight to tame COVID-19. And German firm Evonik is building a biomaterials plant, planning to make bioresorbable polymers needed for some drugs and implantable medical devices.

Thirsty? Milo’s Tea is expanding, taking a taste of the South to Oklahoma. Dread River Distilling is bringing spirits — and a tasting room — to Birmingham. And if you need a nice cold Coke, Coca-Cola Bottling Co. United continues to grow with a new \$86 million distribution facility.

Arts, sports, entertainment and an array of eateries show Birmingham for the major city it is — among the largest in the Southeast. After nine years as a finalist, in 2018 Chef Frank Stitt and his Highlands Bar and Grill won the coveted James Beard Foundation award as the

best among restaurants.

Tuscaloosa is home to the University of Alabama. A highly ranked educational institution, Bama also fields one of the most recognizable football squads in the nation, repeatedly winning national championships while attracting crowds to the university city.

Moreover, the Tuscaloosa County city of Vance boasts another claim to fame as the wellspring of Alabama’s auto making industry. Some 25 years ago, Mercedes-Benz U.S. International announced plans to launch a U.S. plant, and Tuscaloosa beat out all rivals for the honors. MBUSI



Regions Financial Corp., headquartered in Birmingham, is Alabama’s homegrown member of the Fortune 500.

REGIONAL PROFILE

has grown and expanded repeatedly over the years, building popular luxury SUVs — including the \$160,500 Maybach — and hard at work on electric cars and batteries.

Talladega County has a pair of auto-related success stories. Like Tuscaloosa, it's home to one of Alabama's major auto plants. Honda builds the Odyssey minivan, the Pilot SUV, the luxury Acura MDX in the city of Lincoln, and since the advent of the new Ridgeline, it's also the light truck leader for Honda. And across the county, speed dominates

the auto scene at the Talladega Super-speedway, famous for its sizzling speeds and challenging curves. If speed's your thing, don't miss the Barber Motorsports Museum, with hundreds of vintage motorcycles and a great view of the motorcycle races.

The Central Highlands are also home to the cities of Cullman, Anniston and Gadsden — all big contributors to the Alabama economy. Gadsden, lying along the Coosa River at the foot of the Appalachians, is looking forward to a new \$15 million Motus Integrated Technologies plant, joining other Tier 1 automotive suppliers. As the gateway to Alabama's mountains, it's a tourist attraction with a charming riverfront and a popular park that showcases Noccalula Falls.

A pacesetter city, Anniston was the first in Alabama to be wired for electricity, in 1882, and it added telephones in 1884. Its major employer is the Anniston Army Depot, the maintenance center for tracked vehicles. Nearby McClellan, a planned community growing on the site of the former Fort McClellan, also hosts the Department of Homeland Security's Center for Domestic Preparedness, helping first-responders from across the

nation be prepared, whether they face Ebola or an earthquake. Like its Central Highlands neighbors, Anniston and Calhoun County are also home to automotive supplier firms that have emerged in the past 20 years.

Cullman, not too far north of Birmingham nor too far south of Huntsville along Interstate 65, has kept its agricultural roots strong. One of the nation's top 60 counties for agricultural income, it learned in 2019 that it'll be home to the new \$5.7 million Farmer Automatic Aviary Systems — termed "a significant step for all of rural Alabama," by Gov. Kay Ivey. But Cullman has taken to the highways as well. The county is also home to three relatively new Tier 1 auto suppliers and a host of smaller firms. And looking to the skies, Cullman is home to Axsys Technologies, charged with shaping the lenses for the James Webb Space Telescope, in development to replace the Hubble. In fact, Cullman County was tops in the state for new industry just a few years back.

In St. Clair County, National Cement Co. of Alabama is opening a \$250 million plant expansion, the biggest economic development news in the region.

Over to the west, Warrior Met Coal is starting development of a new long wall mine, tapping Alabama's abundant stores of metallurgical coal that's in demand especially for Asian steel processing. And to move that coal, it's investing \$50 million in a barge-loading facility near Jasper.

Not to be outdone by their bigger neighbors, three counties in the western reaches of the Central Highlands — Lamar, Marion and Fayette — teamed up to create a single economic development agency, the C3 of Northwest Alabama Economic Development Alliance, that is promoting location along new Interstate 22 and bringing new industry to the region. When a Wrangler jeans factory was destroyed by tornadoes in 2011, C3 convinced the company not only to rebuild but to rebuild bigger and better.



Top: Personal shopping service Shipt sold out to Target but kept its headquarters in Birmingham. Left: The University of Alabama at Birmingham is the city's largest employer and a key player in the health care and bioscience fields.



CAPITAL HEARTLAND

Cars, cotton and the civil rights movement play key roles in the state’s capital city.

Cotton and catfish, cars and the Capitol, universities and history — all abound in Alabama’s Capital Heartland — a rich and varied land that’s both prosperous and forward thinking. This Alabama heartland lies in the famed Black Belt and once produced cotton to clothe the world. The sounds of agriculture

still fill the air, but the crops now sprout products undreamed of when plantation life was at its peak. Today you’ll find catfish ponds where the farmers raise \$120 million in fish and harvest the algae to make biodegradable plastic, and even an inland shrimp farm or two.

Down the road, former cotton fields now produce bamboo, where Resource Fibers plans a harvest of flooring materials and other household products. Trees grow here, too, for construction and paper and more. And the leftovers — the sawdust and chips and bits and pieces from tree trimming — are processed into pellets that substitute for coal. More traditional forest



Above, left: Alabama’s historic Capitol. Right, top: Quality checks at Hyundai’s plant. Right, bottom: A tribute to Hank Williams Sr. celebrates the area’s music scene.



Samford Hall on the campus of Auburn University, which is renowned for its programs in engineering, architecture, pharmacy and veterinary medicine.

products thrive here. International Paper recently invested more than \$550 million to boost productivity at its Selma mill. And Ikea Group invested in its first U.S. forest, purchasing 25,000 acres in rural Lowndes County. Sunbelt Forest Ventures opened a \$30 million mill in Selma.

Also growing here is one of the most sophisticated cyber networks in the nation, a partnership among local government, the Air Force internet experts at the Maxwell-Gunter base plus education and industry.

There's another new product growing here, too — popular Elantra and Sonata sedans and Santa Fe SUVs rolling off the line at Hyundai Motor Manufacturing Alabama. The \$1.7 billion, 2 million-square-foot plant opened in 2006 and today produces nearly 400,000 vehicles a year. The plant has attracted 35 Tier 1 suppliers and another 43 Tier 2, bringing an added \$650 million in industrial investment and employing another 7,000

workers. Hyundai has invested some \$600 million more just in the last couple of years. And now the new Santa Cruz pickup has been added to the lineup, increasing both the workforce and the overall investment.

In 2020, Danish firm Mountain Top Industries announced plans for a \$13.3 million plant to make aluminum roll top covers for pickups.

The Heartland is also home to a new type of building product — a \$220 million James Hardie Building Products plant in Prattville.

Montgomery, which saw \$1 billion in capital investment in 2019, is a living mix of history and trendy lifestyle options.

The city centers on the Capitol complex and all the myriad offices that handle the public's business. But just down the street one way is Old Alabama Town, showcasing the area's pioneer roots. Down the street another way are the remembrances of the hard times of the civil rights era.

Turn yet another way and you find an array of nightspots, restaurants, riverfront parks and loft apartments.

And just for fun, the city and county are building a new \$40 million water park — starting with a whitewater course and growing into a venue with restaurants, hotels and entertainment near the Alabama River.

Education is a cornerstone of the Capital Heartland. Auburn University, the state's original land grant university, lies in the eastern edge of the region. Programs in engineering, architecture and veterinary medicine are hallmarks of the school. The state's newest medical school, a branch of the Virginia-based Edward Via College of Osteopathic Medicine, is now offering classes.

The campus region is also home to a variety of high-tech businesses, from GE Aviation's innovate 3D printing plant that makes jet engine components to SiO2 Materials Science, making the syringes and vials to rush a COVID-19 vaccine to the frontlines, as soon as one is available.

Opelika recently made headlines by wiring the entire city with fiber optic cable to provide a city-owned internet utility. Smaller cities in the Capital Heartland are making their own headlines.

Sumter County is watching progress on a \$175 million biomass plant to be built by Maryland firm Enviva at the Port of Epes. Tallapoosa County is watching the beginnings of a 23-acre, \$5 million pole plant.

Phenix City is now home to a world-class whitewater course on the Chattahoochee River. The waterway attracted some 18,000 river runners in its first year, many more than expected, and Phenix City is spiffing up its downtown to give those visitors a good welcome. The whitewater course is a joint endeavor with Columbus, Georgia, on the opposite bank.

Selma, in Dallas County, is home to auto suppliers, newfangled agricultural products and Bush Hog — maker of agricultural and lawn care implements.

And you can get a close-up look at the history of the civil rights movement by following U.S. Highway 80 from Selma to Montgomery, traveling in the footsteps of the civil rights marchers from the Edmund Pettus Bridge to the Capitol steps.



SOUTHEASTERN WIREGRASS

Peanuts, helicopters and hospitality set the tone for

Alabama’s wiregrass region.

On the ground, in the air and in between, Alabama’s Wiregrass is thriving.

On the ground are crops to feed the Southeast and beyond — especially if they’re hankering for peanuts or chicken.

Pointing skyward are the trees to feed the lumber and paper mills.

In between are new plants taking up the slack in producing health care protective gear.

And in the air are the aircraft — especially missiles and helicopters — that are the new face of the Wiregrass economy.

This southeastern corner of the state, nestled alongside Georgia and just north of the Florida Panhandle, is the epicenter of the nation’s peanut crop. More than half the peanuts grown in the U.S. are grown within 100 miles of Dothan, which honors the tasty legume with an annual festival. It’s such an important crop that the city of Enterprise has a statue honoring the boll weevil, which forced farmers to find an alternative to cotton.

Chickens are part of the agricultural mix, too, with several plants that process broilers among the major employers.

And one more crop defines the agriculture of the Wiregrass — trees. Forests feed the lumber mills and provide



CAE USA in Dothan trains pilots to keep flying smooth and safe.

REGIONAL PROFILE



the raw materials for sawmills, paper and wood-products plants big and small. Rex Lumber is a newcomer to the Wiregrass, but it moved in in a big way, with a \$110 million investment in a brand new yellow pine saw mill.

Over in Henry County, Abbeville Fiber LLC has invested \$40 million in a new mill to provide wood for Great Southern Wood Preserving Inc. The first logs arrived in 2019, with plans to handle 80 to 90 truckloads of logs a day at full capacity.

While farmers and foresters have tended to their crops, a new realm of industry has flown into the Wiregrass in the contrail of Fort Rucker. The Army base opened in 1942 to train troops, but in less than a decade was reimagined as the Army's aviation training facility. It continues to fill that role today, training Army and Air Force helicopter pilots, as well as those from U.S. allies around the world.

CAE USA won a major Army contract and opened a new facility in 2017, training Army aviators. A major fleet of helicopters at Fort Rucker has attracted its own cluster of supporters. Lockheed Martin, Sikorsky and Bell Helicopter all

maintain a presence nearby.

Dothan had been nurturing a new MRO sector — companies that perform aircraft maintenance, repair and overhaul — when its major player abruptly moved out. In 2013, local officials lured Commercial Jet into the empty property and the sector is moving forward again.

Yulista Holdings just opened a new facility to maintain both fixed and rotary-wing aircraft in Andalusia. That allows the region to take full advantage of the Alabama Aviation Center campus in nearby Ozark.

The Wiregrass is an important player in Alabama's higher education scene, too, as home to Troy University. Troy has built a reputation as an international campus, welcoming overseas students and offering Troy classes abroad. Now Dothan is home to one of the state's two new medical schools, the Alabama College of Osteopathic Medicine. The school's first students completed coursework in 2017.

Along with the staples of agriculture, aircraft, Army and medicine, the Wiregrass is also home to several of Alabama's most unusual businesses.

Lockheed Martin maintains its Pike

County facility in Troy, building missiles to protect the world. The defense powerhouse is now doubling the size of its Pike County facility with the goal of nearly doubling its output of missiles.

Fishing is big business in Eufaula. The city is home to Humminbird-Johnson Outdoors, which makes fishfinders, depth sounders, marine radios and GPS systems for anglers, while a neighboring company, Strikezone Lures, makes fishing lures. Also in Eufaula look for Southern Plastics, maker of wiggly plastic fishing worms for some of the nation's biggest retailers.

And over in Enterprise you'll find Enterprise Electronics. Lest you expect an appliance store, be assured that this is the home of a remarkable product — the Doppler weather radar used around the world to protect us all from approaching storms.

Top left: Students at the Alabama Aviation Center in Ozark learn aircraft maintenance. Bottom left: A team at Fort Rucker works on a helicopter. Right: The Coffee County Courthouse in Elba.



GULF COAST

Ships and aircraft, shrimp and steel, celebrations and a day at the beach.



Mobile’s deepwater seaport has long been Alabama’s connection to the wide world. Shipbuilding and shipping have been mainstays for centuries.

That tradition continues today, but now airships thrive alongside the waterborne variety. On the waterfront are modern variations of the shipbuilding craft that has flourished here for nearly three centuries. Austal USA, making ultramodern aluminum ships for the Navy, dominates the downtown waterfront and is the largest employer by far. Now, with the backing of the U.S. Navy, it plans to begin working on steel ships, too.

Hidden farther from the public eye, along the bayous of south Mobile County, smaller shipyards rear above backcountry roads, crafting tugboats, offshore platform tenders, shrimp boats and more. This year, Metal Shark in the coastal town of Bayou La Batre delivered its first ship, a 120 x 35-foot river towboat headed for work in Louisiana.

Just a few miles away, Airbus builds commercial jets from the A320 family that have been augmenting the fleets of U.S. and overseas carriers for four years now. This year the firm delivered the first of its new A220 models, a smaller more fuel-efficient commercial jet.

Littoral Combat Ship (LCS) 26, the USS Mobile, prepares to begin acceptance trials in September 2020.

REGIONAL PROFILE



It's sometimes hard to remember that aviation was big business in Mobile before Airbus came to town a dozen years ago. One of the region's very first international firms was Singapore-based Mobile Aerospace Engineering — now VT MAE — repairing and overhauling planes from the world's fleets. It's still among the region's top three industrial employers. Continental Motors, another face of Mobile's aerospace cluster that predates Airbus, kicked off a \$70 million upgrade last year.

Baldwin County, across the bay, also boasts a major cluster of aerospace firms — UTC Aerospace, making nacelles and more, is that county's largest industrial employer and growing.

And the air over coastal counties frequently thrums with the sound of Coast Guard helicopters, taking off from their national training facility at Mobile's commercial airport, while also protecting waterborne commerce and keeping all of us safe on the water.

Meanwhile, the Alabama State Port Authority operates Alabama's gateway to the world, where ships laden with coal, steel, chickens, chemicals and wood products head for ports around the world. The port is in the midst of massive improvements, deepening the channel and extending docks, adding the containers and cold storage and cranes to move ever more goods. And a new roll on/roll off terminal is under construction, hoping to provide a new gateway for Alabama's automotive products, the state's largest export.

Steel and chemicals and timber are also

big business along the Gulf Coast.

Just a few years ago, German-based ThyssenKrupp built a massive, \$5 billion steel mill at the Mobile-Washington County line. When the steel market nosedived and ThyssenKrupp backed away, the prospects looked bleak. But almost before you could say "fire up the furnace," world stainless leader Outokumpu Oyj, a Finnish company, had purchased the stainless mill. Then a partnership between the world's largest and second-largest steel producers — Arcelor-Mittal and Nippon Steel — had the cold rolled steel mill up and running. AM/NS Calvert, as that mill is called, is now adding an electric arc furnace, a \$500 million investment.

Chemical plants line the riverbanks, winding inland from the Bay — making products from herbicides to sugar substitutes. A Tate & Lyle plant in McIntosh is the world's only producer of Splenda sweetener, for example.

The Mitchell Cancer Institute at the University of South Alabama is a significant contributor to the state's bioscience sector.

And now the coast is sorting out a new line of work — an Amazon sortation center and a Wal-Mart distribution center opened within a few miles of each other, taking advantage of the interstate, port, air and rail connections.

Cooperation has been key for inland Gulf counties that have formed the Coastal Gateway partnership to recruit business. And there have been economic

successes — most recently Georgia-Pacific's announcement that it has selected Naheola in Choctaw County for a \$120 million tissue machine and roll storage facility. Up in Conecuh County, the state's thriving automotive business is boosting the economy as Guyoung Tech USA, a supplier for Hyundai and Kia, is undertaking a multi-million-dollar expansion.

In Escambia County, farmers and merchants have teamed on a new peanut processing plant, allowing local growers to increase their share of profits from their first-quality produce.

But the glory of the Gulf Coast is the beach. When Alabamians think of sprawling Baldwin County, they could be thinking of pleasant suburbs, timberland, agriculture, aircraft companies and more — but most likely they're thinking of the beach. Condos with stunning views, zoos, amusement parks — including the fabulous Owa built by the Poarch Band of Creek Indians — seafood, sports venues, shopping and fun. All stretching along some of the most beautiful beach in the world. White sand, brilliant sunshine, clear water — it's Alabama's playground.

Above left: Mobile loves a party. Since New Year's Eve is too early for Mardi Gras merriment, the city sets off fireworks and drops a giant Moonpie to welcome the New Year. Above right: The Fairhope Pier attracts boaters, fishing folk and those who just want to enjoy a spectacular sunset.



Auto Industry Hangs Tough

Even rocked by a pandemic, Alabama's auto industry is a pacesetter for the state's economy.

BY NEDRA BLOOM



TOP: Mercedes-Benz U.S. International produces the first customer-ready Maybach GLS 600 SUV.

ABOVE: Mazda Toyota Manufacturing grows at its Huntsville campus.

MAJOR OEM COMPANIES

Mercedes-Benz
Hyundai
Honda
Toyota
New Flyer
Autocar

IN PROGRESS:

Mazda Toyota

BY THE NUMBERS

- ▶ Almost 1 million cars and light trucks in 2019
- ▶ 1.5 million engines produced at Toyota, Honda and Hyundai
- ▶ 150 Tier 1 and 2 supplier firms
- ▶ 40,000 jobs

EXPORTS

- ▶ Automotive is Alabama's top export
- ▶ Alabama is No. 4 auto exporting state in U.S.

AUTOMOTIVE



Workers assemble Honda Ridgeline pickup trucks in Lincoln, in this pre-pandemic photo. Today workers are masked and distanced.

Since the surprise announcement in 1993 that Mercedes-Benz had chosen Tuscaloosa as the site of its first U.S. manufacturing plant, the automotive industry has been an essential element of the Alabama economy.

The state is home to six major original equipment manufacturing plants, known in the trade as OEMs. In addition to Mercedes-Benz, Alabama is home to Hyundai's only U.S. manufacturing plant in Montgomery; to Honda's only U.S. manufacturing plant in Lincoln; to a major Toyota engine plant in Huntsville; to a leading municipal bus maker, New Flyer, in Anniston, and to heavy truck maker Autocar in Birmingham. Truck maker Navistar also has a major engine plant in Huntsville.

And a joint venture between Mazda and Toyota — Mazda Toyota Manufacturing — is under construction in Huntsville, with an \$878 million expansion announced before the first stage is complete. COVID-19 has caused delays but MTM expects to be at work with



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about 4,000 employees later in 2021.

It hasn't all been good news.

COVID-19 caused production pauses and lowered output expectations across the many Alabama plants, but as people began to learn to live with the virus, work has gradually ramped back up.

And Gadsden bid goodbye to Good-year, which once employed 4,000 workers at its 90-year-old plant.

Mercedes announced it would stop producing C Class sedans in Tuscaloosa. SUV production continues apace.


On the brighter side, Toyota inaugurated a 3.3-acre solar array in Madison to meet its energy needs. The \$2.7 million project should generate 1.6 megawatts of electricity.

Here's a quick review of automotive highlights from 2020.

- ▶ Right at the start of the year, Honda Manufacturing of Alabama completed its 5 millionth engine.
- ▶ The first of Mercedes' luxury Maybach SUVs rolled off the line in Tuscaloosa. How luxurious? Think a starting price of \$160,500.
- ▶ Construction is under way on a \$288 million expansion at Toyota, its fifth, bringing the firm's total investment in Alabama to \$1.2 billion with 1,800 employees.
- ▶ Gestamp Alabama expanded its two-year-old plant in McCalla where it makes metal components.
- ▶ Volkswagen subsidiary Traton ramped up efforts to buy out Navistar, sweetening the pot several times over the course of the year.
- ▶ Navistar, meanwhile, broke ground on a \$125 million expansion in Huntsville.
- ▶ Mercedes pledged to add 370 employees in Vance in return for tax abatements on the logistics and parts facility that's now under construction.
- ▶ Seoyon E-Hwa, a supplier of molded plastic interior trim for Hyundai, announced a \$5 million expansion at its Selma plant.
- ▶ Hayashi Telemu North America, which supplies carpet and interior trim, kicked off a \$7 million expansion in Jasper.
- ▶ Unipres, a global firm that provides



Work is proceeding inside the new MTM plant in Huntsville, not far from Navistar's engine plant.



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Muscle Shoals will be home to a \$59 million DURA Automotive plant, shown here in a rendering, to make electric vehicle battery enclosures.

stamping technology, announced a \$6.3 million expansion at its plant in Steele.

- ▶ New Flyer won a contract to supply 140 compressed natural gas powered buses for the Miami-Dade County Transportation and Public Works in Florida.
- ▶ Wheel Pros bought Borbet Alabama's facilities in Auburn, converting its production capacity to aftermarket wheel manufacturing.

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And here are some newcomers to the automotive scene.

- ▶ DURA Automotive announced plans for a \$59 million, 279-employee plant to make battery enclosures for electric vehicles. The plant will be built in Muscle Shoals.
- ▶ Tier 1 auto coolant supplier CCI Manufacturing USA Corp. announced plans for a \$21.5 million plant in Lawrence County.
- ▶ Mountain Top Industries, based in Denmark, plans a \$13.3 million, 90-employee plant in Montgomery to make aluminum roll covers for pickup trucks.

And in a slap in the face to some long-time U.S. automakers, three models built by Honda in Lincoln ranked fifth, sixth and seventh on cars.com's list of the most American-made options on the U.S. market. The Odyssey, Ridgeline and Passport models made the list.

The Mars 2000 launch.
Photo provided by ULA



Rocket Roundup

Alabama has been in the thick of the nation's space program for decades. Here's a look at some of the most prominent players and programs in progress now.

BY KATHERINE MACGILVRAY

MAJOR COMPANIES

Boeing
Airbus
United Launch Alliance
Northrop Grumman
Lockheed Martin
Continental Aerospace
Raytheon
GE Aviation
Sikorsky
BAE Systems
VT MAE
Teledyne Brown Engineering
Aerojet Rocketdyne
Dynetics
Blue Origin
Space X

BY THE NUMBERS

- ▶ 100 years of aerospace and aviation history
- ▶ 4,660 aerospace engineers
- ▶ 61,000 workers
- ▶ Firms from 30 countries
- ▶ More than 300 aerospace companies

FINANCIAL IMPACT

- ▶ Almost \$2.4 billion in aerospace exports in 2018
- ▶ More than \$8.4 billion in DOD contracts in 2015

Space Launch System Update

In Huntsville, NASA's Marshall Space Flight Center has spent much of the past year developing technologies that will pave the way for the Artemis mission, which plans to send the first woman and next man to the moon in 2024, ahead of human missions to Mars and beyond. That includes testing core stages of the Space Launch System (SLS) rocket, which Marshall manages.

The Boeing-built SLS is the most powerful rocket in the world and the only rocket capable of sending the Orion spacecraft, its cargo and astronauts to the moon in a combined mission. Along with



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Orion, Gateway, and the human landing system, the SLS rocket makes up the backbone of NASA's deep space exploration program.

The massive 212-foot-long core stage, designed and structurally tested in Huntsville, is currently installed in the B-2 Test Stand at NASA's Stennis Space Center in Mississippi, where it is undergoing a critical milestone, the eight-part Green Run. The Green Run series will conclude with a hot-fire test, a simulation of the rocket's launch sequence, which includes everything but liftoff. Boeing is the prime contractor for the design, development, testing and production of the SLS core stage, as well as development of the flight avionics suite.

In June, engineers at Marshall completed the largest test campaign at the center since those conducted more than 30 years ago for the Space Shuttle Program. Testing the liquid oxygen tank was the final stage of the SLS rocket's structural qualification testing for the Artemis lunar missions. The three-year campaign included almost 200 tests to ensure the rocket's structure can endure the rigors of spaceflight.

In July, teams at Marshall loaded the Artemis I launch vehicle stage adapter (LVSA) for the SLS rocket onto the Pegasus barge bound for the Kennedy Space Center in Florida, for launch preparations. The LVSA is the final piece of Artemis I rocket hardware built exclusively at Marshall. It will connect the SLS core stage

to the interim cryogenic propulsion stage (ICPS) and upper stage.

Teledyne Brown Engineering in Huntsville served as the lead contractor on the LVSA project and collaborated with several small business partners to design and build the roughly 30-by-30-foot cone-shaped adapter, which provides the structural strength necessary to endure launch loads and maximum dynamic pressure. The LVSA also provides the critical separation system used to detach the SLS core stage from the second stage, which includes the astronauts in the Orion spacecraft. It is the largest hardware to be completed for the SLS in Huntsville. Teledyne is currently building an LVSA for the second Artemis lunar mission and starting work on the LVSA for Artemis III.

Boeing and United Launch Alliance in Decatur built the ICPS, which accelerates Orion fast enough to overcome Earth's gravity and set it on a precise trajectory to the moon.

Marshall supports more than 28,000 Alabama jobs, yielding \$4.5 billion in economic impact. More than half of Marshall's contracts are sourced in Alabama. In the past 15 years, 226 NASA Small Business Innovation Research and Small Business Transfer awards have been made in Alabama and 99 of those partnered with Marshall. The SLS program supports approximately 15,000 jobs across Alabama and generates \$2.1 billion economic output.

Other Aerospace Updates

UNITED LAUNCH ALLIANCE

United Launch Alliance (ULA), which manufactures the Atlas V, Delta IV and Vulcan Centaur rockets in Decatur, recently won a multi-year competitive contract award to launch critical national security missions for the U.S. Space Force with its next-generation Vulcan Centaur rocket. The award represents 60 percent of the missions of the five-year Space Force's National Security Space Launch Phase 2 procurement.

Looking ahead, ULA is on track to launch the debut flight of the Vulcan Centaur rocket in 2021. The company's Atlas V rocket will launch Boeing's CST-100 Starliner spacecraft to the International Space Station next year as part of NASA's Commercial Crew Program.

ULA employs more than 700 Alabamians and utilizes 288 supplier companies within the state.

BOEING

Boeing is NASA's lead industry partner for the International Space Station and will continue supporting the project through 2024 under a \$916 million contract extension. Boeing is Alabama's largest aerospace company with more than 3,000 employees supporting several space and defense programs.

BLUE ORIGIN

Blue Origin has opened its rocket engine facility in Huntsville where it manufactures BE-4 and BE-3U engines. The company plans to add more than 300 jobs and invest more than \$200 million in the Huntsville facility. Blue Origin also delivered the first BE-4 engine to the United Launch Alliance rocket factory in Decatur. At 75,000 horsepower, the BE-4 is the most powerful liquefied natural gas-fueled rocket engine developed yet and the first oxygen-rich staged combustion engine made in the U.S. ULA will use two BE-4 engines to power its Vulcan Centaur launch vehicle.

The launch vehicle stage adapter rolls onto the Pegasus barge, bound for Kennedy Space Center in Florida. NASA/Fred Deaton





NASA conducts structural tests on the Space Launch System. Photo courtesy of Boeing

DYNETICS

Dynetics recently completed successful testing of two tactical space support payloads for the U.S. Army Space and Missile Defense Command's Lonestar program.

A Dynetics/RUAG team in Decatur has completed a composite panel Manufacturing Test Demonstrator, which represents one of four panels that will comprise the Universal Stage Adapter for NASA's Space Launch System. Dynetics is the prime contractor building the Universal Stage Adapter, which will integrate the Exploration Upper Stage to the Orion spacecraft and provide structural, electrical and communication paths.

RUAG

RUAG's manufacturing plant in Decatur supplied the interstage adapter for the United Launch Alliance 400 series Atlas V launch vehicle. It is the plant's first space flight hardware. In February, the Atlas V rocket with solar orbiter took off from Cape Canaveral.

AEROJET ROCKETDYNE

In the past year, Aerojet Rocketdyne's Advanced Manufacturing Facility (AMF) in Huntsville has increased its workforce by 300 percent to 120 employees and expects to fill 150 more positions by year's end. The 136,000-square-foot AMF makes solid rocket motor cases and specializes in advanced rocket propulsion research and development.

The company successfully completed a static-fire test of an advanced large solid rocket motor, the Missile Components Advanced Technologies Demonstration Motor (MCAT Demo), this spring. The MCAT Demo is under contract for the Air Force Research Laboratory.

Earlier this year, Aerojet Rocketdyne was awarded \$19.6 million by the Defense Advanced Research Projects Agency (DARPA) to develop technology for an advanced hypersonic defense interceptor for its Glide Breaker program.

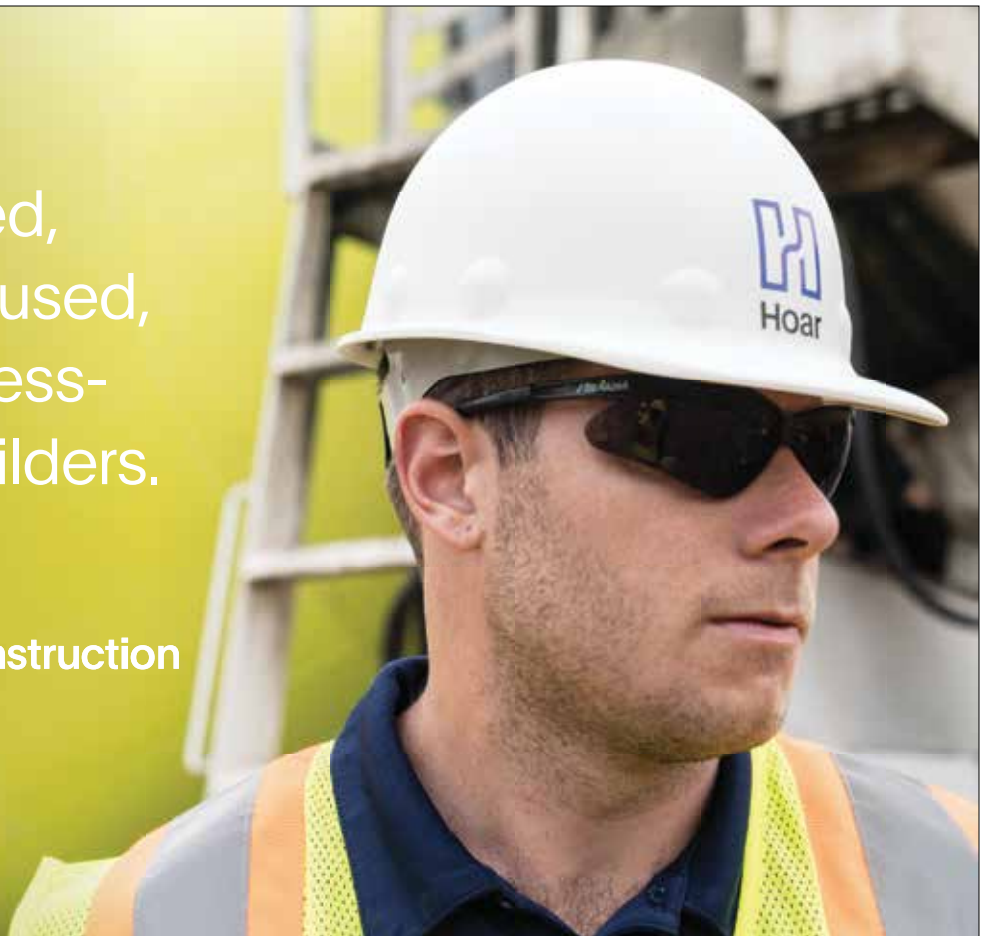
This story originally appeared in the October 2020 issue of Business Alabama.

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Airbus Marks Five Years in Mobile

BY NEDRA BLOOM // PHOTOS BY BRAD MCPHERSON



In September, five years to the day after Airbus began work on its first A321 aircraft in Mobile, the firm celebrated its growth and its impact on the Mobile community.

That first aircraft was delivered to JetBlue Airways, and since then the firm has delivered 186 A320-family planes to eight airlines. Those planes have carried some 60 million passengers for some 500 million miles.

In the meantime, Airbus has added a second final assembly line in Mobile to make the smaller A220 jets.

U.S. production has allowed Airbus to increase its market share from 40%, before it started U.S. production, to 70%, said Daryl Taylor, vice president and general manager of the Mobile facility.

Total employment has grown from 250 in 2015 to 1,000 today, and total facilities investment has topped \$1 billion, company officials say, with another \$24 million spent on training.

“When we announced our intent to build A320 family aircraft in the United States and to locate that facility in Mobile, Alabama, we also stated our intent to be a good neighbor, to create jobs and

Above: Airbus opened a new delivery facility, where airlines come to test their new aircraft before flying them home.
Left: An A220 in progress in Airbus' new final assembly line.



opportunities and to help strengthen the U.S. aerospace industry. Five years later, we have become a major economic driver in creating an aerospace hub on the Gulf Coast,” said C. Jeffrey Knittel, president and CEO of Airbus Americas Inc.

The University of South Alabama’s Center for Real Estate & Economic Development calculates the firm’s impact in Mobile and Baldwin counties at \$1.1 billion supporting 12,000 jobs, with an impact of \$1.2 billion and 15,000 jobs in the entire state.

“We have become a major economic driver in creating an aerospace hub on the Gulf Coast.”

— C. Jeffrey Knittel
President & CEO, Airbus Americas

In addition, the firm identifies more than 40 charitable and civic causes that it has supported since opening here.

Just before the coronavirus-caused drop in air travel, Airbus Mobile was poised to turn out seven of the bigger A320-family planes and four of the A220 planes each month. That production rate has slowed drastically, but work continues and employment has held steady at 1,000.



Top: A brand new plane awaits pickup by Delta Airlines at Airbus in Mobile.
Below: An A220, before it has wings or a tail, starts the assembly process.

Before the production dip, Mobile was poised to be the fourth-biggest producer of commercial aircraft in the world, after only Boeing’s Washington state facilities and Airbus facilities in Toulouse and Hamburg, Mobile’s Mayor Sandy Stimpson said at the A220 groundbreaking.

The firm has also opened a second delivery facility, where airlines come to pick up their new planes. The facility is named for Tom Enders, who long urged the European firm to build planes in Mobile. A new hangar is also under construction on site.

Airbus has had a presence in Mobile since 2005, when it opened a C212 and CN235 support unit at Mobile Regional

Airport. The Airbus engineering center, which now supports most commercial aircraft products, opened in 2007. The Final Assembly Line, the first such Airbus facility in the U.S., opened in 2015.

Airbus builds A320-family aircraft in Hamburg, Germany; Tianjin, China, and Toulouse, France. The A220 planes are also built in Mirabel, Quebec, Canada, where the jet was designed and developed by the Canadian firm Bombardier.

In 2019, Airbus outsold its U.S.-based rival Boeing for the first time in the commercial aircraft market.

This story originally appeared in the November 2020 issue of Business Alabama.

Katie Heywood, project manager at HealthSpring in Birmingham, used the STEM Path to the MBA at the University of Alabama to learn new skills.



LARGEST COLLEGES & UNIVERSITIES BY ENROLLMENT

PUBLIC

- University of Alabama - 38,103
- Auburn University - 30,460
- University of Alabama at Birmingham - 22,117
- Troy University - 16,075
- University of South Alabama - 14,397

PRIVATE

- Samford University - 5,692
- Faulkner University - 3,036
- Tuskegee University - 2,876
- University of Mobile - 1,989
- Oakwood University - 1,526

TWO-YEAR

- Calhoun Community College - 9,736
- Jefferson State Community College - 9,082
- Coastal Alabama Community College - 7,472
- Wallace State Community College - 5,057
- Southern Union State Community College - 4,531

BY THE NUMBERS

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- ▶ 14 independent colleges & universities with 23,764 students
- ▶ 24 community & technical colleges with 79,938 students

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STEM Path to MBA

BY CHARLIE INGRAM // PHOTOS BY CARY NORTON

When she entered the University of Alabama almost 10 years ago, Katie Heywood knew she wanted to work in health care. Motivated and inspired by a college-level anatomy and physiology class she had in high school in Cincinnati, Heywood planned to eventually practice medicine.

Although her focus of study would be the sciences, Heywood was attracted to a then new program at UA — the STEM Path to MBA. The program allows science, technology, engineering and mathematics (STEM) majors to weave honors business

courses into their undergraduate curriculum before completing an MBA in only one additional year of study.

“I knew, no matter what, I was going to need some kind of business knowledge,” Heywood says. “Most undergraduate prerequisites aren’t in accounting or finance, and basic life skills are learned in classes like that. So, I was like, ‘OK, I’m going to need this.’”

During her junior year, Heywood realized she no longer wanted to be a doctor. “I couldn’t see doing it the rest of my life,” she says. “I’m one of those who always asks, ‘OK, what’s next?’ I wanted to continue to grow and challenge myself to do

different things.”

Rob Morgan, director of the STEM Path to MBA program at UA, suggested Heywood consider the possibility of working for a health care company as opposed to practicing medicine. She remained in the STEM/MBA program and now is a project manager for HealthSpring in Birmingham.

“If you had asked me as a freshman, I would not have thought I would be working for a health care company as a project

manager,” she says. “I thought I was going to be a PA or PT or pharmacist. I looked at everything. But that wasn’t what I enjoyed. When I sat down and really looked at it, I enjoyed learning about the many different aspects of health care. The STEM/MBA program provided an avenue that I wouldn’t have had otherwise.”

One of Heywood’s classmates in the STEM Path to MBA program was Samantha Whorton, who now works as an engineer at Alabama Power Co. in Bir-

mingham. At one time, “I was debating on changing majors, when I heard about the STEM Path to MBA program,” Whorton says.

“I had been interested in business, but I wasn’t sure what segment of business. I didn’t know it was possible to put both technical and business together, but once I learned that it was, there was no looking back for me. The ability to learn more about business skills while working towards my engineering degree was exciting.”

For Los Angeles native Joseph Wolfe, Alabama’s STEM Path to MBA program “was all about getting school done in one go. I always knew that I wanted an MBA because I wanted to go into engineering management long-term and believed that it would be useful for that career path.

“But I didn’t want to spend an extra two years somewhere down the line either going back to school full time or taking night/weekend classes. Getting the MBA in just one extra year before entering the workforce was a much more attractive option,” says Wolfe, now a project manager at Adtran in Huntsville.

Heywood, Whorton and Wolfe all agree that communication skills attained through experiential learning were the most important part of the STEM/MBA program. Much of that came from doing innovative problem solving in teams.

Says Heywood: “I think it’s great to do well in the classroom when you’re in college, but in the STEM program and all the MBA classes, they force you to work with people on projects from day one whether you want to or not. That’s more real world, more applicable to the work force, as opposed to just sitting behind your computer getting straight As by yourself.

“You’re having to collaborate with people from different backgrounds. And you’re graded as a team. You’re not graded as me, Katie. You’re graded as Katie and whoever else is on your team.”

Roughly 75% of students are from out of state and about half are female. About 30% of those who start finish the MBA.

This story originally appeared in the November 2019 issue of Business Alabama.

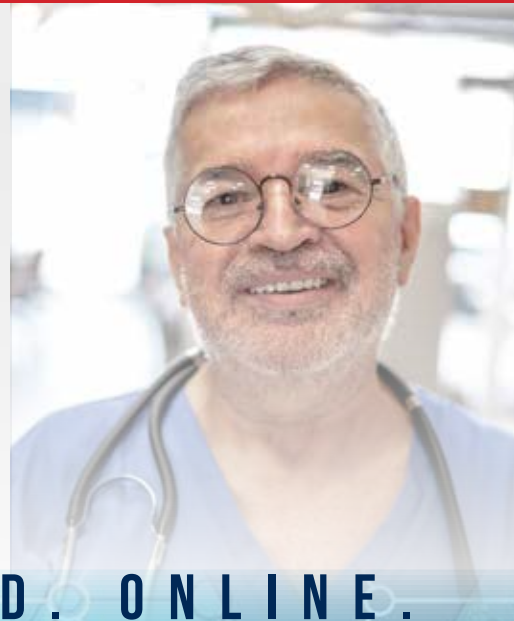
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Auburn Opens Construction and Structural Testing Labs

BY ALEC HARVEY & ERICA JOINER WEST

Engineering and construction students at Auburn University are benefitting from two new campus labs.

For the folks involved with Auburn University's Samuel Ginn College of Engineering, the recent groundbreaking for an advanced structural testing laboratory was a long time coming.

"The first planning for this began about 10 or 15 years ago," says Andrzej S. Nowak, professor and chair of the structural engineering department. "We've needed a new lab for a long time, because the existing one is just too small."

The \$22 million, 41,500-square-foot facility that opened this fall is a showcase — "one of the, if not the, most modern

labs in the world," Nowak says. "It's not the largest in the world, but the size is really what we need, and the arrangement is really the best there is."

The structure boasts a high-bay lab with specially engineered floors and walls capable of handling extreme structural testing loads; a geotechnical test chamber; a concrete materials research and testing laboratory; a wind testing facility, and faculty and graduate student spaces.

"What it really comes down to is the scale of the testing," says Justin Marshall, associate professor of civil engineering. "The foundations and the structure of our existing laboratory building just aren't strong enough to do large-scale type things."

"For example, we've had projects

before for bridge-type studies for the Department of Transportation, and they've liked our ideas and want to look into implementing new technologies, but we've just had to do them on a small scale," says Robert Barnes, associate professor of civil engineering. Everything had to be scaled down. Not in the new lab.

The new lab isn't the largest one ever built, but it has other things going for it, Barnes says, especially the geotechnical testing chamber.

A look inside the new advanced structural testing facility laboratory at Auburn University, while it was under construction. *Photo by Robert Fouts*

“It’s a big, deep chamber with very strong walls, and we can put soils of different types in there and test foundations for buildings,” he says. “We can test connections between building elements and foundation elements inside the laboratory. ... Other places may have something like that, but it involves a lot of outdoor testing. ... We also have a wind engineering specialist, doing research on the effects of hurricanes and tornadoes. We’re going to have some space and some facilities in there for doing that type of thing.”

The building itself can also be studied, Marshall says.

“We have a building that has captured a number of different structural materials,” Marshall says. “The strong floor and the strong wall are concrete, but the building that surrounds it is structural steel, and then the adjacent administrative office wing is specifically done in timber. So that way the building itself will be a little bit of a teaching tool and highlight the variations and types of structural systems that can be done.”

The new lab sits at a key campus entry

point, says Barnes, but “the architects working with us have put a lot of effort into making it not just appear like some industrial research-type facility but a gateway to all. Getting that type of feel was a challenge.”

The new lab, built by Chambless King Architects and Rabren General Contractors with a combination of state, university and private funds, will provide benefits on several fronts, the engineers say — attracting large-scale testing projects, excellent faculty and strong students.

Construction companies are also going to benefit from the new lab at Auburn, too.

“Alabama is home to major national and regional construction companies, and we are providing service to them by having that lab,” Nowak says.

Finally, the new lab will help show off Auburn University’s engineering program, Nowak says. “Especially for our department, this is like a showcase,” he says. “This is our profession, building buildings, bridges and so on. ... So we wanted this to be the best.”



Andrzej “Andy” Nowak, who leads Auburn’s structural engineering program, stands before the “strong wall” used in structural testing. *Photo by Robert Fouts*



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Construction

Robins & Morton has teamed up with Auburn University to provide construction students with real-world, hands-on training through the new Robins & Morton Construction Field Laboratory for Auburn University’s College of Architecture, Design and Construction.

“The field lab is a teaching and research facility that allows our students and faculty to experience the full range of construction management, including building assemblies in full scale and testing new construction materials and processes,” says

Vini Nathan, dean of the college.

Robins & Morton donated \$1.3 million to create the first-of-its-kind lab, which features a high-bay building with four bays, two of which are fully enclosed and protected from the elements. With 30-foot ceilings, the facility gives students the opportunity to build taller structures that might need scaffolding.

Robins & Morton Project Manager Taylor Payne says the goal of this project was to fill in the gaps between the classroom and a typical job site. “I looked back at my own experience at Auburn, and

The Robins & Morton Construction Field Lab recreates a construction job site, giving students hands-on field training.

what stood out was when I was able to get hands-on experience. We wanted to provide the space that could be used for that.”

The lab is designed to recreate an active construction site, complete with indoor and outdoor spaces to demonstrate building processes. “We believe field experience is critical to a successful career in our in-



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dustry,” said Robins & Morton Chairman and CEO Bill Morton at the completion of the project. “The field lab allows students the opportunity to combine experience in the field with a formal classroom education. We’re very excited to have this opportunity to partner with Auburn University to advance the learning process for the next generation of construction professionals.”

Payne and the Robins & Morton team worked closely with architecture firm Stacy Norman Architects on the design, so that the facility could have multiple uses. “We created flexible spaces. We set it up as a modular unit, much like a job site,” Payne says, adding that the bays provide room for all sorts of activities, including raising walls with lift cranes. The site also has storage for tools and materials and an onsite classroom, modeled after real-life construction management settings.

“There also are work areas that have power and lights, which gives students a place to do their own projects or work in smaller groups,” Payne says. “And we left some areas open for other activities.”

Other firms involved in the project include civil engineering firm Hydro-Engineering Solutions; mechanical, electrical and plumbing engineering firm Conway & Owen, and structural engineer LBVD. In addition, Robins and Morton worked with a number of local trade contractors on the project.

In addition, the lab will also be used for faculty research projects, outreach programs and to support community service projects, such as builds for Habitat for Humanity.

“We’re not teaching them to be masons or carpenters, but I think it’s really important that our students understand fully what the construction trades do: how difficult it is, the skills needed, the environment you have to work in,” said McWhorter School of Building Science head Richard Burt.

Robins & Morton is a privately held construction firm, founded in 1946, and headquartered in Birmingham. Since its founding, it has completed more than 1,500 projects in 35 states, handling projects valued at nearly \$10 billion in the last 10 years.

These stories originally appeared in the April and September 2020 issues of Business Alabama.



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ALABAMA ECONOMIC DEVELOPMENT GUIDE 2021 39

Alabama Colleges and Universities



Guidance from Afar

Birmingham start-up flourishes offering remote fix-it help via merged reality

BY KATHY HAGOOD // PHOTOS BY ART MERIPOL



Birmingham-based Help Lightning Inc. has seen demand for its remote expertise and merged reality software skyrocket during the COVID-19 pandemic because of lock down and social distancing requirements across the nation and world. The company now is primarily targeting the field service and technical support services markets in addition to its original focus, the healthcare industry.

Led by serial entrepreneur Gary York, Help Lightning was already building momentum for its innovative show-and-tell software for real-time guiding of complex procedures.

“We had a great 2019, and the first two months of 2020 were strong,” CEO York says. “Then the pandemic created a four-fold increase in users during the first 30 days.”

Cox Communications, the nation’s third-largest cable television provider, signed on with Help Lightning in March. Cox uses the technology to provide customer support for tasks such as installing internet, plugging in a modem or setting

Gary York, CEO of Help Lightning, which has taken off with the demand for remote help during the pandemic.

HEADLINE COMPANIES

Google
Facebook
DC Blox
HEXAGON
CPSI
DAXKO

BY THE NUMBERS

- ▶ 15,000 IT employees statewide
- ▶ \$1 billion in annual revenue
- ▶ 2,500 IT professionals at Maxwell AFB Gunter Complex

KEY CONTRIBUTORS

- ▶ Equifax has a Global IT center at Auburn University
- ▶ DHS and the Secret Service operate National Computer Forensics Institute in Hoover
- ▶ Innovation Depot in Birmingham houses more than 100 start-ups, most in tech fields

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up WiFi — tasks that technicians performed in person before the pandemic. “Cox made the decision to no longer send technicians into homes but instead walk customers through installation and problem solving with Help Lightning,” York says.

Other large customers for Help Lightning include Siemens, Boston Scientific, Becton Dickinson and Ricoh USA. The product is now used in 85 countries across the globe. Companies license the product per expert user for a year. “We have some customers with 10 licenses and some with 1000,” York says.

With demand for Help Lightning software rapidly increasing, the company is scaling up to meet it. To help it do so, in August the company obtained \$8 million in Series A funding led by Resolve Growth Partners.

Jit Sinha, Resolve’s co-founder and managing director, says, “After evaluating the virtual expertise software market for over a year, our diligence is clear that Help Lightning has built a highly differentiated solution that is valued by its customers. Help Lightning has a tremendous opportunity to power the success of this rapidly emerging market.”

Help Lightning software allows an expert to demonstrate remotely how to in-

stall, use, maintain or repair a user’s piece of equipment or machinery via video chat and merged video streams. The virtual interactive presentation can be viewed on a computer, tablet or cellphone.

“I am constantly surprised at the new ways our customers find to use Help Lightning,” York says.

The website, helplightning.com, features a series of demo videos showing how the technology looks and functions, from the viewpoint of the expert and the user, in applications ranging from HVAC repair to nuclear power plant safety to telemedicine.

Help Lightning’s show-and-tell technology offers multiple benefits, including cost-savings, convenience and rapid response, as well as improved service, mentoring and education.

“With Help Lightning you can avoid some in-person service visits, and when visits are determined to be needed, you can send the right person for the job the first time,” York says.

Founded by neurosurgeon Bart Guthrie, M.D., Help Lightning originally focused on telesurgery. Guthrie, who is director of Computer-Assisted Neurosurgery at UAB, is a serial inventor holding several patents related to image-guided surgery. Through his merged reality

technology, Guthrie was able to virtually demonstrate techniques and assist in complex surgeries from thousands of miles away.

York served on Help Lightning’s board of directors from the company’s beginning. Then in 2016, after the sale of his team’s Emergency CallWorks’ 9-1-1 software to Motorola, York came on board as Help Lightning’s CEO.

“Bart is a prolific inventor and I had worked with him on technology development before,” York says.

Help Lightning sales significantly increased after the company began to target the field service and technical support services markets. “Medical use of Help Lightning is continuing for clinical and surgical applications, but we had the idea that it would be in our best interest to target the most compelling use cases,” York says. “Focus on the low hanging fruit where we could have the most impact.”

The company currently employs 35, primarily in Birmingham, where it is headquartered at Innovation Depot. Help Lightning does have a handful of representatives across the county and internationally. Marketing is primarily done through emails, phone calls and webinars.

“We are growing rapidly and anticipate adding employees over the next few years,” York says.

Help Lightning is the latest in a series of entrepreneurial successes guided by York, who grew up in Huntsville, the son of a space program engineer. York received his Ph.D. in electrical engineering and high availability computing from Carnegie-Mellon and served on the university’s research faculty. After volunteering for two and a half years with Food for the Hungry International in Ethiopia, Kenya, Bolivia and Thailand, he returned stateside to work in Silicon Valley and as a visiting scholar at the University of California, Berkeley.

Returning to Birmingham 25 years ago, he soon began working in business-to-business software.

Using merged video streams and video chat, experts can guide others through procedures as simple as hooking up internet or as complex as surgery.

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York sets up a demonstration video.

“While Alabama is not a software hotspot, you can develop a software company no matter where you are, and the number of software companies here is growing,” York says.

York has created, lead and sold several companies, including another medical imaging project with Guthrie called Emageon, before joining Help Lightning in 2016.

He foresees a great expansion in the market for virtual expertise and merged reality, even when COVID is no longer calling all the plays. That view is corroborated by Gartner Research, which predicts that by 2023 more than 60% of all customer service will be delivered via digital and web self-serve platforms. Their prediction would mark a nearly three-fold increase from 2019, upping the number from 23% percent to 60%.

While the pandemic has helped speed greater use and acceptance of the technology, businesses are finding it invaluable in general in improving efficiency, customer satisfaction and profitability.



“There is still a lot of new business potential to be explored with this technology and I want to be a part of that,” York says.

This story originally appeared in the November 2020 issue of Business Alabama.



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Rural Private Equity: Alabama-Born Niche

Private equity manager Matt Bean repatriated to Alabama to specialize in a unique niche of small, rural-based companies.

BY CHRIS MCFADYEN // PHOTOS BY ART MERIPOL

KEY COMPANIES

Drummond Company
Brasfield & Gorrie
Coca-Cola Bottling Co. United
EBSCO Industries
O'Neal Industries
American Cast Iron Pipe Co.
Robins & Morton
Great Southern Wood Preserving
BL Harbert International
BBB Industries
McWane Inc.

BY THE NUMBERS

- ▶ Top 21 companies earn \$1 billion or more
- ▶ Top 100 companies have sales topping \$100 million
- ▶ Top 100 companies employ 135,680 people

PRIVATE COMPANIES

It's not every day that a billionaire flies into Haleyville, but that's what fashion designer Tommy Hilfiger did when he wanted to consult with the women upholstering the interior of his private plane.

Hilfiger, who sold his fashion company for \$1.6 billion in 2006, is still the company's lead designer, so it was not a big deal for him to want to have his hands on the material.

And it wasn't a big deal to the women who owned and operated Southern Air Custom Interiors Inc., who took the visit with the nonchalance of a test pilot, says Matt Bean, whose private equity firm, Lowden Street Capital, bought Southern Air on May 21.

Based in Alexander City, Lowden Street Capital is close to topping out the first of its investment portfolios, now consisting of three companies.

Bean founded his company in 2017 with a unique market focus — very small companies located in rural areas.

"I have been thoroughly impressed

Matt Bean visits Southern Air Custom Interiors Inc. in Haleyville.

with their work on private aircraft, client mixture and high ethical standards, and I look forward to working with their team to streamline processes, increase efficiencies and expand sales channels,” Bean says of Southern Air Custom Interiors. It’s a 27-year-old company, led by two women furniture upholsterers who have established themselves as a premier aircraft interiors operation for Cessna, Gulfstream and Mooney owners.

The other two companies in Bean’s first investment fund are the Polar Bear Inn, a 43-room motel outside of Branson, Missouri, and Good Labor Jobs, an Alexander City-based, one-person online staffing and recruiting company that specializes in workers from Puerto Rico, placing them all over the country in jobs that include “landscaping, housekeeping, industrial, anything you can think of,” Bean says.

Bean is now building investment capital for a second fund. “Once we get the new funds, we will add five to seven new businesses, depending on their size,” he says.

Bean moved to Alexander City in 2018, after working for a private equity firm in the New York City area. He earned an undergraduate degree in engineering at Auburn University, then an MBA at Texas Christian University, before moving to Connecticut to work in private equity.

Bean says he hunts for companies to acquire across the country but is more focused on the Southeast and Alabama in particular. He expects his second fund will include more Alabama companies, because those are the ones that come across his desk more often.

Networking to find companies is one of his biggest challenges. They are not on the radar screen and he spots them, he says, by keeping in touch with chambers of commerce and the kinds of professionals who work with small companies, such as accountants and financial managers.

Markers he is looking for are companies that are adding liquidity, a repeatable sales process and a high internal rate of return.

“One of our biggest advantages when we come to the table is that we have negotiating power, we have cash, can consult on the deal, and we’re not competing,” says Bean. “And a lot of time the business owners are receptive and help you take the company to the next generation, offering insights.

“And the community helps. You’re buying a company in a town with 10,000

to 20,000 people, and the people welcome you.”

More of an advantage than a challenge, he says, is the rural labor market.

“A lot of rural communities have industrial complexes, say an auto parts company or a mobile home manufacturer, where the workers are making \$7.25 and \$10 an hour starting. If you come in and buy a business with outside capital and have a vision where it can go, you can pull from that

labor pool and say, ‘Come work for me, and I’ll pay you a lot more,’ and they see that as a real opportunity. People will jump all over that. They might get a chance to go into labor recruiting or build out a new website, and they see the opportunity, they finally have a chance do something that’s out of the normal for their community.”

This story originally appeared in the August 2020 issue of Business Alabama.

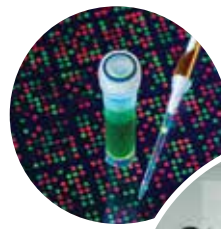


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 Evonik Industries
 Nektar Therapeutics
 Serina Therapeutics
 SiO2 Materials Science

BIOTECH

BY THE NUMBERS

- ▶ 780 bioscience companies
- ▶ 54 medical device companies
- ▶ \$350 million in NIH funding in 2018
- ▶ 17,870 bioscience workers
- ▶ 623 bioscience patents awarded in 2009-2013
- ▶ 7 FDA-approved anticancer drugs discovered at Southern Research
- ▶ 16 more drugs in approval pipeline

Biotech brings multi-faceted progress against deadly enemies

BY NEDRA BLOOM

From cutting-edge genetic study to medical device manufacturing to drug discovery, Alabama's 780 bioscience firms are helping solve the physical woes that can beset humanity.

This \$7.3 billion industry has brought seven currently used anti-cancer drugs to market. It has helped understand the human genome. And it has pitched in as all humankind works to defeat the COVID-19 virus.

The work takes place in special-purpose facilities like the HudsonAlpha Institute for Biotechnology in Huntsville, where scientists work to unlock the secrets of the genome and turn their discoveries into ways of helping people now.

Researchers at HudsonAlpha Institute for Biotechnology seek to unlock the secrets of the human genome and use their discoveries to make life better.



Left: Specialty vials created by SiO₂ Materials Science move automatically to the coating machine. Above: SiO₂ Materials Science, in Auburn, has scaled up its capacity in order to make more vials for the COVID-19 vaccine.

It takes place in research labs like Southern Research in Birmingham, where drug discovery is a priority — not only cancer research but work to combat AIDS, polio and mosquito-borne viruses.

It takes place in the state’s universities — particularly at the University of Alabama at Birmingham.

In 2018, National Institutes of Health funding provided \$350 million in research support.

Every project designed to curtail COVID-19 made news this year.

Here are some of the Alabama efforts:

▶ BioGX of Birmingham got emergency FDA approval to produce a new diagnostic test early in April.

▶ Huntsville Hospital teamed with HudsonAlpha and iRepertoire Inc. to see how COVID-19 patients’ immune systems respond to the virus, in hopes of developing a treatment. “The most effective way to stop pandemics is with vaccines,” says Rick Myers, president and scientific director for HudsonAlpha. “However, the pipeline for vaccine production from development, to testing, to market can take years. A COVID-19 treatment is the best way to bridge the gap until a vaccine is widely available.”

▶ Birmingham’s Assurance Scientific Laboratories was one of two labs winning FDA approval to test samples from at-home COVID test collection kits. The kits were designed to limit spread of COVID by allowing possible victims to test

at home rather than potentially exposing personnel at medical offices and labs.

▶ SiO₂ Materials Science in Auburn received \$142 million in federal funding to help develop vials to carry a vaccine as soon as one is available. Later in the year, SiO₂ won a contract from the Canadian government to provide vials there, too.

▶ Pinnacle Research Group in Anniston teamed with a California firm, Vir Biotechnology, to test effectiveness of antibody therapy.

And here’s a quick look at some of the other projects in progress:

▶ Incysus Therapeutics, with offices in Birmingham and New York, received permission to begin trials of a new treatment for glioblastoma.

▶ University of South Alabama Mitchell Cancer Center began a clinical study of ovarian cancer vaccine made from a patient’s own tumor.

▶ East Alabama Medical Center and HudsonAlpha teamed to use genetic tests to study the effectiveness of cholesterol medication.

▶ UAB was named one the nation’s 31 sites for study of Alzheimer’s Disease, looking particularly at racial disparities in the incidence of the disease.

▶ UAB received \$4.5 million in NIH funding to continue study of aging, specifically looking at how energetics affect the aging process.

▶ UAB received a \$9.3 million NIH grant to establish a Center for Precision Animal Modeling, which uses yeast, fruit flies, mice and such to mimic conditions in humans to help find the causes and cures for various conditions. Advanced data science and artificial intelligence help researchers predict possible treatments that can be tested on the models. Therapies that help treat the model would then become candidates for treatment of the patient.

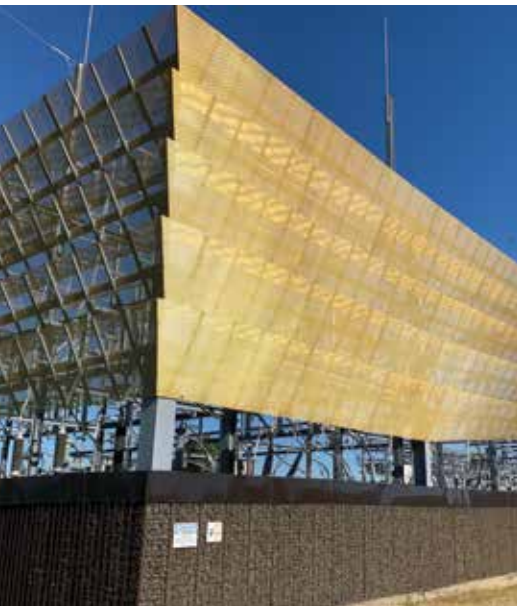
“The most effective way to stop pandemics is with vaccines. However, the pipeline for vaccine production from development, to testing, to market can take years. A COVID-19 treatment is the best way to bridge the gap.”

— Rick Myers
President and scientific director
HudsonAlpha

More Than Just Metal

Birmingham-based AMICO is branching out from its metal-making roots

BY CARY ESTES



What do the Panama Canal, the Kennedy Space Center and the famous practice-field tower once used by Alabama head football coach Paul “Bear” Bryant have in common? They all included metal fabrication components created by Alabama Metal Industries Corp., or AMICO.

Forged out of Birmingham’s steel-producing heyday, AMICO has been manufacturing metal components since 1939. These components are then used worldwide in a variety of ways, from the construction of buildings and houses, to floorboards for trucks and trains, to the creation of such smaller items as utility carts and picnic tables.

“Our products are used in a lot of diverse applications,” says Dean O’Donald, vice president and general manager of AMICO US. “Many of them are in people’s everyday lives, they just don’t know it. But they benefit from them.”

For decades, AMICO was able to steadily grow primarily through its production of expanded and perforated metals. But things began to change around the beginning of the 21st century. First, it increasingly became easier for companies to acquire similar metal components that were less expensive from overseas.

“We’ve always prided ourselves on using high-quality steel, and it was getting harder to do that and still compete against China and India,” says Gary Baltz II, AMICO director of marketing, innovation and business development.

Then came the major economic recession of 2008-09. After that, O’Donald says, many companies scaled back on the amount of products they purchased. At the same time, smaller metal producers were entering the marketplace, providing additional competition.

“After the recession, the market dynamics changed,” O’Donald says. “A lot of distributors decided to just buy what they could sell quickly instead of buying truckloads, so they were not stocking products at the level they had before. You also had more people entering the

AMICO’s expanded metal products, designed to be pretty and practical, offer security at a substation in Minneapolis (top) and safety at an eco park at New York’s Pier 35.



Left: Coils of steel wait to be transformed. Right: Powder-coated expanded aluminum mesh with embedded LED lights adds shimmer at the Ottawa Art Gallery in Canada.



market, and these products became heavily commoditized. Any time that happens, the price goes down.

“With these commodity products, we don’t control our destiny. We’re too dependent on the underlying costs of the raw material, which is steel. And we’re now in a highly competitive environment where price matters more than anything. We struggled trying to adapt to all that.”

So about five years ago, AMICO officials decided to branch out and start also offering actual products instead of only the basic metal materials, focusing on the areas of construction and security.

“We needed to be more of a solutions-oriented company,” Baltz says. “We needed to develop technology and add some value to our products to where we weren’t just selling panels, we were selling solutions.”

This transition did not happen immediately. O’Donald says it took time for the company to analyze the various markets and determine the types of products AMICO could produce that would also be in high demand.

“We did a lot of brainstorming and prototyping. Some of the ideas didn’t pan out,” O’Donald says. “We went out into the field and talked to customers about what they were struggling with, so we

could go back and develop solutions.”

AMICO already has gained national attention for one of its newest creations, a self-draining vented wall system called HYDRODRY. In January, the product was given the 2020 “Green Innovation of the Year” award by Green Builder Magazine.

The need for this system came about, ironically enough, through the development of greater energy-efficient buildings and homes. The implementation of more stringent energy codes resulted in the tighter insulation of new construction, restricting the amount of air able to flow through a wall cavity.

While this improves energy efficiency and lowers utility usage, there has been an unintended consequence. Condensation can still accumulate within the walls, primarily due to the disparity of temperatures between the outside and inside of a building. In the past, this condensation usually would dissipate. But now that buildings are tighter, the water can’t leave so easily, resulting in mold, rot and mildew within the walls.

“When they increased the energy efficiency by getting rid of the air leaks, the exterior cladding couldn’t breathe anymore,” O’Donald says. “The drainage plain within these new walls is literally the thickness of two pieces of paper. If there were any wrinkles, it created a dam. So when natural condensation occurred within that wall cavity, it couldn’t escape, and water would soak into the sheathing. Usually by the time people started to notice a problem, there was already a massive amount of damage done.”

AMICO’s solution was the development of a product that provides a dedicated drainage channel at the bottom of the wall and over any openings, as well as a continuous venting system that allows evaporated moisture to escape from the top of the cladding. This basically creates a convection system within the wall cavity that prevents the accumulation of moisture without affecting energy efficiency.

“We developed a solution for an industry problem,” O’Donald says of HYDRODRY, which is one of a series of products the company plans to produce focused on moisture management and sustainability. “So rather than just making components that go into products that other people engineer and build, we’re now taking our knowledge to build the components, do the engineering and provide solutions.”

AMICO also is producing a series of security products involving fencing, crash gates and bollard posts. The products, which O’Donald says are “aesthetically pleasing but also offer a high level of security,” are being used around power stations, railroads, seaports and data centers. In addition, the company has introduced a retro-fit product that enables high-security fencing to be installed using existing chain-link fence posts, reducing the replacement cost for the customer.

“We offer basically anything you’d need for a high-security application,” Baltz says. “Security over the last 10 years has gotten to be really important, and we’re growing with that market.”

Such growth in various markets is the primary goal of AMICO officials moving forward, as the company attempts to build upon its foundation of metal manufacturing to ensure long-term success.

“There are not many industrial manufacturers like this one left (in the United States). They’ve all gone overseas,” Baltz says. “But our solutions-oriented model is really going to help us. That’s where the future is, and what we’re doing as far as technology and innovation. We want to be known as an innovation company, and that’s what we’re working towards.”

This story originally appeared in the June 2020 issue of Business Alabama.



For 20 years, Dennis Madsen lived in Atlanta and saw the city sprawl its way to misery. Cars and construction were everywhere, often overwhelming the few relaxing public spaces that remained.

“I watched that growth just get worse and worse incrementally, until you finally looked around and said, ‘It’s almost unlivable here,’” Madsen recalls.

Madsen is determined that the same thing will not happen to rapidly growing Huntsville, where he now works as the city’s manager of urban and long-range planning. The key, he says, is to combine public financial support with private-sector investment, creating a partnership that promotes both quality of life and economic development.

As Tuscaloosa Mayor Walt Maddox puts it, “It is incumbent upon us to provide our constituents with a first-class quality of life. Cities that build that type of community will have the advantage moving forward into the 2020s.”

Here’s a look at how Tuscaloosa and Huntsville are putting that philosophy into practice.

Cities Celebrate Open Spaces

Tuscaloosa and Huntsville invest in public spaces to improve livability and promote economic development

BY CARY ESTES // PHOTOS BY VASHA HUNT

Left: Tuscaloosa Mayor Walt Maddox along his city’s Riverwalk, which stretches five miles along the Black Warrior River. *Photo by Vasha Hunt*
Right: An inviting bridge entices visitors to Huntsville’s Chapman Mountain Nature Preserve. *Photo courtesy of Land Trust of North Alabama*

Elevate Tuscaloosa

In 2019, Tuscaloosa officials approved a 1% sales tax increase to fund more than \$500 million in projects, including several involving area parks, recreation and public spaces. Dubbed Elevate Tuscaloosa, the use of these funds is overseen by a 30-person, volunteer advisory group consisting of residents and business owners.

“We’re making sure that when we make an investment in public spaces, it’s validated by the community as something they want to see happen,” says Brendan Moore, executive director of urban development for the city of Tuscaloosa.

The most prominent public space in Tuscaloosa is the paved Riverwalk trail that extends for nearly 5 miles from downtown along the southern bank of the Black Warrior River. The Elevate project includes plans to expand the existing trail by another mile and create a second trail along the northern side of the river.

Moore says the original Riverwalk cost approximately \$5 million to create, but has resulted in more than \$100 million in nearby private investment over the past decade. He says the planned expansion will go past property that currently is vacant, including a 120-acre former golf course, which should prompt additional private investment on that land.

“We see it as a huge economic development tool to help stimulate growth along our riverfront,” Moore says. “At the

same time, it enhances the quality of life of our residents.”

The Elevate projects also include the construction of a \$4 million, fully accessible playground in Sokol Park that will be the largest of its kind in the state. In addition, a series of hiking, biking and water recreation trails will be established on more than 2,000 acres of land around Lake Harris and Lake Nicol, an enhancement Maddox calls “one of the hidden gems of these plans.”

Maddox says the economic goal of all this is two-fold: to encourage more University of Alabama students to remain in Tuscaloosa after graduation and to entice new businesses to the area, including foreign companies related to the automotive industry.

“Less than 10% of students who graduate from the University stay in Tuscaloosa County. We want them to build their business here,” Maddox says. “And then many of our European partners come from communities where outdoor recreation is essential. We want to be one of those communities that can offer outdoor recreation at an elite level.

“We’re in an experience-based economy these days, where people are likely to spend more on experiences than on retail goods. So creating those experiences — in this case using outdoor recreation for things like the Riverwalk and the Harris-Nicol trails — gives us an advantage. We want to leverage that advantage for our citizens, and to recruit economically and grow the city.”

Huntsville's Chapman Mountain

Nearly 20 years ago, The Land Trust of North Alabama began acquiring property on Chapman Mountain, just north-east of downtown Huntsville. In 2018, The Land Trust opened the 371-acre Chapman Mountain Nature Preserve complete with hiking and biking trails, campsites, a disc golf course and a solar-power educational pavilion.

The preserve has been so popular that when the opportunity arose in 2019 to purchase an additional 86 acres on the mountain, both the city of Huntsville and area residents pitched in to make it happen. The city committed \$100,000 to the project, while The Land Trust raised \$80,000 through individual donors.

“It’s another step in the broader goal of improving access to recreation opportunities for folks throughout Huntsville,” Madsen says. “We see this partnership with The Land Trust as a great amenity and success story for the people of Huntsville.”

Along with the public and city funds, the Land Trust received several corporate donations for the creation of the educational pavilion and a grant from REI to build a new trail, as well as an agreement with Alabama A&M University to extend another trail through property the university owns.

“It’s an amazing community effort with everybody coming together to make this happen,” says Marie Bostick, executive director of the Land Trust of North Alabama. “That partnership is such a big thing, with the community embracing this and understanding how valuable it is.”

“When we want to attract industry or workers, knowing that there are these types of amenities is incredibly important,” Madsen says. “Roads and schools are important, but what can put you over the top are the things that add value to your community, like recreational opportunities.”

Or as Bostick says, “A lot of people move to Huntsville because of the natural beauty and the character of the community. If you lose that, you lose the draw.”

This story originally appeared in the January 2020 issue of Business Alabama.



The Pavilion at Chapman Mountain Nature Preserve.



Hunter Renfroe (left) and John Boone work to bring new vitality to historic structures.

Birmingham's Real Estate Conductors

Orchestra Partners has been instrumental in recent redevelopment of historic buildings

BY CARY ESTES // PHOTOS BY ART MERIPOL

John Boone and Hunter Renfroe had a vision of the future. And it was rooted firmly in the past.

In 2015, a dozen years after they first met as students at Birmingham-Southern College, the two friends decided to go into business together. Boone was returning to Birmingham from Fort Lauderdale, Florida, where he spent nearly four years working as a business development

analyst for Charter Schools USA, while Renfroe was moving back to town after receiving an MBA in strategy and finance from Boston University.

Their experiences away from Birmingham gave them a greater appreciation of what their hometown had to offer, especially in the midst of the city's long-needed revitalization. Boone and Renfroe wanted to be part of this process, so they founded the real estate development firm

Orchestra Partners, named because of the company's goal to "compose a symphony of purposeful partnerships for livable, thriving neighborhoods."

"When we were in other cities, we realized the potential that Birmingham had," Boone says. "It's not a clean slate here, but it's certainly a very attractive Lego set. We got back right as this growth curve was really taking off, and we wanted to help with what this city could be."



Five Points Lane bustles with shops and shoppers since its Orchestra Partners remake.

For Orchestra Partners, the key to what Birmingham could be was based largely upon what it once was. Namely, in the abundant number of historic buildings throughout the city, still standing but needing to be refurbished and repurposed to attain their former glory.

“There is a good financial argument to repurposing historic buildings, because they are inherently unique,” Renfroe says. “Anyone can build something new, and they could build it next door to your place and price it a little bit cheaper. But nobody can build a 120-year-old building, which makes it more desirable and more valuable.”

The opening sonata for Orchestra Partners took place in Five Points South, a neighborhood that began in 1887 as one of Birmingham’s first streetcar-lined suburbs. The area transformed into the city’s premier entertainment district during the latter half of the 20th century, then faded through neglect as new hot spots emerged in Lakeview, Avondale and Uptown.

But while the people might have left, the historic buildings remained. Renfroe compared Five Points South to the Boston neighborhood around Fenway Park, which fell into disrepair in the 1990s before experiencing a rapid revitalization.

“We realized that there was so much opportunity in Five Points, and no one was paying attention to it. Everybody said it was on the way down,” Renfroe says. “I was inspired by what they did with the Fenway neighborhood, which was where I lived in Boston. That was a bit of a roadmap for us in thinking about Five Points South. What’s the difference?

There’s not one. It’s just a bigger market, but it’s the same concept.”

The first property purchased by Orchestra Partners was a 10,000-square-foot space that became known as Five Points Lane, with storefronts opening into a recovered alleyway. On the same block, the company converted a 16,000-square-foot space that originated as a five-and-dime store into The Woolworth, a sprawling bar-and-grill featuring a variety of recreation and games, including eight lanes of duckpin bowling.

“Five Points is where we cut our teeth,” says Boone, who also lives in the area. “It’s where our heart is.”

Over the past five years, however, Orchestra Partners has raised the baton to a number of projects in other historic areas of Birmingham. These include Founders Station, a 59,000-square-foot, mixed-use redevelopment downtown in which a parking lot was converted into a walkable plaza connecting cobblestoned Morris Avenue to First Avenue North. The partners subsequently sold the Founders Station property for \$2.75 million to an affiliate of Michael Yi & Associates of Ann Arbor, Michigan.

In the works is a major project in partnership with Alabama Power called Parkside, which will consist of more than 100,000 square feet of retail, restaurant and commercial space. Located near the Regions Field baseball stadium and the 19-acre Railroad Park greenspace, the project will include an entertainment venue set within the 125-year-old Powell Avenue steam plant.

“All our projects have something in common. There is a historic building, and there is some sort of under-utilized outdoor space,” Boone says. “What’s most important to us is coming up with outdoor spaces to augment these historic properties. We want to keep the cool structure that everyone loves aesthetically — the brick and beam — but also bring it into the 21st century, which is very focused on outdoor space. It creates this interesting juxtaposition of old and new on the same property.”

Outdoor space will be even more important moving forward, as the COVID-19 virus creates a new emphasis on social distancing and a reduction in crowded, indoor places. While this obviously produces challenges for real

estate developers, Renfroe says the recent shutdowns because of the virus actually are increasing demand for the ability to interact in public spaces.

“We believe deep in our hearts of the need for humans to be around each other. Our mission is to reestablish a sense of center. Coronavirus is the dagger to the heart of that,” Renfroe says. “It’s been very frustrating for that reason, but we still believe it. People are seeing how disconnected we all feel. It’s helping everyone understand the value of personal, face-to-face interaction.

“Everyone has had this gut check to realize that spending time with people and being near them is important, and they’ve been missing it. So long term, I think we’re going to see a reinvigorated sense of finding ways for people to interact with each other.”

Until then, Boone says the shutdowns have had a beneficial side for Orchestra Partners.

“When you’re going full speed like we were before COVID, there’s no way to catch up. You’re building the airplane as it’s taking off,” Boone says. “The coronavirus allowed us to take this big step back out of this development mire that we’d been sucked into and say, ‘What are we doing operationally?’ We’ve been able to create new processes for all our departments. We’re going to come out of coronavirus and back into a regular office environment, much stronger than we left it.”

Boone believes Birmingham will bounce back as well. While new development certainly has slowed in recent months, Boone says the curtain will soon rise again.

“Before COVID slowed everything down, this city was humming along in real estate development. And I don’t think it’s going to stop,” Boone says. “I think you’re going to see more migration away from the mega cities, and places like Birmingham are going to be in even more demand.”

As a result, Boone says Orchestra Partners isn’t about to bow out. “There are still deals and projects to be had here,” he says. “We are not done with this yet.”

This story originally appeared in the October 2020 issue of Business Alabama.

Opportunity Zones Incentives Enhanced

Alabama has boosted the incentives offered by the federal government for investments in economically disadvantaged areas.



The Opportunity Zones program is a new alternative economic development program, established by Congress in the Tax Cuts and Jobs Act of 2017, to foster private-sector investments in low-income rural and urban areas.

There are 158 qualified Opportunity Zones in Alabama, at least one in each of the state's 67 counties, and Alabama has enhanced federal incentives through the Alabama Incentives Modernization Act, enacted in 2019.

Alabama boosts opportunity zone impact with aligned state-level capital gains tax benefits, potential state investment and impact investment tax credits to lower investment risks. Communities,

developers and businesses benefit from positive community impact. The state benefits from the ability to steer investment for more equitable, high-impact growth. The AIM Act enhances opportunity zones by:

- ▶ Offering opportunity zone investors the same capital gains tax cut allowed by federal law.
- ▶ Investing at least \$135 million in Alabama's opportunity zone funds.
- ▶ Guaranteeing minimum returns on investment via \$50 million in tax credits. Returning excess profits to the state.

To take advantage of these benefits, investors either contribute to existing Opportunity Funds or create one by applying through the Alabama Department of Economic and Community Affairs. ADECA uses a three-pronged test to evaluate applicants:

- ▶ **Capacity:** Does the fund have the ability to raise capital? Do they have management experience? Is their project concept strong? What are their anticipated returns? Do they have a strategy for tracking and reporting impact? Can they garner strong community engagement?
- ▶ **Impact:** Is the project community-oriented? Does it create living wage jobs? Will it aid in blight remediation or urban revitalization? Does it prioritize a rural area? Technology or advanced manufacturing? Workforce training? Affordable housing? Does it have a substantial social, environmental or economic impact?
- ▶ **Alabama-based:** Are at least 75% of the applicant's projects located in Alabama?

The American Life building in downtown Birmingham, which had fallen into disrepair, is being renovated into affordable housing as an Opportunity Zone project.
Photo by Cary Norton

More information about Opportunity Zones in Alabama is available at OpportunityAlabama.com.



PORT OF HUNTSVILLE

Huntsville has historically been the hub of Alabama aerospace enterprise — the builders of spacecraft — but Huntsville also sets the pace for using aircraft to get things and people from one place to the other in record time. Now, these two meet, with Huntsville International Airport continuing to work toward landing Sierra Nevada Corp.'s Dream Chaser spacecraft on one of its commercial runways. This would make the first commercial airport to land a vehicle from space be right here in Alabama.

HSV celebrated 50 years of operation in October 2017. However, Huntsville International Airport is not content to rest on the laurels of reaching that milestone, but rather is proactively looking to the future as innovators and visionaries. Since its inception in 1967, the airport has grown to more than 8,000 acres, which makes it one of the largest commercial airports in the Southeast United

States. The Port of Huntsville has three key units — the Huntsville International Airport (HSV), International Intermodal Center and Jetplex Industrial Park.

INTERNATIONAL AIR CARGO

- ▶ AIRCRAFT: B747-8
- ▶ DESTINATIONS:
 - Europe
 - Mexico
 - Asia
 - South America
- ▶ FLIGHTS: 7 to 10 per week

Passenger service is provided by five commercial airlines (American, Delta, United, Frontier and Silver). During regular operation (prior to the pandem-

ic), HSV has more than 65 flights per day and 10 nonstop destinations. More than 1.2 million customers are served annually.

The airport features two parallel runways — 12,600 feet, which is the second-longest runway in the Southeast U.S., and 10,000 feet. It also has 2.3 million square feet of air cargo ramp space.

As of 2018, HSV ranks as the 17th largest international air cargo airport in the continental United States. Cargo carriers located at HSV are Atlas Air, Cargolux Airlines, Federal Express, DSV and UPS. This high-tech air cargo market is served by domestic and international all-cargo carriers. Weekly international nonstop is available to Europe, Mexico, Hong Kong and Sao Paulo, Brazil.

The Huntsville Airport Authority began promoting its cargo capacities in the early 1980s, with an air cargo ramp that



had 50,000 square feet of cargo space. Those efforts culminated in a rail intermodal facility in 1986. The International Intermodal Center celebrated 30 years of serving the region in April 2016 and today provides a single-hub location that delivers world-class, multimodal (rail, air and highway) services and facilities. Nationwide rail service is provided by Norfolk Southern.

HSV currently owns three air cargo buildings totaling close to 300,000 square feet of warehouse and office space, adjacent to 2.1 million square feet of ramp area. In 2018, HSV completed construction on an 18,750-square-foot cold chain logistics solutions facility. Combined with two existing cold-storage units of 5,250 square feet and 11,000 square feet, HSV now has 35,000 square feet of cold storage space. To date, Huntsville International Airport's investment for air cargo growth is \$212 million, with \$52 million planned in future expansion. This brings investment to a total of \$264 million toward air cargo growth.

In 1990, Swiss-based international carrier Panalpina (now DSV) opened

operations in Huntsville with one 747 flight a week, gradually adding flights over the years. DSV will celebrate 30 years of operation at the Port of Huntsville this year. They operate the only nonstop 747-8 freighter international air cargo service in the State of Alabama to Europe, Mexico, Asia and South America. These markets are currently served with seven to 10 flights weekly.

DSV also provides fully integrated and customizable supply-chain solutions at its U.S. branch in Huntsville. DSV serves many of the company's largest high-tech customers in health care and the chemicals industries with temperature-controlled storage and transport capabilities. Advanced warehouse services, customizable IT enhancements and direct access to its road feeder service in Huntsville allow DSV to also provide last-minute solutions for needs of all customers.

The Port of Huntsville completed upgrades that make it operational for Group VI aircraft. Both the 12,600-foot west runway and 10,000-foot east runway meet requirements set for the 747-8s. While the 747-8 has a payload

increase of 16% over the 747-400 model, it has substantial reductions in fuel burn, noise and CO2 emissions. This Group VI aircraft boasts a 224-foot, 7-inch wingspan and measures 250 feet, 2 inches from nose to tail. The new model is 18.3 feet longer and 13 feet wider than the earlier 747 models.

"Huntsville International Airport is part of a small group of U.S. airports that have been FAA-certified to support these 747-8s," said Dr. Carl Gessler Jr., Huntsville-Madison County Airport Authority board member. "We share this distinction with cities like Miami, New York, LA and Chicago. Considering the size of our community as compared to the others on the list, this truly is an accomplishment for our region."

For more information, visit the HSV's website at flyhuntsville.com.

The Huntsville International Airport serves more than 1.2 million customers in passenger service, while also serving a number of cargo carriers that can take advantage of its two parallel runways and 300,000 square feet of cargo space.



COLD STORAGE, CONTAINER YARD PUMPED AT PORT

BY JANE NICHOLETS & EMMETT BURNETT // PHOTOS BY MIKE KITTRELL

The Port of Mobile is in the midst of major improvements — widening and deepening channels, adding a roll-on/roll-off facility for automotive exports, adding a new cold storage facility and undergoing a major expansion of its container facilities.

Here's a look two of those projects, both handled in conjunction with private partners.

Container Terminal

Three days after APM Terminals finished lengthening its dock as part of a \$50 million expansion project at the Port of Mobile, it docked two container ships

at once for the first time. The double docking in March was a milestone both for the privately operated APM and for a port that has grown steadily in an economy increasingly dependent on international trade.

“We added another 20 acres to the container terminal and lengthened the dock by 400 feet so we can dock two of these big Post-Panamax ships at a time,” says Jimmy Lyons, shortly before his retirement as director and CEO of the Alabama State Port Authority. “Literally within a week of us finishing the dock we had two ships on it at one time. We got it done just when we needed to get it done.”

But by the end of April, stacked containers filled 60 percent of the space available and plans were in place to move ship cargo to the railroad yard if it was going to “dwell,” or sit around for a while at the port, according to Brian Harold, managing director of the terminal. Contingency plans also include moving containers off-site to other pieces of land in the area.

Lyons blames COVID-19 for crowd-

Above: The container terminal at the Port of Mobile, operated by APM Terminals, has been growing steadily since 2008 — helping fuel an increase in overall port business.

ing the docks, while Harold cites other factors, such as companies wanting more options for storing and moving cargo. But Harold says the additional space has proven useful in keeping cargo containers moving quickly and efficiently when needed, while other containers dwell.

“We were very fortunate,” says Lyons. “We built this latest expansion of the yard area really kind of thinking ahead as something that we would need in a couple of years, so that we could direct expansion into it. Hell, we need every bit of it right now.”

Since the container terminal opened in 2008, Mobile has regularly been recognized as one of the fastest-growing ports in the country. A downturn in one sector has usually been offset by an upturn in another sector.

According to the Journal of Commerce in October, 2019, “The port’s volume increased 24.7% to 182,453 loaded TEU [a shipping container measure of 20-foot equivalent unit] from January through July compared with the same period in 2018, while the volume through all Gulf ports increased 13% to 1.58 million loaded TEU.... Loaded TEU imports through Mobile leaped 62% to 111,686 loaded TEU.”

COVID-19 caused drastic drops in international trade, but even so there are a few immediate bright spots for the Port of Mobile. “The Chinese are buying up a great deal of U.S.-made wood pulp,” Lyons says, projecting that the port would ship 200,000 tons of wood pulp to China in 2020.

And the COVID-caused great American toilet paper shortage is benefitting the port as well. Lyons notes that one of the key ingredients in premium toilet tissue used in the home is wood pulp, specifically wood pulp made out of eucalyptus trees in Brazil. He’s expecting another 90,000 tons of Brazilian eucalyptus wood pulp to come through this year.

None of the economic woes will affect dredging plans for the Mobile Ship Channel, a project long sought by the Port Authority. Work to deepen the channel to 50 feet is expected to begin towards the end of the year and will eventually allow the largest of the world’s container ships to dock at the APM Terminal, according to Harold.

The port has completed three phases

of its expansion and though some other work is delayed in hopes of economic rebound, the completed Phase 3 offers plenty of capacity. Storage capacity at the railyard increased by 75%. Gate lanes were widened. Where once the annual maximum number of containers that could come through APM was 500,000 TEU, it’s now 650,000 TEU. When Phase 4 and the dredging project are completed, the APM Terminal will be able to handle 1.5 million TEU annually.

Currently four weekly services from Asia and one from northern Europe come through the port in an average week. “What we would like to attract is direct service to Latin America,” Harold says.

Even though Phase 4 may be on hold because of COVID-19, APM is talking with other potential users of the Port of Mobile and the available container facilities. “We’re confident that we will need all that capacity at some point,” Harold says.

Lyons is confident the Port can ride out the economic storm. “We’re going to come out of it,” he says. “It’s just the timing is the big question.”

Cold Storage

MTC Logistics, one of the oldest and largest temperature controlled logistics companies on the East Coast, is on track to be the largest cold storage facility of its kind in Alabama.

Privately owned and founded in 1928, the Baltimore-based company is building a facility in Mobile — its first plant beyond northern roots. A \$61 million investment adjacent to the Alabama State Port Authority container terminal, the cold storage facility will encompass 12 million cubic feet including 40,000 racked pallet positions of storage. Services will include blast freezing, port drayage and LTL (less than truckload) consolidation — just as it did for 90-plus years, only this time, in Mobile’s port.

The new plant will offer a seamless supply chain focused on global commerce.

“MTC is a good company with a first-rate business model,” says Lyons. “We’re extremely pleased to add this high caliber company to our portfolio of port services. MTC will more than quadruple available capacity for our export poultry producers,



Brian Harold, managing director of the terminal, with the massive container moving cranes.

as well as attract new shippers.”

Lyons also noted that currently the docks ship about 300 containers of poultry products monthly. With the addition of MTC the number could reach 1,000 to 1,200 a month. “We think it will start off with great success.”

Brooks Royster, MTC’s vice president of international supply chains, is enthusiastic about the new facility. “Not only will Mobile have the largest of its kind plant in our company and the state,” he says, “there is no facility like this, this size, in the United States.” The uniqueness is mobile racking.

Basically, frozen food in its almost 300,000-square-foot freezers is stored on an automated racking system that slides together or separates as needed, creating aisles. It creates aisles on demand rather than static non-movable shelving. The unique system allows maximum use of storage space in the two-story plant, which will be two football fields long and one football field wide. There is no wasted space.

The new facility is slated to open in March 2021.

MTC Logistics originally appeared in the March 2020 issue and APM Terminals in the June 2020 issue of Business Alabama



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THE PORT

Alabama State Port Authority

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ALABAMA STATE PORT AUTHORITY

Alabama's deep-water seaport, at the Port of Mobile, is located just 32 miles from the Gulf of Mexico and handled more than 58 million tons of cargo in 2019, making it the 11th largest U.S. seaport in total trade, according to U.S. Army Corps of Engineers Waterborne Commerce Statistics. The full-service public seaport terminals are owned by the Alabama State Port Authority and are served by major ocean carriers transiting today's global trade lanes. Since 2016, the Journal of Commerce in its North American top rankings recognized the port in both growth and port productivity in North America.

APM Terminals' and the authority's continued investments support traditional markets and new emerging growth markets, including retail distribution, refrigerated products and advanced manufacturing in automotive, aviation and energy. The container intermodal assets deliver shore-side Super Post-Panamax infrastructure alongside

a -45 foot (-50 foot by 2025) channel and berths. Ocean carriage services have been upgraded, providing 8,500+ TEU capacity vessels in both Asia and Northern Europe trade lanes. Outside the container terminal gates, MTC Logistics will complete its state-of-the-art, temperature-controlled, international distribution center by March 2021, providing shippers with 12 million cubic feet and 40,000 racked pallet positions for handling refrigerated cargoes. The facility will also offer a comprehensive suite of services, including blast freezing, port drayage and LTL Consolidation.

With more than \$1.2 billion invested to date in public port facilities, the Port of Mobile ranks as the second-largest steel and third-largest coal port in the nation.

Alabama's metallurgical coal exports are surging to support global steel production. New mine investments top \$500 million over the next five years, driving nearly \$45 million in phased

enhancements at one of the nation's largest coal handling facilities. Automotive production and consumer markets spurred additional investment to support North American automotive original equipment manufacturers (OEMs). The Authority's new \$60 million finished automobile and automotive logistics terminal will provide a world-class RO/RO processing and handling facility by early 2021. A joint venture between Terminal Zarate S.A., a Grupo Murchison company headquartered in Buenos Aires, Argentina, and Neltume Ports, headquartered in Santiago, Chile, will operate the new AutoMOBILE International Terminal. Terminal Zarate S.A. is one of the largest finished automobile terminal operators in the Americas.

Alabama State Port Authority facilities stretch along the Mobile River in downtown Mobile.



The growing container yard connects ship and shore with massive cranes in foreground plus rail and interstate access.

In 2020, the U.S. Army Corps of Engineers and the Alabama State Port Authority signed the Mobile Harbor project agreement to deepen the port to -50 feet. The project also includes a channel widener to provide for vessel transit efficiencies in and out of the port. Engineering and design have been completed and the first of several phased construction contracts was awarded in September 2020. The project will be completed by Q1 2025.

Roads

The public terminals are connected to two interstate systems, I-10 and I-65, and U.S. Highways, including U.S. 90, U.S. 98, U.S. 43 and U.S. 45.

Waterways

Extending from the deep-water port terminals are more than 1,200 miles of navigable waterways in Alabama, among the most of any state in the nation, with lock and dam structures along the Tennessee-Tombigbee Waterway, Black Warrior, Coosa-Alabama and Tennessee rivers that provide access to not only Alabama's heartland but also to the Tennessee and Ohio valleys and the Great Lakes. The Port of Mobile is also accessible to the Gulf Intracoastal Waterway, providing coastal connections from Texas to Florida.

Rail, Air and Highway Access

Five Class 1 railroads access the port — Burlington Northern/Santa Fe/Alabama & Gulf Coast Railroad, CSX Transportation, Canadian National/Alabama Export Railroad, Norfolk Southern and Kansas City Southern. Port linkage is provided by the Alabama State Port Authority's Terminal Railway. The CG Railway offers a unique service that provides railed cargo via ship to and from Mexico's Veracruz region. The seaport is located approximately four miles from the Mobile Aeroplex at Brookley, which is home to Airbus' assembly lines for its A320 and A220 aircraft families. Mobile Aeroplex also serves as the region's air cargo terminal, with daily service provided by UPS and FedEx.

General Cargo

The Alabama State Port Authority offers 31 general cargo berths, with approximately 2.4 million square feet of open yards adjacent to piers and railroad tracks, and more than 2.6 million square feet are under roof. The general cargo facilities also feature heavy-lift terminals, along with a heavy-lift crane capable of lifting cargo up to 400 tons from ship to barge, rail, truck or specialized carrier. Other facilities include a freezer terminal, a cement terminal, a grain terminal and three RO/RO berths, all of which can accommodate vessels up to 40-foot draft.

Steel

Investments in the Authority's steel-handling facilities contributed to Alabama's rapid growth in the steel market. The automated Pinto Terminal applies innovation and technology to meet its 5-million-ton annual throughput capacity. The terminal has a 45-foot draft, a 1,050-foot-long ship berth, an automated barge-handling system and a slab storage yard. Pinto Terminal is equipped with three post-Panamax gantry cranes, which are the first in North America to use magnet technology in a ship-to-shore cargo handling operation. At the port, stainless and carbon steel coils are handled through a multi-modal steel coil handling facility. Alabama Steel Terminals includes a 178,200-square-foot warehouse equipped with four 50-ton bridge cranes, an adjacent 168,000-square-foot open yard, supported by integrated technology that provides shippers real time cargo data and tracking. The \$26 million Pier C North yard handles both inbound and outbound carbon and stainless steel articles.

Coal

The McDuffie Coal Terminal is the most versatile facility in the nation, with import/export handling capability to ship, barge and rail transportation. The Port Authority is launching a multiphase, \$45 million capacity enhancement and efficiency program to support growing export demand and to provide operational improvements.

APM Terminals/ Container Intermodal

The recently completed Phase 3 yard expansion added 20 acres and a 400-foot dock extension and a fender system that support 14,000 TEU class vessels. The latest expansion complements two new Super Post-Panamax and two Post-Panamax ship-to-shore gantry cranes, bringing the terminal's capacity to 650,000 TEUs (20-foot equivalent units). Maersk, China Shipping (CSCL), CMA CGM, COSCO, Evergreen, Mediterranean Shipping Co. (MSC), OOCL and ZIM provide weekly ocean carrier services on most trade lanes. The container terminal is part of

the Authority's 380-acre Choctaw Point container intermodal project, which includes an intermodal rail transfer facility and development land for logistics. The intermodal container transfer facility (ICTF) is served by Canadian National and is accessible to all five Class I railroads serving the Port of Mobile.

Rail Ferry Terminal

The Authority's Terminal Railway operates a rail ferry terminal that provides rail shippers twice weekly sailings into the Veracruz region of Mexico. The CG Rail Terminal features a twin-deck design for quicker loading. The ships can haul 120 standard rail cars per voyage without loading and unloading cargo, shaving nearly two weeks off the typical rail services into Mexico. The service provides four-day rail service between Mobile and Coatzacoalcos, Mexico.

Terminal Railway

The Port Authority's Terminal Railway (TASD) is one of the nation's

largest port authority-owned railroads, providing switching service for seven railroads serving the port authority's terminals. It handles more than 158,000 revenue-producing rail cars annually and maintains more than 75 miles of track and eight locomotives. The Terminal Railway serves the general cargo and over-dimension cargo berths, McDuffie Terminal and the Intermodal Container Transfer Facility.

Inland Port Facilities

To take full advantage of Alabama's waterway system, which comprises nearly 1,500 navigable inland barge miles, the Alabama State Port Authority owns 9 inland dock facilities that can be served by either barge or rail. The facilities are located throughout the state's river systems — at Bridgeport, on the Tennessee River; Demopolis, Tuscaloosa/Northport and Cordova on the Warrior River; Selma and Montgomery on the Coosa Alabama River; Columbia and Eufaula on the Chattahoochee River and at Axis on the Mobile River.

PORT FACTS - 2020

(Fiscal Year ending September 30,

*Extrapolated Volumes)

- ▶ **Acreage:** 4,000
- ▶ **Number of Berths:** 41
- ▶ **Channel Depth:**
 - 45 Feet in the lower harbor
 - (-50 Feet by 2025)
 - 40 Feet in the upper harbor
- ▶ **Warehousing and Open Yards:** 4.8 million square feet
- ▶ **Number of vessel calls:** 1,470
- ▶ **Tonnage:** 22.6 million*
- ▶ **Containers:** 367,777 TEUs
- ▶ **Imports:** heavy lift and oversized cargo, containerized cargoes, thermal coal, aluminum, iron, steel, copper, woodpulp, plywood, fence posts, veneers, automotive components, frozen fish, furniture components, retail goods, cement and chemicals
- ▶ **Exports:** metallurgical coal, heavy lift and oversized cargo, containerized cargoes, iron, carbon and stainless steel, automotive components, lumber, plywood, woodpulp, OSB, laminate, flooring, rool and cut paper, frozen poultry, soybeans and chemicals



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FOREIGN TRADE ZONES

Like an airport duty-free shop, Foreign Trade Zones offer businesses a place for international trade without the encumbrance of tariffs — a level playing field with international competitors.

The U.S. Department of Commerce designates FTZs, mostly near ports and major industrial sites. The designation allows companies within the zones to import foreign goods without paying any duty, store them, mix them with domestic parts and convert them into new products for sale here or abroad.

Until goods leave the FTZ, they technically have not been imported into the United States.

As trade wars escalate and new tariffs abound, U.S. manufacturers have looked more than usual to the potential benefits of FTZs, trade consultants say.

The National Association of Foreign Trade Zones estimates in a 2019 statement that merchandise received at FTZs

was valued at about \$793 billion, up from \$669 billion the previous year, mostly from domestic sources. Exports from FTZs accounted for two-thirds of all U.S. exports.

Alabama ranked 17th among states for the value of imports through FTZs and ranked 7th for the value of its FTZ exports.

Five of Alabama's major cities — Mobile, Huntsville, Birmingham, Montgomery and Dothan — have an FTZ. State economic development officials estimate that 12,000 workers are employed in FTZ companies, making \$1 billion worth of products that are later sold overseas. Autos, ships, oil and chemicals are among the key products.

Recent additions include sites for Airbus Americas in Mobile, MH Wirth Inc. in Theodore, Toyota Motor Manufacturing Alabama in Huntsville and Outokumpu Stainless in Calvert.

Quick facts about Alabama's five major FTZs

Mobile: Administered by the City of Mobile, the southernmost FTZ covers 9,848 acres in several locations. Several international firms are located within the FTZ, while Evonik Degussa, Austal USA and Shell all benefit from smaller business-based subzones. The Mobile zone also has four sites in Baldwin County.

Huntsville: FTZ facilities, administered by the Huntsville-Madison County Airport Authority, are clustered on 1,700 acres around the intermodal center, plus another 1,000-acre complex at Mallard Fox Creek Industrial Park and the Port of Decatur. DaimlerChrysler has its own subzone in the Huntsville group, as do VF Jeanswear, General Electric and Toyota Motor Manufacturing Alabama.

Birmingham: Birmingham's FTZ is scattered over seven sites, including parts of AirportNorth/Northeast Industrial Park, Shaw Warehouse facilities, ACIPCO industrial area, Oxmoor Industrial Park, Birmingham International Airport's air cargo facility and Munger/Valley East. Industrial giant Mercedes-Benz has its own subzone in Vance, as do ZF Industries, JVC America and NACCO Materials Handling Group Inc.

Montgomery: Montgomery has more than 5,000 acres in four sites — near the airport and I-65, along the northern and eastern bypass, at the Airport Industrial Commercial Park and at Montgomery County Technology Park. Montgomery also has subzones for Hyundai Motor Manufacturing and Quantegy Inc.

Dothan: Dothan has six sites in its FTZ, with no industry-specific subzones. Dothan's international commerce is handled by the airport and the port of Panama City, Florida.

ACIPCO in Birmingham is part of one of the five major FTZs, or foreign trade zones, across the state.

Alabama Economic Development Incentives

“Alabama has one of the most competitive business climates in the nation,” says the Alabama Department of Commerce. And the fact that tax incentives are statutory — part of the state’s Constitution and Codes — “gives industry a stable framework for long-term investment.”

Citing Alabama’s tax burden as among the lowest in the nation, the Economic Development Partnership of Alabama says, “Alabama is one of a small number of states that allow a full deduction of federal taxes paid from state income tax liability.”

That provision drops an actual 6.5% corporate tax rate to an effective rate of 4.5%, lower even than any of the state’s Southern neighbors.

In 2019, the Alabama State Legislature approved new incentives designed to attract tech-based companies and entrepreneurs, boost rural development and enhance opportunity zones.

Here’s a quick look at these new features: Building Rural Communities

- ▶ Population ceiling raised from 25,000 to 50,000
- ▶ Job quota dropped from 25 to 10, as long as the project includes at least \$2 million in capital investment
- ▶ Jobs Act Investment Credits extended 15 years for all beneficiaries
- ▶ Sale of Jobs Act Investment Credits enabled to banks and insurance companies
- ▶ Growing Alabama Credit made available to industrial parks, inland ports, intermodal facilities and the Alabama Farm Center

Recruiting Tech Companies

- ▶ New job quota dropped from 50 to 5
- ▶ Percentage of wages available for additional jobs fees raised to 5%
- ▶ Sale of Jobs Act Investment Credits enabled to banks and insurance companies
- ▶ Growing Alabama Credit made available to tech accelerators, research parks and marketing for STEM workers
- ▶ Some capital gains taxes eliminated for tech companies moving to Alabama and meeting certain criteria.

Enhancing Opportunity Zones

By investing in an Opportunity Fund or creating a new one, investors can take advantage of state investment in these projects.

Here’s a quick look at major tax incentives and credits:

Jobs Act Incentives

- ▶ Jobs Credit. Annual cash refund up to 3% of the previous year’s gross payroll for up to 10 years, with additional credits for companies employing many veterans or in targeted counties.
- ▶ Investment Credit. Credit of up to 1.5% of the qualified capital investment costs for up to 10 years. Credit can be taken against the Alabama income tax liability and/or utility tax liability. Credit is available for up to 15 years for companies in targeted counties selling their output nearby.

Alabama Reinvestment and Abatements Act

- ▶ New Facility and Expansion.
 1. Abatement of non-educational portion of sales and use taxes on construction materials, and
 2. Abatement of non-educational portion of property tax for up to 20 years.
- ▶ Existing Facility: Refurbishments, Upgrades or Placed Back in Service.
 1. Abatement of non-educational sales and use taxes on construction materials and equipment
 2. Abatement of non-educational property taxes for up to 20 years of the incremental property tax increases
 3. Exemption from taxes for increased utility services for up to 10 years, and
 4. AIDT worker training.
- ▶ Property Tax Abatement. New and expanding businesses can abate all of the state and local non-educational portion of the property taxes on all real and personal property incorporated into a qualifying project, for up to 20 years. Data processing center projects can receive an extended abatement up to 30 years, contingent on total capital investment in a project.
- ▶ Sales and Use Tax Abatements. Companies can abate all state and the local non-educational portion of the sales and use taxes on the acquisition, construction and equipping of a qualifying project. Data processing center projects can receive an extended abatement associated with constructing and equipping a project, including refresh, for

up to 30 years, contingent on total capital investment in a project.

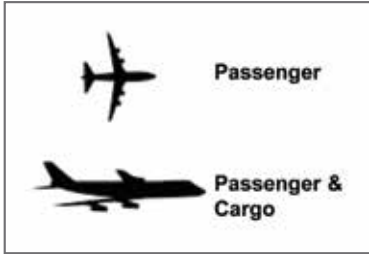
- ▶ Full Employment Act Credit. Employers with fewer than 50 employees are eligible for a \$1,000 nonrefundable income tax or financial institution excise tax credit for each qualifying job created.
- ▶ Heroes for Hire Credit. Employers meeting the requirements for the Full Employment Act are eligible for an additional \$1,000 nonrefundable income tax or financial institution excise tax credit if the employee is a qualifying veteran.
- ▶ Net Operating Loss Carryforward. Companies may carry forward any operating losses for up to 15 years.
- ▶ Alabama Enterprise Zone Credit. Credits and exemptions based on numbers of employees for businesses locating in depressed areas of the state.
- ▶ Income Tax Education Credit. Allows an employer to take a tax credit for 20 percent of the cost of an employer-sponsored program to improve basic skills though high school level.

Here’s a look at financing incentives:

- ▶ Industrial Development Grants. Local governments and authorities can receive state grants to help businesses with the cost of site preparation. These grants are available to industrial, warehousing and research firms or headquarters facilities for other types of firms.
- ▶ Industrial Revenue Bonds. Tax-exempt bonds up to \$10 million can be issued covering all or part of the cost of land and building acquisition, construction, furnishings and some soft costs.
- ▶ Alabama Infrastructure Grant Program. Helps finance water, sewer and road facilities.
- ▶ Alabama Industrial Access Road and Bridge Program. Helps finance the roads and bridges needed to connect public roads to industrial projects.
- ▶ Certified Capital Company Program. Provides financing for projects considered to be too risky for conventional financing options.

More Information: Alabama Department of Revenue, Alabama Department of Commerce and other state agencies.

ALABAMA COMMERCIAL AIRPORTS



MAJOR ALABAMA HIGHWAYS



Source: Center for Business and Economic Research, The University of Alabama

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- Burlington Northern
- CSX Transportation
- Kansas City Southern
- Norfolk Southern
- Canadian National



ALABAMA WATERWAY SYSTEM

Source: Alabama State Data Center, Center for Business and Economic Research, The University of Alabama.

ALABAMA DEPARTMENT OF COMMERCE

Alabama's lead economic development agency

Despite the challenges created by the coronavirus crisis, Alabama's strategic economic development goals remain unchanged, with a clear focus on creating jobs that provide sustainable opportunities for citizens and attracting investment that injects vitality into communities across the state.

The Alabama Department of Commerce spearheads this effort by supporting the comprehensive efforts of its allies across the state to secure new capital investment and jobs. Under the direction of Secretary Greg Canfield, Commerce's project managers maintain a global outlook as they build business relationships and pursue high-impact economic development projects that will enhance Alabama's prosperity. Commerce also plays a crucial role in the state's workforce development efforts, which ensure that businesses operating in Alabama have the highly motivated, skilled workers they require.

Commerce and the Alabama economic development team have a consistent track record of winning game-changing projects that introduce important new dimensions to the state's evolving economy. As a result, Alabama's economic development team has received numerous awards, and site-selection consultants routinely recognize Alabama as a top state for doing business. In recent years, the Alabama team has worked with an expansive roster of industry leaders, including Boeing, Airbus, Lockheed Martin, Facebook, Google, Amazon and global automakers such as the Mazda-Toyota partnership.

In 2019 alone, economic development activity in Alabama attracted more than \$7 billion in new capital investment, including \$3.2 billion in foreign direct investment. Major projects have followed in 2020, including a \$500 million expansion



Alabama Commerce Secretary Greg Canfield speaks at a November 2019 announcement outlining Hyundai's plans to invest \$410 million at its Montgomery manufacturing plant to launch production of the new Santa Cruz crossover vehicle in Alabama. Photo courtesy Governor's Office/Hal Yeager

at the AM/NS Calvert steel mill and \$830 million in additional investment from Mazda Toyota Manufacturing.

Alabama's foundational economic development growth plan, called Accelerate Alabama, established clear target industries for recruitment. The updated 2.0 version of Accelerate elevated the priority of recruiting knowledge-based jobs in activities such as R&D, engineering and design, as well as establishing a tighter alignment with the state's seven research universities. By outlining an identified set of objectives, Accelerate Alabama created a framework for strategic economic development when it was launched in 2012. Since then, Alabama has recorded a high level of significant economic development activity, with companies announcing projects involving roughly 135,000 jobs and \$43 billion in new capital investment

In addition, Commerce is closely aligned with the state's primary non-edu-

cational workforce development initiatives, which serves to streamline the process for prospects. AIDT, the state's highly regarded job-training agency, remains at the core of Commerce's Workforce Development Division. Other state workforce programs are also part of the division, whose goal is to act as a comprehensive and convenient channel for worker recruitment and training needs such as apprenticeships.

A critical Commerce objective is to identify prospects for partnerships that can broaden Alabama's economic base and create jobs for its citizens. Other objectives are to attract domestic and foreign investment, expand international trade and Alabama exports, facilitate small business growth and attract film and entertainment projects to the state. Commerce has also strengthened its commitment to facilitating economic growth in the state's rural areas with the hiring of its first rural development manager.

KEY CONTACT

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BBA BIRMINGHAM BUSINESS ALLIANCE

BBA promotes economic growth in the seven-county Birmingham metro area

Birmingham is the largest city in Alabama and a major driver of the state's economy, and the work of the Birmingham Business Alliance (BBA) helps keep the seven-county region moving forward.

Through its economic and workforce development, public policy, innovation and technology, image enhancement, and business retention and expansion work, BBA fosters a climate where business can boom in Bibb, Blount, Chilton, Jefferson, Shelby, St. Clair and Walker counties.

The BBA is responsible for growing quality jobs and capital investment, and in 2019 it tracked 46 projects bringing 1,526 jobs and \$895 million in capital investment. BBA helped spur most of these projects, including Carvana, National Cement, U.S. Steel, Gestamp and others.

Nearly 1,000 of the jobs and \$832 million of the capital investment came through expansions, mostly supported by BBA's Business Retention and Expansion program.

Both Alabama's largest employer, the University of Alabama at Birmingham with 23,000 employees, and its only Fortune 500 company, Regions Financial Corp., are located here. The region's 1.15 million people make up a diverse and motivated workforce.

And Birmingham's economy is as diverse as its workforce. Historically, manufacturing, banking, insurance, health care, logistics and construction industries have dominated the business landscape. Now, life sciences, technology and automotive are also growing here.

The work of the BBA leverages Birmingham's greatest assets, including UAB, which annually conducts research funded at more than \$600 million, and



Birmingham's skyline — the skyline of a growing and thriving city — benefits from the economic development expertise of the Birmingham Business Alliance.

Southern Research, a contract research organization with nearly 500 scientists and engineers who focus on drug discovery and drug development. Seven FDA-approved cancer drugs currently on the market were developed at Southern Research. Entrepreneurs thrive in Birmingham, home to incubator Innovation Depot, which houses more than 100 startups and is the Southeast's largest technology incubator.

In 2019, BBA helped 17 young companies in Jefferson County raise \$13.1 million, using new digital initiatives including BhamBizHub, designed to aid entrepreneurs, and OnBoard Birmingham, helping companies recruit talent.

In 2020, Glassdoor named Birmingham one of its 25 best cities for jobs; The Wall Street Journal named it the No. 23 hottest U.S. job market; Niche put Birmingham at the No. 12 city with the lowest cost of living in the U.S.; SmartAsset named the city No. 10 on its list of best cities for college graduates; and Volusion named Birmingham the No. 2 best city for female entrepreneurs.

The Birmingham region is the headquarters of construction aggregates

company Vulcan Materials Co.; national retailers Hibbett Sporting Goods and Books-A-Million; mining giant Drummond Co. Inc.; Blue Cross and Blue Shield of Alabama; global life insurance provider Protective Life Corp., and many others. Some 80 international companies are here, along with most of the workforce for two of the premier automotive assembly plants in North America, Mercedes-Benz in Vance and Honda in Lincoln, and dozens of supplier firms. The region has a \$63 billion GDP and a workforce that comprises more than a quarter of Alabama's total employment.

The quality of life in the region is unmatched throughout the state. Since 2010, \$2.5 billion has been invested in downtown Birmingham, creating a hub of nationally ranked restaurants and new apartments, condos, hotels and entertainment venues. The cost of living in Birmingham is an impressive 87% of the national average, meaning your dollar stretches farther in Birmingham than most anywhere in the country.

KEY CONTACTS

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ADECA ALABAMA DEPARTMENT OF ECONOMIC AND COMMUNITY AFFAIRS

Managing grants to build communities

The Alabama Department of Economic and Community Affairs (ADECA) distributes hundreds of millions of dollars annually to Alabama cities, counties, nonprofit organizations and others to support economic development projects, infrastructure improvements, job training, energy conservation, law enforcement, traffic safety, recreational development, assistance to low-income families and more.

Since coming on board in 2017 with the beginning of Gov. Kay Ivey's administration, Director Kenneth Boswell has emphasized the importance of forming partnerships to improve Alabama communities and commerce and create job opportunities.

Three ADECA grant programs are often used to help Alabama communities with economic development projects:

► **Community Development Block Grants** are funded through the U.S. Department of Housing and Urban Development and support local efforts to attract and prepare for new or expanding industries, rehabilitate neighborhoods, provide water and sewer services or fund other infrastructure improvements that support business development or enhance the quality of life.

In 2019, ADECA awarded grants for 58 projects totaling nearly \$18.7 million, enabling local governments to address critical infrastructure needs. Seven CDBG grants, totalling \$2 million, went to provide infrastructure needed for new businesses, which in turn provide new jobs.

► Grants from the **Appalachian Regional Commission** (ARC) are awarded to encourage economic development and improve the quality of life of Alabamians living within 37 north Alabama counties considered part of the Appalachian



Left: Alabama Department of Economic and Community Affairs Director Kenneth Boswell tours Winston Homebuilders in Double Springs. ADECA provided a \$400,000 CDBG award to rehabilitate a building for the company, which employs 150 people. Right: ADECA Deputy Director Elaine Fincannon helps cut the ribbon at One Oak Medical Center in Wetumpka. CDBG and ARC funds were used for the project, which provides medical care in Elmore County.

Region. Projects that develop and improve infrastructure and support education, workforce development and community development are funded through the program. In 2019, \$8.9 million was invested in 37 projects in ARC counties, helping to create or retain 865 jobs.

► **Delta Regional Authority** (DRA) is another state-federal partnership that encourages the development of new jobs and helps with basic community improvements in a rural region that includes 20 counties, primarily in the Black Belt region of Alabama. In 2019, ADECA partnered with DRA to fund 10 projects totaling \$2.3 million.

► The **Land and Water Conservation Fund** and the **Recreational Trails Program** (RTP) are used to attract tourists who boost local economies. Twelve projects totaling \$2.29 million were funded by the Land and Water Conservation Fund, while eight other projects received \$2.6 million in RTP funds.

Additional ADECA programs designed to increase commerce and create jobs are:

The **Alabama Inland Ports**

Infrastructure Program was created as a one-time program to help the state take advantage of inland waterways by making improvements at the state's numerous inland ports. The program, created by the Alabama Legislature, provided nearly \$5 million in grants in 2020. Future funding is possible, but uncertain.

The **Alabama Broadband Accessibility Fund**, also created by the Legislature, provided more than \$17.5 million in 2020 to supply high-speed internet to rural areas.

The **Volkswagen Environmental Mitigation Trust Plan** is a temporary program, based on a financial settlement with Volkswagen, which helps groups purchase or refurbish equipment to meet clean air standards.

The **Alabama Research Alliance Trust Fund** supports and encourages entrepreneurship and innovation programs leading to new jobs.

ADECA also helps manage the state's water resources, supports law enforcement and traffic safety efforts, and distributes state and federal surplus property.

KEY CONTACT

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AIDT ALABAMA'S WORKFORCE TRAINING AGENCY

Workforce development provided by AIDT is among the strongest incentives for businesses choosing to locate or expand in Alabama.

Alabama has one of the strongest workforce training programs in the world in support of the state's commitment to new and expanding industries.

AIDT has long been recognized among the nation's top workforce training programs by industry observers. AIDT's pre-employment training program holds an ISO 9001:2015 certification for quality and continuous improvement.

AIDT has assisted new and expanding companies in recruiting, selecting and training more than 700,000 job seekers. AIDT training produces a workforce that employers recognize for high performance achievement — a result of both the technical assessment and training AIDT trainees receive and the process by which they are selected.

From automotive to aerospace, logistics, warehousing and biomedical, AIDT researches and identifies the needs of each company served and uses that information to develop a full range of technical pre-employment selection programs customized to each company.

In a continued effort to meet the needs of industry, Alabama has embarked on an aggressive plan to open regional Workforce Centers of Excellence, managed and operated by AIDT. The Alabama Workforce Training Center in Birmingham is designed to meet the growing needs of companies engaged in the manufacturing and construction industries in north and central Alabama. The Montgomery Regional Workforce Training Center provides entry-level training, employee upgrade training, two-year technical college level training, and K-12 career training to adequately supply businesses with a trained workforce for the Montgomery region.



AIDT programs are tailored to the needs of specific industries, from complex wiring to the elements of today's Smart Factory.

AIDT SERVICES INCLUDE:

- ▶ Identification of needed employee skills and knowledge, training criteria and curricula content definition, and required behavior and performance criteria the company expects of employees.
- ▶ Recruitment of trainee candidates for potential employment. AIDT interviews and enrolls applicants in training programs that are acceptable to the company.
- ▶ Program development, instructors, equipment, consumable supplies and training aids such as manuals, workbooks and videos are provided at no cost to trainees or employers.
- ▶ Pre-employment training. Job seekers who meet the selection criteria designed by AIDT and the employer are enrolled

in job-specific training for detailed assessment of attitude, character, work ethic, literacy, teamwork and technical learning ability.

A division of the Alabama Department of Commerce, AIDT also provides leadership development, on-the-job training, industrial maintenance assessment and industrial safety assessment. Leadership development conducted by AIDT is designed to develop and retain quality leaders, improve retention and create loyal and dedicated employees. Industrial maintenance and safety assessment services help identify candidates best qualified for effective and efficient operations through corrective and preventive maintenance of equipment and processes.

KEY CONTACT

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ATN ALABAMA TECHNOLOGY NETWORK

Technical experts work directly with Alabama industries to increase productivity, profitability and competitiveness.



ATN sends experts into training facilities and workplaces to help businesses find creative ways to solve technical problems and advance competitiveness.

The Alabama Technology Network provides the most extensive workforce training, technical assistance and engineering services designed to improve Alabama business and industry. Experts in technical assistance and innovation work directly with Alabama's existing industry to increase productivity, profitability and competitiveness.

As part of the Alabama Community College System, the network's 19 sites are located at 15 community colleges and the state's three research universities — Auburn University, the University of Alabama and the University of Alabama in Huntsville. ATN's team of experts helps solve the needs of industry and

business through innovative, sustainable, cost-effective solutions. ATN can conduct detailed needs assessments, outline potential solutions based on the results and then provide technical assistance to help you solve those problems or identify those who can. Services include lean enterprise, quality services training, continual improvement methods, environmental health and safety training, industrial maintenance training, sustainability in manufacturing and innovation engineering.

ATN is an affiliate of the National Institute of Standards and Technology's Manufacturing Extension Partnership, which provides hands-on assistance and

training to smaller manufacturers. As the state's MEP, in FY2019 Alabama companies served by ATN reported economic impacts as follows:

- ▶ Created and Retained Jobs: 2,739
- ▶ Total New Investments: \$57 Million
- ▶ Manufacturers' Cost Savings: \$66 Million
- ▶ New & Retained Sales: \$304 Million
- ▶ Client Reported Impacts: \$427 Million

In addition to its training services, ATN partners in presenting the Alabama Manufacturer of the Year awards. These awards recognize the state's top manufacturers, in three size categories, for their accomplishments.

KEY CONTACT

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EDAA ECONOMIC DEVELOPMENT ASSOCIATION OF ALABAMA

An association of professionals committed to Alabama's economic development



Teledyne Brown Engineering, in Huntsville's Cummings Research Park, has expanded three times in three years, all in support of its manufacturing and fabrication business, often performed for NASA or the Department of Defense.

EDAA is diligent in addressing state and federal legislation and regulatory issues impacting economic development in Alabama. With a full-time lobbying presence when the Alabama Legislature is in session, EDAA is a leader in forming economic development policy and legislation for its members. Legislative efforts on the state level in recent years have seen EDAA lobby for competitive and sustainable economic development incentives, adequate funding for state recruitment efforts and worker training programs and to defeat legislation that would pose a threat to Alabama's economic development effort.

EDAA actively seeks innovative solutions to challenges that could negatively impact the state's economic development efforts. EDAA holds multiple networking opportunities, publishes a membership directory, conducts two major conferences each year and holds quarterly workshops. EDAA is also a partner with Auburn University's Government and Economic Development Institute (GEDI) in conducting the Economic Development Leadership Institute.

In addition, EDAA has partnered with the University of Alabama's Economic Development Academy to offer an Applied Economic Development Honors program. This program is specifically aimed at increasing the skills and abilities for those new to the profession.

Economic development can have a multitude of meanings, but at its core, it is a collaborative effort among businesses, communities, organizations and government agencies. Since 1968, the Economic Development Association of Alabama (EDAA) has facilitated that collaboration in an effort to both attract new investment to the state and work to expand those companies that are located here. EDAA provides a forum for discussion of specific issues affecting economic development and provides programs, training and expertise to create successful development programs.

The EDAA membership of 500 consists of individuals involved in economic development from many different areas and disciplines. EDAA members are economic development professionals, attorneys, engineers, architects, state agency personnel, utility employees, bankers, contractors, real estate agents, educators, and municipal and county officials.

A voluntary member association, EDAA conducts workshops and seminars covering the ideas, principles, practices and ethics of economic development. Most of the EDAA educational programs focus on enhancing the skills of economic development professionals by providing them with new tools to address the challenge of remaining one of the nation's top states in economic development. In addition, EDAA works with other organizations in the state to improve Alabama's economic development environment. Strategic alliances with the Alabama Department of Commerce, Alabama Department of Economic and Community Affairs and the Economic Development Partnership of Alabama enable EDAA to provide its membership with substantive skills.

The EDAA Leadership Institute represents a partnership between EDAA and GEDI to educate and engage elected officials, ED board members and other community leaders about key issues in economic and community development. For more information contact: EDAA (334) 676-2085

KEY CONTACT

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EDPA ECONOMIC DEVELOPMENT PARTNERSHIP OF ALABAMA

A private, nonprofit organization, EDPA works with state, local and corporate allies to attract new investment, support existing business expansion and encourage innovative startups.

For the past 30 years, the Economic Development Partnership of Alabama (EDPA) has been a catalyst for economic growth in the state. A totally private, nonprofit organization, EDPA is uniquely positioned to partner with state, local and private allies to drive Alabama's economic development efforts.

EDPA'S FOUR PILLARS

EDPA's program of work today is focused on four pillars:

- 1. Lead Generation:** Identify and target leading companies that are good prospects to bring quality jobs and investment to the state.
- 2. Innovation and Entrepreneurship:** Provide resources and support to startup companies that have high-growth potential.
- 3. Talent Attraction and Retention:** Work to attract and retain the talent needed to support economic growth.
- 4. Business Intelligence and Economic Development Analytics:** Support both lead generation and business attraction efforts through business intelligence, data and analytics.

EDPA's website provides a portal for prospective companies to access data and information on the business climate in Alabama and other key factors important to the site selection process. Of critical importance is a statewide database of available buildings and sites that EDPA maintains.

EDPA ADVANTAGESITES

AdvantageSite, which is managed by EDPA, is a joint effort between the private sector and state and local governments to prepare and deliver products and materials for industrial prospects. A voluntary industrial site preparedness program, AdvantageSite was created



EDPA's Alabama Launchpad conducts four startup competitions annually, providing early stage companies the opportunity to earn funding. Huntsville-based Seamly won \$37,500 at Reignite Alabama, a COVID-19 response competition run by Alabama Launchpad.

to make the state more competitive for companies considering a location in Alabama. Since the program's start in 2008, 49 economic development projects have located on AdvantageSites across the state, investing \$1.9 billion and creating 7,200 new jobs.

ALABAMA LAUNCHPAD

EDPA has also been a statewide leader in encouraging innovation, commercialization and entrepreneurship. The mission of EDPA's Alabama Launchpad program is to help high-growth companies Start, Stay and Grow in Alabama.

Alabama Launchpad is the state's most active early seed investor and drives innovation and job growth through four

startup competitions annually, offering non-dilutive funding along with mentoring and other services. Since it started in 2006, Alabama Launchpad has awarded \$5.4 million in funding to 98 Alabama companies, 66% of which are still operating. Those companies today employ more than 700 people and have a combined post-money valuation of more than \$400 million.

COLLABORATION

By participating in collaborative efforts in Alabama, EDPA works to foster a cooperative spirit among the diverse organizations involved in the many areas that affect the state's growth.

KEY CONTACT

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NAIDA NORTH ALABAMA INDUSTRIAL DEVELOPMENT ASSOCIATION

NAIDA is a 71-year-old regional economic development organization striving to create quality jobs in the 13 North Alabama counties served by TVA power.



NAIDA created this map of potential industrial sites in the 13 counties of Northern Alabama. View it interactively at: automotivesites.us

Currently, twice as many individuals are employed in manufacturing occupations in this region compared to the national average. This current industrialization owes its roots to the 1950s, when industry began locating along the Tennessee River, and the development of the rockets that took man to the moon began taking shape here. Today, our region continues to build on those successes.

STRONG ECONOMIC SECTORS

The aerospace and defense sectors are among our strongest, featuring companies such as Boeing, Raytheon, Northrop Grumman, Ruag and ULA. ULA continues the tradition of building rockets in North Alabama with the Delta IV, Delta II, Atlas V and the new Vulcan Centaur. Blue Origin is building rocket engines, Lockheed Martin is developing and integrating new hypersonic weapons, and GE is producing state-of-the-art SiC and CMC materials.

Our automotive sector is further strengthening its base of more than 100 automotive-related companies with the

addition of the \$2.43 billion Mazda Toyota Manufacturing. Toyota Boshoku, YKTA, DaikyoNishikawa, Vuteq and others have new locations on or near the MTM site. BOCAR and DURA have also located their most recent automotive manufacturing investments here to supply other automotive assembly plants in Alabama. To assist this growth, a microsite, AutomotiveSites.us, features sites and buildings pre-selected by each of the region's counties as readily available for development.

Alloys/Metalworking companies such as Carpenter Technology, Constellium and Progress Rail also find success in North Alabama. Nucor Steel recently invested \$102 million, Nucor Tubular Products invested \$27 million, and Valley Joist & Deck invested more than \$8 million in their new facility.

More than 70 chemical companies operate in the region, including 3M, Daikin, Hexcel, OCI, Occidental Chemical, Toray and Ascend Performance Materials, which recently announced a \$175 million expansion.

The HudsonAlpha Institute for Bio-

technology and its 40 associate companies are operating in the cutting edge of the life sciences sector.

Other new additions include \$750 million Facebook, \$600 million Google and \$13 million DC Blox datacenters.

We have created an online industrial services directory to assist new and existing companies in finding the suppliers and services to meet their needs. This new tool can be accessed at IndustrialServices.naida.com.

KEYS TO SUCCESS

Some of the reasons companies in North Alabama flourish include:

- ▶ Twelve institutions of higher education.
- ▶ World-class automation training provided at no charge to Alabama industries by AIDT through the Robotics Technology Park.
- ▶ The robust TVA electric power system.
- ▶ Two commercial airports. Huntsville International provides direct flights to major cities and air cargo to international destinations and offers an intermodal facility along with FTZ #83.

With offerings that include more than 3,000 acres designated as AdvantageSites and speculative buildings ranging from 21,600 to 404,738 square feet, along with other available sites and buildings, North Alabama is prepared for your company's growth.

KEY CONTACT

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**BUSINESS COUNCIL
OF ALABAMA**

For over 100 years, our firm's history includes working with a variety of auto manufacturers and suppliers in the Southeast to drive economic development for our region.

At Burr, we collaborate with our manufacturing clients as business partners, working alongside them on matters including economic incentives, land acquisition, construction, operations and workforce management.

Being able to take care of our clients' multiple legal needs in one place is part of what makes our client relationships successful.

At Burr, we work across offices, practices and communities to serve our clients as one team.



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