



Accelerate Alabama
Strategic Economic Development Plan
January 2012



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Alabama Economic Development Drivers

Recruitment

Retention

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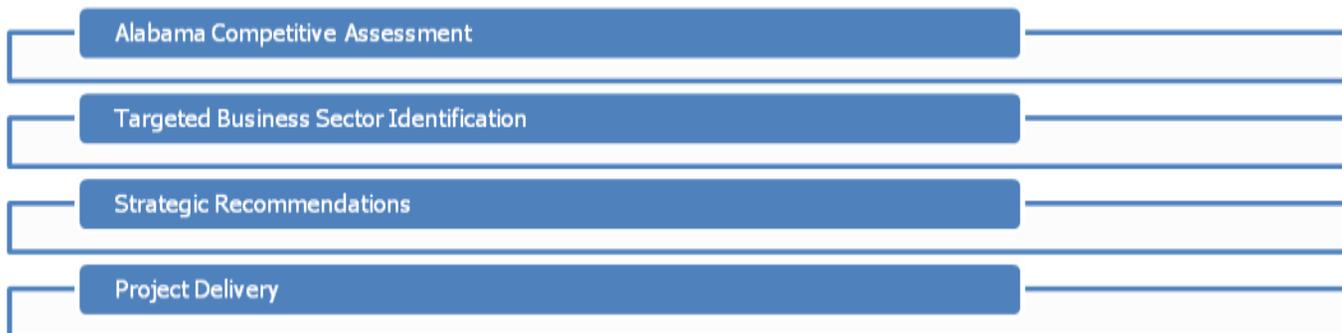
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Introduction

Accelerate Alabama, the economic development strategic plan for the state, was developed during a six-month period led by the Alabama Economic Development Alliance (Alliance), created in July 2011 by Executive Order of Governor Robert Bentley. The Alliance engaged Boyette Strategic Advisors (BSA), an economic development consulting firm, to facilitate the development of the plan. More than 1,200 stakeholders provided input into the development of the plan. *Accelerate Alabama* is meant to provide direction for Alabama's economic development efforts over the next three years.

BSA, working closely with the Alliance, conducted the following four-step process in developing the *Accelerate Alabama* plan:



Accelerate Alabama includes 11 identified targeted business sectors for Alabama to focus its efforts, as well as recommendations or accelerators, and related tactics, centered on three economic development drivers: Recruitment, Retention and Renewal. The targets and accelerators were identified based on extensive research, as well as input from the Alliance members and other stakeholders located throughout the state.

Stakeholder Input

More than 1,200 Participants

- Visioning Meetings – Nearly 500
- Online Surveys – 721
 - *Company Survey* - 311
 - *Economic Development Partners Survey* – 181
 - *Renewal Survey* – 96
 - *Resident Survey* - 95
 - *Legislator Survey* - 38
- Project Website:

www.acceleratealabama.com



Alliance Members

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Local / Regional Economic Development Organizations

Economic Development Association of Alabama

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Director

Alabama Department of Finance

Per Executive Order Number 21, upon completion of the strategic plan for the state of Alabama, the Director of the Alabama Development Office shall serve as chairman of the Alliance and will oversee implementation of the strategic plan.

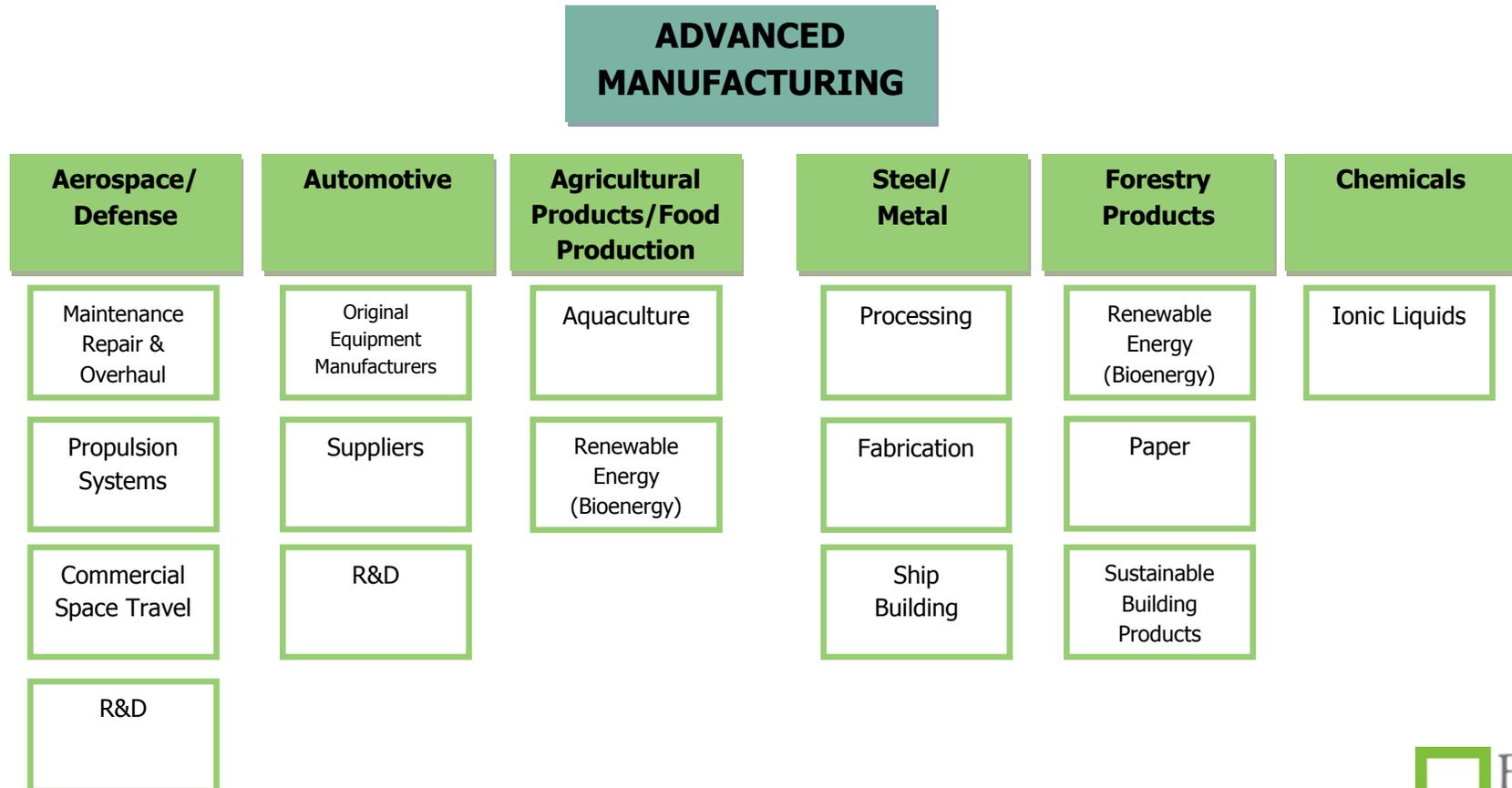


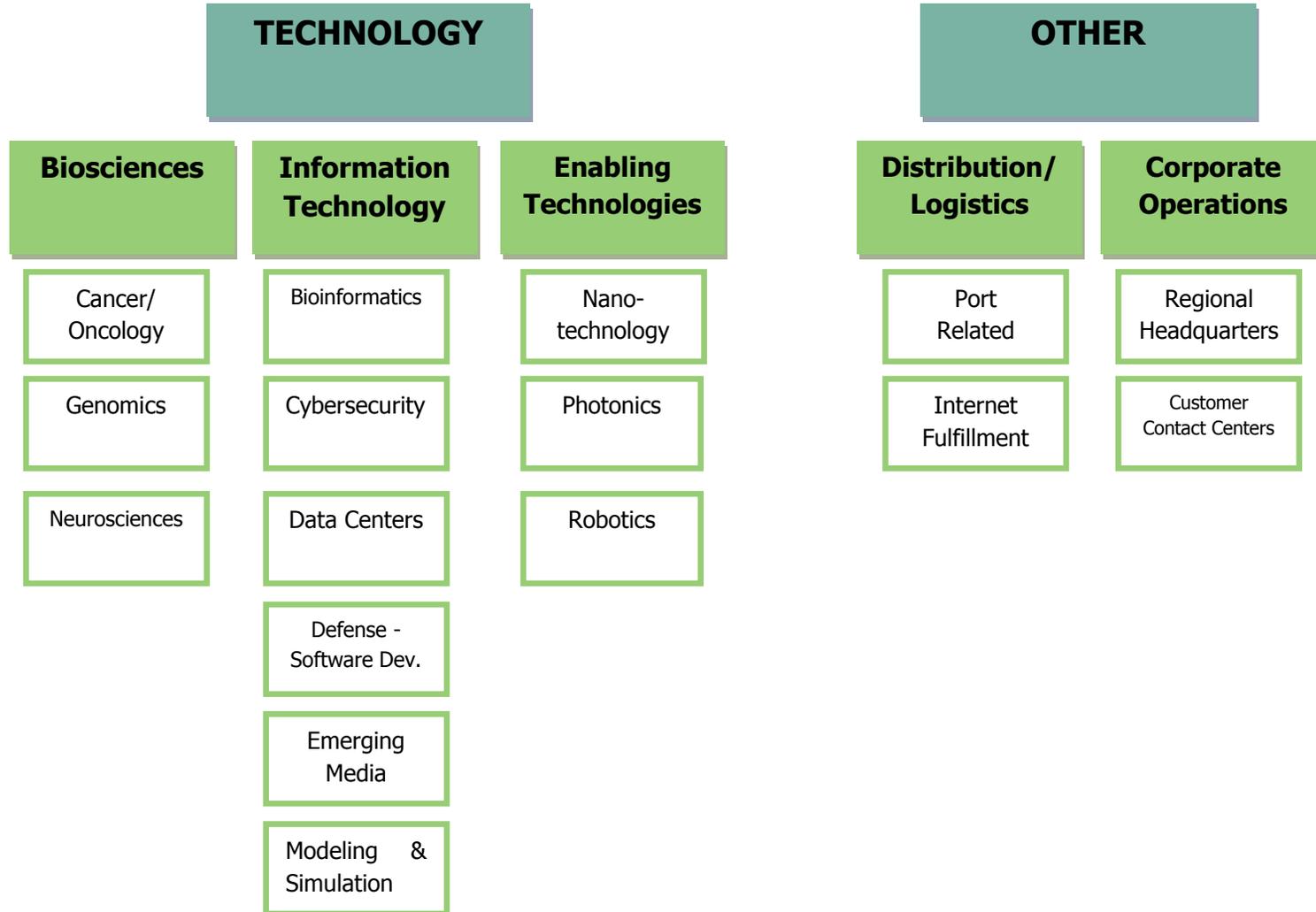
Alabama Targets



Targeted Sectors

Eleven targeted business sectors, along with areas of focus for each, have been identified for the state of Alabama to focus its recruitment, retention and renewal efforts over the next three years. The determination of these targets involved the review of the current business/industry base in Alabama, current targeted sectors of state, regional and local economic development organizations in Alabama, as well as the various power providers, recent project activity, and other emerging sectors that have shown growth at the national, state and possibly local level. The strengths of Alabama related to each sector were also considered. The targeted sectors and areas of focus are outlined below and further defined in this section.







Advanced Manufacturing

Advanced manufacturing typically involves the use of advanced, innovative, or cutting-edge technology to improve products and/or processes. The National Council for Advanced Manufacturing (NACFAM) defines advanced manufacturing as “extensive use of computer, high precision, and information technologies integrated with a high performance workforce in a production system capable of furnishing a heterogeneous mix of products in small or large volumes with both the efficiency of mass production and the flexibility of custom manufacturing in order to respond rapidly to customer demands.”¹

Manufacturing is an important contributor to the United States’ economy, and one trend impacting growth of the sector is the number of U.S.-based companies that are bringing overseas manufacturing operations back to this country. A report released by the Boston Consulting Group in October 2011 indicated approximately two million to three million jobs could be created in the U.S. by 2015 from companies moving jobs out of China alone.² Also contributing to the growth of the sector are efforts by many companies to implement process improvement techniques, incorporate quality management systems, and overhaul production operations with advanced technology in order to remain globally competitive.³

The United States Department of Labor identifies advanced manufacturing as a high growth industry that is expected to add a significant number of new jobs to the American economy. The manufacturing sector accounts for 14 percent of U.S. Gross Domestic Product and 11 percent of total U.S. employment. Advanced manufacturing jobs often employ workers who have advanced technical skills and such jobs typically offer higher salaries and benefit packages than traditional manufacturing jobs. The average salary and benefit package for manufacturing workers is \$65,000, which is higher than the average for the total private sector.⁴

Manufacturing is Alabama’s largest employment sector and accounts for 16.4 percent of all jobs in the state. Some of the products manufactured in Alabama include food, chemicals and plastics, paper products, aerospace and aviation parts, steel, and motor vehicles including parts and accessories.

Strategic Sectors

Targeted sectors within the Advanced Manufacturing category include:

- Aerospace/Defense
- Automotive
- Agricultural Products/Food Production
- Steel/Metal
- Forestry Products
- Chemicals



Advanced Manufacturing

Aerospace/Defense

GROWTH OPPORTUNITY AND TRENDS

In 2010, the aerospace/defense industry recorded its seventh consecutive year of record sales and sales are projected to reach another record of \$220 billion in 2011. The sector supports nearly 1.2 million jobs in the United States and has continued to grow each year despite the global economic conditions. Military aircraft represents the largest subsector in terms of sales with sales of \$64.5 billion in 2010.⁵

The demand for Maintenance, Repair & Overhaul (MRO) services is growing as the fleets of many commercial airlines and military aircraft are aging. Commercial airlines are keeping planes in service longer, driving the demand for maintenance services and upgrades in order to extend the useful life of aircraft as long as possible. Airlines lose money for every hour a plane is out of service, so the timing and speed of maintenance activities are critical factors. Some airlines are looking for a “one-stop-shop” for MRO services, and major airlines are entering into contracts with third-party companies for MRO services.⁶

The ending of NASA’s Space Shuttle Program in July 2011 creates a significant opportunity for companies in the private sector that have the capacity to develop and operate affordable commercial space transportation systems for use by the government and other customers.⁷ In September 2011, NASA introduced a new plan that will enable the agency to purchase commercial spaceflights for its astronauts. The Integrated Design Contract will award \$1.61 billion to companies that develop a complete spaceflight package including rockets, spaceships, launch services, ground and mission control operations, and spacecraft recovery after landing.⁸ Commercial space sales are also expected to be supported by the need for satellite service providers around the world to replace aging equipment in coming years.⁹

ALABAMA ADVANTAGES

Alabama is home to more than 280 aerospace and aviation companies, including major companies such as BAE Systems, Boeing, EADS North America, General Dynamics, Lockheed Martin, Northrop Grumman, and Raytheon.¹⁰

Areas of Focus

- Maintenance, Repair & Overhaul (MRO)
- Propulsion Systems
- Commercial Space Travel
- Research & Development

Definition

AEROSPACE/DEFENSE encompasses the manufacture of commercial and civilian aircraft, military aircraft and equipment, and spacecraft as well as the production of the parts, components and supplies that are used in such aircraft.

MAINTENANCE, REPAIR AND OVERHAUL (MRO) includes inspection, repair, maintenance, conversion, modification or refurbishment activities needed to keep aircraft in good flying condition.

PROPULSION SYSTEMS commonly take the form of rockets and are used to produce thrust to move an object, such as spacecraft or satellite, forward.

COMMERCIAL SPACE TRAVEL refers to the development of spacecraft and related services by the private sector, which can be purchased by NASA and used to transport crew, cargo and supplies to the International Space Station and on other missions.



The aerospace/defense sector in Alabama is primarily centered around Huntsville, but a number of companies including Crestview Aerospace, EADS North America, Northrop Grumman, Teledyne Continental, ST Aerospace and Star Aviation, have operations in the Mobile area.¹¹ The Army Aviation Center at Fort Rucker is located in the southeast corner of the state in an area known as the “Wiregrass.” The mission of the Army Aviation Center is to develop the aviation force for its worldwide mission.¹²

Huntsville has a long association with space, defense, and military aerospace programs. Prominent research centers are NASA’s Marshall Space Flight Center and the U.S. Army’s Redstone Arsenal. Redstone Arsenal is a major federal research, development, test and engineering center. The United States Army’s missile, missile defense and aviation programs, the Missile Defense Agency, the Defense Intelligence Agency, and NATO’s MEADS program are all based at Redstone Arsenal. The facility also performs missile and helicopter research for the U.S. Army.¹³

The Marshall Space Flight Center is also located at Redstone Arsenal and is one of NASA’s largest and most important field centers. It manages key programs involving the International Space Station, Payload Operation Center, space science, future moon and Mars missions, and Ares I and Ares V launch vehicles.¹⁴

Alabama has a number of strengths related to propulsion. The Propulsion and Structural Test Facility at the Marshall Space Flight Center develops and matures propulsion technologies, including boost, upper stage, and in-space applications for current and future space transportation and science missions.¹⁵ The National Institute for Rocket Propulsion Systems (NIRPS) is a new center being created at the Marshall Space Flight Center that will serve to preserve and enhance propulsion capabilities in the U.S.¹⁶ The Propulsion Research Center (PRC) at the University of Alabama – Huntsville (UAH) conducts research related to advanced propulsion technologies and their applications. It also mentors students and provides collaboration opportunities between the academic research community and propulsion community.¹⁷

A study conducted by UAH in 2010 shows 36 percent of workers in Alabama’s aerospace sector are employed in jobs related to R&D activities.¹⁸ Research in the areas of advanced composites, aerodynamics, aerospace structures, aerospace systems, aircraft control, aircraft flight dynamics, astrodynamics, computational fluid dynamics, conventional and composite structures, fluid mechanics, propulsion, smart structures, solid mechanics, and structural dynamics is being conducted at universities in the state including Auburn University, the University of Alabama and UAH.¹⁹

Location Criteria

- Proximity to customer or supplier
- Available workforce with required skills
- Supportive environment for R&D activities
- Available infrastructure
- State support and financial incentives
- Cost of doing business

Representative Alabama Companies

Army Fleet Support – Fort Rucker

Army Material Command – Redstone Arsenal

The Boeing Company

GKN

Lockheed Martin Corporation

Northrop Grumman Corporation

ST Aerospace Mobile



Advanced Manufacturing

Automotive

GROWTH OPPORTUNITY AND TRENDS

The output or production of U.S. motor vehicle manufacturing is forecast to grow at an annual compounded rate of nine percent between 2011 and 2016.²⁰ A number of automotive manufacturers across the country, including many located in Alabama, have announced plans to invest in new equipment and facility expansion as well as create new jobs. Mercedes-Benz is investing \$2 billion at its Vance facility to add production of a new M-Class sports utility vehicle and expand production of the GL-Class and C-Class models produced there.²¹ The company will also invest an additional \$350 million and create 400 new jobs to prepare for production of a completely new model that is expected to begin in 2015 and will be the fifth vehicle made at the facility.²²

Hyundai is investing \$173 million and adding more than 200 jobs at the engine plant located at its OEM facility in Montgomery. The expansion will be used to produce the Nu engine that is used in the Hyundai Elantra compact sedan, which is made in Montgomery, as well as to increase production of the Theta engine that is used in the Hyundai Sonata sedan, the Hyundai Santa Fe and the Kia Sorento.²³

Honda Manufacturing of Alabama is increasing production of vehicles manufactured in Lincoln, which includes the Odyssey minivan, the Pilot sports utility vehicle, the Ridgeline pick-up truck as well as V-6 engines used in all three models. The expansion represents an investment of \$94 million and the creation of 20 new jobs.²⁴

The expansion plans underway by the automakers in Alabama have the potential to create opportunities for automotive suppliers. It is estimated the new vehicle Mercedes-Benz will make in Alabama has the potential to bring 2,500 to 2,800 supplier jobs to the state to support its production.²⁵ Additionally in July 2011, the CEO of German automaker AUDI, announced the company intends to build an assembly facility in the U.S. and will likely select the final location in the next three years. AUDI's parent company, Volkswagen, recently opened a new automotive assembly plant in Tennessee, and it is speculated that AUDI will consider locating its new facility in the Southeast as well.²⁶ Another German automotive company, Volvo, also plans to expand sales in the U.S. and does not have an OEM facility located here currently.²⁷

Areas of Focus

- OEMs
- Suppliers
- Research & Development

Definition

AUTOMOTIVE ORIGINAL EQUIPMENT MANUFACTURERS (OEMs) manage the final assembly and completion of vehicles as well as research and development activities to design new vehicles and improve existing ones. **AUTOMOTIVE SUPPLIERS** design, engineer, and manufacture parts and components such as engines and engine parts, electrical equipment, steering and suspension components, brake systems, transmission and power train parts, seating, and interior parts, which are needed to assemble vehicles. The automotive supplier base is broken into "tiers" for definition of supplier status along the supply chain. Tier one suppliers are those that supply the OEMs, or major automotive assembly firms. Tier two are those that supply to tier one, tier three supply to tier two, and so on down the line. There are also other support services such as machine shops and other operations needed to support the automotive industry.



ALABAMA ADVANTAGES

Alabama has more than 350 automotive companies, including OEMs Honda, Hyundai, and Mercedes-Benz, as well as their numerous suppliers and other support operations.²⁸ In 2010, those three OEMs produced more than 711,000 vehicles in Alabama, which represented a 52 percent increase over 2009.²⁹ Alabama is also home to two engine plants: Navistar Diesel of Alabama and Toyota Motor Manufacturing, Alabama, Inc., which are both located in Huntsville.³⁰ Additionally, the Kia Motors facility opened in West Point, Georgia in 2009 has created an opportunity for Alabama. Kia makes the Sorento and Optima, as well as the Hyundai Sante Fe, in Georgia.³¹

University research programs give Alabama an advantage in attracting automotive OEMs, suppliers and companies engaged in automotive-related research and development activities. Auburn University, the University of Alabama, and the University of Alabama at Huntsville participate in the Automotive Research Alliance (ARA). The ARA provides a wide-range of research resources to automotive manufacturers and suppliers, including technology and manufacturing solutions as well as academic and training programs.³²

Alabama has many sites available, including two certified megasites, indicating they each have at least 1,000 contiguous acres of available land and meet the criteria for a large manufacturing operation.³³

Another Alabama advantage is its transportation infrastructure. The state has five interstate highways: Interstates 10; 20; 59; 65; and 85 as well as Interstate 22, which is scheduled to be completed in 2014 and will run from Birmingham to Memphis.³⁴ The International Intermodal Center located in the Port of Huntsville Global Logistics Park and the Port of Mobile are other unique advantages Alabama has related to transportation infrastructure.³⁵

Location Criteria

- Proximity to customer or supplier
- Availability of a workforce with manufacturing skills
- Supportive environment for R&D activities
- Transportation resources
- State support and financial incentives
- Cost of doing business
- Right to work

Representative Alabama Companies

Honda Manufacturing of Alabama
 Hyundai Motor Manufacturing Alabama
 Mercedes-Benz
 Michelin/BF Goodrich/Goodyear
 Navistar Diesel of Alabama
 Toyota Motor Manufacturing, Alabama



Advanced Manufacturing

Agricultural Products/Food Production

GROWTH OPPORTUNITY AND TRENDS

A survey conducted by FoodProcessing.com, released in April 2011, indicated a number of companies planned to invest in the construction of new plants, expand existing facilities or modernize older facilities in 2011. An average of a 20 percent increase has been allocated for capital expenditures in 2011.³⁶ Economic conditions generally have less of an impact on food production as compared to other industries, and even during periods of recession, the demand for food tends to remain relatively stable.³⁷ Current trends related to food production include the increased demand for food that promote wellness and prevent disease, foods that are produced locally and sustainably, and foods that are organic.³⁸

The U.S. aquaculture industry includes about 6,400 farms with combined annual revenue over \$1 billion. However, the U.S. imports over 80 percent of its seafood and is the world's second largest seafood importer. The largest seafood imports include shrimp, salmon, and tilapia. This heavy reliance on imports has created a seafood trade deficit of more than \$9 billion per year in the U.S. To reduce the trade deficit, the National Oceanic and Atmospheric Administration and the U.S. Department of Commerce joined together to create aquaculture programs intended to increase the amount of seafood raised nationally, create jobs in coastal communities, protect marine ecosystems, and advance technologies used in aquaculture. The Aquaculture Technology Transfer Initiative aims to attract private investment to the industry, further innovation and create more employment opportunities. The Shellfish Initiative supports shellfish aquaculture for both commercial and restoration purposes. The Gulf of Mexico Fishery Management Plan for Aquaculture will develop a program to support the issuance of permits to raise certain types of finfish in the Gulf of Mexico.³⁹

In 2010, a record 13.2 billion gallons of bioenergy fuel was made in the U.S. and production has increased 20 percent per year for the last 10 years.⁴⁰ Demand for bioenergy is driven by the need for alternative forms of energy to preserve the environment and to promote energy independence.⁴¹ In August 2011, President Obama announced the U.S. Departments of Agriculture, Energy and Navy will invest up to \$510 million over the next three years in partnership with the private sector to produce advanced biofuels used to power military and commercial vehicles, jets and ships.⁴² The best options for long-term production are fuels made from biomass

Areas of Focus

- Aquaculture
- Renewable Energy (Bioenergy)

Definition

FOOD PRODUCTION includes the processes and techniques used to transform raw ingredients into food items, which can be consumed by humans or animals. Food processors use **AGRICULTURAL PRODUCTS** such as raw fruits, vegetables, grains, meats, and dairy products to manufacture items that fall into the following major categories: bakeries and tortillas; fruits and vegetables; dairy products; sugar and confectionery products; specialty foods; grain and oilseed milling; animal processing; and seafood product preparation and packaging. **AQUACULTURE** is the farming of aquatic organisms such as fish, shrimp, oysters, clams, mollusks and aquatic plants. Aquaculture involves cultivating freshwater and saltwater populations under controlled conditions and can be contrasted with commercial fishing, which is the harvesting of wild fish. **RENEWABLE ENERGY**, such as **BIOENERGY**, is made using sources of biomass, such as crops, crop waste, grasses, trees, and forestry residues.



sources such as wood chips and pellets, perennial grasses, and crop waste.⁴³

ALABAMA ADVANTAGES

Alabama has a strong cluster of food production companies and the industry employs approximately 35,000 workers.⁴⁴ Alabama also has a strong agricultural presence, which includes more than nine million acres of farm land or 28 percent of total land area in the state according to U.S. Department of Agriculture statistics. Approximately 305 acres of farmland in Alabama is certified as organic.⁴⁵

The top five agricultural products in terms of value produced in Alabama are boiler chickens, cattle and calves, chicken eggs, greenhouse/nursery products, and cotton. Top exports of agricultural products are poultry and related products, cotton, soybeans and wheat. In 2010, Alabama ranked fourth among all states in terms of poultry and poultry products exports.⁴⁶

Alabama is also among the national leaders in several areas of aquaculture, and approximately 25 different seafood products are raised in more than 25,000 acres of ponds or other culture systems. Channel catfish is the largest product and tilapia, shrimp, crawfish, ornamental fish and game fish are also produced in the state. Alabama's natural resources such as high-quality water and heavy clay soils needed for constructing earthen ponds make the state well-suited for commercial aquaculture. The Department of Fisheries and Allied Aquacultures at Auburn University offers Bachelors, Masters and Doctorate degrees in Fisheries Science and is recognized nationally as a premier warm water fisheries program. Current research activities involve catfish and shrimp.⁴⁷

Auburn's Center for Bioenergy & Bioproducts supports the development of bioenergy and bioproducts. The center is engaged in research and development activities to discover technologies that will enable bioenergy to be a cost-effective alternative fuel to traditional petroleum-based fuels. The main feedstocks being researched are woody biomass, energy crops, and agricultural crop waste.⁴⁸

Another advantage Alabama has for attracting food production companies are its transportation resources, which include five interstate highways: Interstates 10; 20; 59; 65; and 85, as well as Interstate 22, which is scheduled to be completed in 2014 and will run from Birmingham to Memphis.⁴⁹ The Port of Mobile is served by 100 overseas shipping lines, all five Class I railroads in Alabama, and Interstates 10 and 65.

Location Criteria

- Availability of needed natural resources, feed stocks or raw materials
- Proximity to supply chain and consumers
- Transportation resources
- Cost of doing business
- Availability of a skilled workforce
- Financial incentives

Representative Alabama Companies

AlaTrade Foods LLC

Buffalo Rock Company

Keystone Foods

Pilgrim's Pride Corporation

Sara Lee Food and Beverage

Tyson Foods

Wayne Farms



Advanced Manufacturing

Steel/Metal

GROWTH OPPORTUNITY AND TRENDS

The output or production of the steel and metal manufacturing sector in the U.S. is projected to grow at an annual rate of five percent per year between 2011 and 2016.⁵⁰ The production of primary metals in Alabama grew 2.4 percent in 2010 and the production of fabricated metals grew 2.8 percent in 2010. Additionally, both sectors are projected to grow 2.4 percent in 2011 in the state.⁵¹ Industries such as automotive, aerospace and ship building are large users of steel and also have a strong presence in the state.

Exports of Alabama steel, especially to areas such as Mexico, South America, Egypt and India, are growing due partly to excess supply of steel in this country and a weak U.S. dollar. Steel exports at the Port of Mobile are expected to double in 2011, growing from 500,000 tons of steel in a typical year to more than one million tons this year. The Port of Mobile ranks number one in the U.S. for the amount of flat-rolled carbon steel it exports.⁵²

Growth of the sector in Alabama can be contributed to several factors including recent company locations and expansions. ThyssenKrupp's new \$5 billion steel mill investment near Mobile is one of the largest private industrial developments in U.S. history.⁵³ SSAB is currently investing \$290 million in its facility near Mobile. The expansion added a heat treating facility for quenched and tempered steels, which are used in the manufacturing and construction sectors.⁵⁴ Most recently in October 2011, Carpenter Technology Corporation selected a site near Athens as the location of a \$500 million, 400,000 square foot state-of-the-art manufacturing facility that will produce premium alloy products primarily used in the aerospace and energy industries.⁵⁵

Alabama has also recently experienced growth related to ship building. In 2010 Australian company Austal USA won a \$3.8 billion contract to build 10 warships for the U.S. Navy by 2018, and is investing \$160 million to double the size of its Module Manufacturing Facility as well as build a new office complex and assembly bay.⁵⁶

Areas of Focus

- Processing
- Fabrication
- Ship Building

Definition

Companies involved in **STEEL PROCESSING** manufacture and distribute steel and steel products often in the form of plates, sheets, strips, rods, bars, wires, pipes, and tubes. Steel can be made either from raw materials such as iron ore, coal and limestone or by recycling steel scrap.

FABRICATION includes processes such as cold rolling, forming, forging, joining, machining, coating, punching, bending, welding, coil processing, laser cutting and stamping.

SHIP BUILDING includes the manufacture of commercial products such as tankers, passenger vessels and cruise ships, barges and bulk carrier barges, and cargo and container vessels. Ship building also includes the manufacture of military products such as aircraft carriers, attack submarines, transport and ammunition ships, cruisers, destroyers, amphibious assault ships, and mine hunting.



ALABAMA ADVANTAGES

Alabama has a significant number of companies engaged in steel and metal processing, fabrication and ship building, indicating the needed resources to support such industries are available. Additionally, steel is used by a number of sectors, including aerospace, appliance manufacturing, automotive, construction, electrical and utility, engineered products, and precision machinery, some of which have a strong presence in the state.⁵⁷

The location of ThyssenKrupp gave Alabama an advantage in attracting customers or suppliers to the company. ThyssenKrupp's capacity to produce 72-inch coils of stainless steel at its Alabama facility make it the only steel mill in North America and one of few worldwide that have such capability. Extra-wide sheets of steel allow customers to use the material more efficiently and create less scrap. Wider sheets of steel also require fewer welds to make a product and reduce overall manufacturing cost. Manufacturers of large stainless steel tanks, automobiles, ships and some appliances could have use for this type of steel.⁵⁸

Another advantage Alabama has for attracting steel companies and ship builders are its transportation resources, especially the Port of Mobile. The port is currently ranked as the ninth largest seaport in the U.S. in terms of total volume and can handle containerized, bulk, break bulk, roll-on/roll-off, and heavy lift cargoes. It includes 41 ship berths, more than four million square feet of warehouse and open yard space, and handled approximately 23.4 million tons of freight in fiscal year 2010. The Port of Mobile is served by 100 overseas shipping lines, all five Class I railroads in Alabama, and Interstates 10 and 65.⁵⁹ Other interstate highways in Alabama include Interstates 20, 59, and 85 as well as Interstate 22, which is scheduled to be completed in 2014 and will run from Birmingham to Memphis.⁶⁰

The University of Alabama's Metallurgical and Materials Engineering program grants Bachelor, Masters and Doctorate degrees. Faculty and students in the programs are also involved in research in the areas of metal matrix composites, mechanical properties of materials and metals, physical modeling of materials-processing operations such as solidification and steel making, foundry methods, and metal casting.⁶¹

Alabama has a number of available sites, including two certified megasites, indicating they each have at least 1,000 contiguous acres of available land and meet the criteria for a large manufacturing operation, which may be a suitable location for a steel or metal manufacturer.⁶²

Location Criteria

- Transportation resources, including port access
- Proximity to customer or supply chain
- Availability of a workforce with needed skills
- State support and financial incentives
- Cost of doing business, including cost of electricity
- Supportive environment for R&D activities

Representative Alabama Companies

American Cast Iron Pipe

Austal USA

BAE Systems Southeast Shipyards

Nucor

McWane, Inc.

O'Neal Industries

ThyssenKrupp

US Steel Corporation



Advanced Manufacturing

Forestry Products

GROWTH OPPORTUNITY AND TRENDS

The forestry products sector in the U.S. manufactures nearly \$175 billion in products each year and provides jobs for 900,000 workers based on statistics from the American Forest and Paper Association.⁶³ The industry is the largest producer of renewable biomass energy in the U.S. and the renewable energy generated by biomass is greater than that which is produced by all of the nation's solar, wind and geothermal energy generation combined. Approximately 77 percent of industrial biomass energy in the U.S. is generated by wood products, such as wood chips, pellets or forestry residues.⁶⁴ The demand for bioenergy is driven by the need for alternative forms of energy to preserve the environment and to promote energy independence.⁶⁵ Additionally, in August 2011, President Obama announced the U.S. Departments of Agriculture, Energy and Navy will invest up to \$510 million over the next three years in partnership with the private sector to produce advanced biofuels used to power military and commercial vehicles, jets and ships.⁶⁶

The primary growth area related to paper products is the Consumer Tissue segment, which includes facial tissue, napkins, paper towels, toilet paper, disposable diapers, feminine products, and other sanitary papers or personal hygiene products. Such papers account for around 67 percent of all tissue sales and are less likely to be impacted by economic conditions because of their necessity to everyday life. Additionally, the need for sanitary and personal hygiene products is increasing due to the aging population and longer life expectancy.⁶⁷

The annual market for sustainable building products and services in the U.S. is valued at \$36 to \$49 billion and is projected to double by the year 2013.⁶⁸ Registrations for LEED certified projects rose nearly 40 percent in 2010 when compared to 2009 and such growth is expected to continue.⁶⁹ Growth of the market for sustainable building products is being driven by an increased consumer demand for green construction; new legislation enacted by states or cities that support or require construction of sustainable buildings and homes; an increased number of available government incentives or grants that help reduce costs associated with purchasing sustainable building materials; and improvements in the performance and design of sustainable building products.⁷⁰

Areas of Focus

- Renewable Energy (Bioenergy)
- Paper Products
- Sustainable Building Products

Definition

FORESTRY involves managing forested land in order to maintain a sustainable and continuous supply of timber through planned harvest and replacement. Wood is a renewable and environmentally-friendly material and examples of **FORESTRY PRODUCTS** made from wood include lumber for construction use; furniture, flooring, and cabinetry; paper, paperboard and tissue; and wood chips or pellets, which can be used to create renewable energy.

RENEWABLE ENERGY, such as **BIOENERGY**, is made using sources of biomass, such as crops, crop waste, grasses, trees, and forestry residues.

PAPER PRODUCTS include items such as containerboard, Kraft paper, paperboard, printing and writing papers, pulp, industrial papers, newsprint and tissue.

SUSTAINABLE BUILDING PRODUCTS are typically made of renewable or recycled materials and serve to conserve energy, improve air quality, or reduce water usage.



ALABAMA ADVANTAGES

According to the Alabama Forestry Commission, Alabama has 22.7 million acres of timberland, accounting for 68 percent of the total land area in the state, which ranks it third, behind Georgia and Oregon, as having the most timberland acreage among the 48 contiguous states.⁷¹ Approximately 2.2 million acres of Alabama's forests are certified under the Tree Farm program, which recognizes the practice of sustainable forestry on private forest land.⁷² Forestry product exports out of Alabama average 1.2 million tons annually and were valued at \$1.16 billion in 2010 ranking the industry as the fourth largest export for the state.⁷³ Alabama ranks second in the U.S. in pulp production, third in paper production, seventh in lumber production, and eighth in wood panel production.⁷⁴

A unique advantage of Alabama related to forestry products is the state's potential to grow bamboo, which has a number of applications related to sustainable building products, including a feedstock for bioenergy and a pulp for producing paper. Growing conditions in Alabama's Black Belt region appear to meet the needs for growing bamboo and a five acre test site has recently been planted near Northport. The global market for bamboo goods is expected to reach \$15 billion to \$20 billion by 2018, and much of that demand comes from the United States, however, no large scale commercial production exists in the U.S.⁷⁵

Alabama also has key advantages related to education and research opportunities for the forestry products, bioenergy, paper products, and the sustainable building products markets. The School of Forestry and Wildlife Sciences at Auburn University offers Bachelor, Masters, and Doctorate degrees in several areas including Forestry and Forest Engineering. The Forest Products Development Center, which is part of the School of Forestry, supports forest-based economic development in Alabama. The center can assist with services related to forest resource studies, economic feasibility studies, capital project investment analyses, project financing opportunities, technical training, and others.⁷⁶

The Alabama Center for Paper and Bioresource Engineering (AC-PABE), part of Auburn's Samuel Ginn College of Engineering, supports the pulp, paper and bio-resource industries by conducting research relevant to industry needs, developing new technology and aiding with technology transfer activities. AC-PABE is also involved with the Pulp and Paper Education and Research Alliance and the Wood Fiber Initiative in Science and Engineering.⁷⁷ Auburn's Center for Bioenergy & Bioproducts is engaged in R&D activities to discover technologies that will enable bioenergy to be a cost-effective alternative fuel to traditional petroleum-based fuels. The main feedstocks being researched are woody biomass, energy crops, and agricultural crop waste.⁷⁸

Location Criteria

- Supportive governmental policies
- State and local financial incentives
- Availability of needed natural resources, feed stocks or raw materials
- Proximity to market demand and supply chain
- Availability of a workforce with needed skills
- Costs of doing business

Representative Alabama Companies

Boatright Companies

Boise Paper

Georgia-Pacific

International Paper

Kimberly-Clark

Kronospan GmbH

SCA Tissue North America

Wellborn Cabinet, Inc.



Advanced Manufacturing

Chemicals

GROWTH OPPORTUNITY AND TRENDS

More than 783,800 people are employed in the chemical industry in the United States according to the American Chemistry Council. The industry in the U.S. is valued at \$689 billion and produces nearly 20 percent of chemicals in the world. While the sector has been impacted by the global recession and a lack of demand for chemical products, it is projected to grow at a rate of four percent per year between 2011 and 2016.⁷⁹

Growth within the chemicals industry is strongly tied to the major end-use markets for chemical products, which include construction supplies, agriculture, textiles, motor vehicles, electrical equipment, furniture, plastic products, agriculture, and rubber products.⁸⁰ Areas experiencing the greatest growth are in the manufacture of certain specialty chemical sub-sectors including mining chemicals, emission control catalysts, and electronic chemicals. Other growth areas include specialty polymers such as high-performance thermoplastics and specialty films, and synthetic organic polymers, which can be used as plastics, fibers and elastomers. Additionally, the demand for more energy-efficient products, such as lightweight plastics used in fuel-efficient cars and packaging, and films used in solar cells, is also providing growth opportunities for chemical companies.⁸¹

Another promising growth area for chemical companies is in the use of ionic liquids as solvents. Ionic liquids consist of salts that are liquid at room temperature, are typically not flammable, do not evaporate, and exhibit high thermal stability. They have many applications, such as powerful solvents for a range of inorganic, organic, and polymeric materials as well as an extractive media in liquid/liquid extraction processes. German chemical company BASF, which has two locations in Alabama, formed a research partnership with the University of Alabama (UA) in 2006 to explore the use of ionic liquids to dissolve and process cellulose. The use of ionic liquids with cellulose has the potential to enable cellulose to be used as a chemical feedstock for production of plastics and fibers with enhanced properties, such as film blends of cellulose and polypropylene that have exceptional tear strength or the development of antibacterial fabrics that can reduce bacterial transmission via clothing and bedding.⁸²

Area of Focus

- Ionic Liquids

Definition

Basic **CHEMICALS** are manufactured from mined materials such as crude oil, natural gas, and minerals, or can also be made from natural substances such as crops. Examples of basic chemicals include petrochemicals, industrial gases, dyes and pigments, alkalis, chlorine, and alcohols. Basic chemicals, often known as commodity chemicals, are used to produce specialty chemicals such as resins, plastics, synthetic fibers, pesticides, lubricants, paints, coatings, adhesives, soaps and cleaners, pharmaceuticals, and numerous other products.

An **IONIC LIQUID** is a salt in the liquid state that offers the potential for significant changes in operations in the chemical industry. Ionic liquids have non-detectable vapor pressures and unique solvent properties that enhance the possibility for clean manufacturing.



ALABAMA ADVANTAGES

Chemicals are the second-largest export in Alabama, totaling \$2 billion in 2010, and the industry employs more than 9,300 workers.⁸³ Major chemical companies that have a presence in Alabama include Akzo Nobel, Arkema, BASF, Dow Chemical, DuPont, Evonik Degussa, Ineos, Mitsubishi Polysilicon, Olin Corporation and Sabic Innovative Plastics.⁸⁴ Chemicals and other products made by such companies in Alabama include oxidants, light stabilizers, tinuvin, emissions catalysts, silicon metal for industrial applications, materials for semi-conductors, polycarbonate resin, insecticides, fungicides, carbon disulfide, sulfuric acid, sodium hydrosulfide, sulfuric chlorides, hydrogen peroxide, chlorine, caustic soda, industrial bleach, fumed silica, and methionine, an additive used in animal feed.⁸⁵

In addition to the strong cluster of chemical companies in the state, another key advantage Alabama has for attracting such companies is its transportation resources, especially the Port of Mobile. The port is currently ranked as the ninth largest seaport in the United States in terms of total volume and can handle containerized, bulk, break bulk, roll-on/roll-off, and heavy lift cargoes. It includes 41 ship berths, more than four million square feet of warehouse and open yard space, and handled approximately 23.4 million tons of freight in fiscal year 2010. The Port of Mobile is served by 100 overseas shipping lines, all five Class I railroads in Alabama, and Interstates 10 and 65.⁸⁶ Other interstate highways in Alabama include Interstates 20, 59, and 85 as well as Interstate 22, which is scheduled to be completed in 2014 and will run from Birmingham to Memphis.⁸⁷

Universities in Alabama that offer degrees and research opportunities in chemical engineering include the University of Alabama, Auburn University, the University of Alabama-Huntsville, and the University of South Alabama. The mission of the Center for Green Manufacturing at the University of Alabama is “to prevent pollution and save energy through the discovery and development of new knowledge that reduces and/or eliminates the use or generation of hazardous substances in the design, manufacture, and application of chemical products or processes.” The center primarily focuses on research related to the use of ionic liquids and their application to materials, separations, energy, and medicine.⁸⁸

Additional advantages of Alabama include a number of available sites and buildings that may be a suitable location for a chemical company, low costs of doing business, low costs of living and competitive incentives.

Location Criteria

- Transportation resources, including river or port access
- Cost of doing business, including cost of electricity
- Available infrastructure
- Presence of other companies in the industry (Clusters)
- Availability of a workforce with needed skills
- State support and financial incentives

Representative Alabama Companies

BASF
 Dow Chemical
 Dupont
 Evonik Degussa
 Olin Corporation
 UOP, LLC



Technology

According to the National Science Foundation, there is no single preferred definition for the technology industry. Generally, companies in this sector have a great dependence on science and technology innovation that leads to new or improved products and services. They also have a substantial economic impact, fueled both by large research and development (R&D) spending, and a higher than industry average sales growth. New product development and capital investment often go hand in hand, making technology companies an attractive economic development target.⁸⁹

A Congressional Office of Technology Assessment describes technology firms as those “engaged in the design, development, and introduction of new products and/or innovative manufacturing processes through the systematic application of scientific and technical knowledge.” Technology firms typically use state-of-the-art techniques and, in terms of quantifiable resources, devote a high proportion of expenditures to R&D and employ a high proportion of scientific, technical, and engineering personnel.⁹⁰

The overall technology sector often includes companies involved in information technology, advanced materials, aerospace, biotechnology, energy and environment, electronics, transportation, management services, and technology industrial manufacturing. The trend in the United States and many other parts of the world is toward the development of more knowledge-intensive economies, in which research, its commercial exploitation, and other intellectual work play a growing role. Industry and government play key roles in these changes.

The combination of consumers’ unquenched demand for new technology and businesses’ application of new technologies to gain efficiencies has given the technology industry a job growth rate nearly four times faster than the national average since the employment trough was reached in February 2010 (5.1 percent vs. 1.4 percent). Additionally, rising venture capital and initial public offering activity is fueling key rapid evolution and growth segments of the technology industry.⁹¹

Biosciences continues to be a growth sector. In the information technology area, the military simulation and virtual training market is expected to hit \$8.75 billion in 2011.⁹² In addition, the non-military commercial application of the technology is expanding rapidly into other fields. There is also an ongoing convergence of technologies between military simulation, interactive media and motion picture computer generated imagery. This convergence along with other developing trends in information technology is often described as “emerging media”.

Strategic Sectors

Targeted sectors within the Technology category include:

- Biosciences
- Information Technology
- Enabling Technologies



Technology

Biosciences

GROWTH OPPORTUNITY AND TRENDS

The biosciences sector has continued to grow nationally, despite the overall economic downturn. The biomedical sector directly and indirectly accounts for some five million U.S. jobs (including 1.2 million high-wage private-sector jobs in pharmaceuticals, biotech, medical devices, and research and testing). The U.S. Department of Labor projects that employment in the biosciences sector will grow at an average annual rate of 1.5 percent between 2008 and 2018, making it one of the fastest growing industry sectors.

Bioscience employment grew faster than national employment from 2001 to 2008. During that period, the bioscience industry added 193,748 jobs, an increase of 15.8 percent, which was 4.5 times greater than the overall jobs growth rate of 3.5 percent. This growth in biosciences is due primarily to growth in research, testing, and medical laboratories. Annual wages in the bioscience sector were \$77,595 in 2008, up from \$70,959 in 2006. This is \$32,366 more than the average annual wage of the total U.S. private sector, which was \$45,229 in 2008. In addition, since 2001, earnings for biosciences workers have increased by 10.1 percent, compared with 3.2 percent for the U.S. private sector. R&D expenditures have also increased steadily, and bioscience-related patents totaled 75,593 from 2004 to 2009. Bioscience related patents reached 13,150 in 2009, the second largest yearly total of the period.⁹³

The Human Genome Project, an international public project led by the United States, required the development of advanced equipment, technologies, data analysis tools, and specialized analysis techniques that have facilitated the growth of an expanding genomics industry. In 2010, human genome sequencing projects and related research generated \$67 billion in U.S. economic output, \$20 billion in personal income for Americans and 310,000 jobs.⁹⁴

Areas of Focus

- Cancer/Oncology
- Genomics
- Neuroscience

Definition

The **CANCER/ONCOLOGY** niche in biosciences involves the molecular, genetic, cell biological, and pathobiological aspects of cancer diagnosis and treatment.

GENOMICS is a discipline in genetics concerning the study of the genomes of organisms. The field includes intensive efforts to determine the entire DNA sequence of organisms and fine-scale genetic mapping efforts.

NEUROSCIENCE is a branch of the life sciences that deals with the anatomy, physiology, biochemistry, or molecular biology of nerves and nervous tissue, as well as their relation to behavior and learning.



ALABAMA ADVANTAGES

Alabama is home to more than 100 bioscience companies, with the majority conducting cutting edge research in areas such as cancer, heart disease, diabetes, hepatitis and osteoporosis. Leading agricultural research is also being conducted to improve crop yields and identify alternative sources of energy.

Most of the state's bioscience jobs are found in Huntsville, Birmingham and Mobile. These cities offer access to research universities and a trained workforce that is critical for scientific research and technology transfer. Researchers and entrepreneurs are clustered in the HudsonAlpha Institute for Biotechnology in Huntsville, the Innovation Depot in Birmingham, the Auburn Research Park in Auburn, and the University of South Alabama's Biotechnical Research Unit in Mobile.⁹⁵ HudsonAlpha is located in the second largest research park in the nation and includes a Genome Sequencing Center and a Genomic Services Lab, which is available for companies and academic researchers to use. Two companies there are testing new products that could advance the fight against breast and other cancers.⁹⁶

The University of Alabama - Birmingham (UAB) has more than \$450 million in research funding, much of which goes to the life sciences, according to the state's biotech association.⁹⁷ Southern Research is another leading research organization that employs more than 600 scientists, technicians and support staff. This organization focuses on cancer, infectious and neuro/CNS diseases and has discovered six FDA-approved drugs, with four more in clinical trials.⁹⁸

UAB's Comprehensive Cancer Center is the only National Cancer Institute (NCI)-designated comprehensive cancer center located in a six-state area that includes Alabama, Arkansas, Georgia, Louisiana, Mississippi, and South Carolina. UAB's cancer center has a faculty of more than 330 physicians and researchers who treat an estimated 5,000 new patients each year. The center conducts clinical trials to specifically target a broad array of cancers, including breast, gastrointestinal tract, lung, ovary, head and neck, brain tumors, and lymphomas. In addition, the Cancer Vaccine Development team at UAB is charged by the NCI with developing a series of cancer vaccine trials using genetically engineered vaccine reagents.⁹⁹

UAB is also home to a Comprehensive Neuroscience Center that involves research, clinical care and education. The Neuroscience Center includes the Alabama Neuroscience Blueprint Center Core Facility, the Mental Retardation Research Center and the UAB Center for Gialil Biology in Medicine, which provides additional research capacity. The new Civitan Functional Imaging Center provides training and research in human brain imaging of adults and children.¹⁰⁰

Location Criteria

- Presence of high-quality research institutions
- Availability of funding/venture capital
- Access to technical talent
- Supportive tax policies and incentives
- Low overall cost of doing business

Representative Alabama Companies

BioHorizons Inc.

Cardinal Health

Centrix Pharmaceutical, Inc.

Conversant Bio

Discovery BioMed, Inc.

Open Biosystems

Pharmavite

Qualitest Pharmaceuticals

SurModics Pharmaceuticals



Technology

Information Technology

GROWTH OPPORTUNITY AND TRENDS

The Information Technology sector continues to rapidly evolve and grow as business and personal computing needs increase. Enterprises are moving into 2012 with information at the forefront of their agendas. According to a recent Gartner survey, increasing the use of information and analytics is one of the top three business priorities. Data volumes continue to increase as a result of collaboration, productivity and social channels, requiring additional enterprise information management.¹⁰¹

Bureau of Labor Statistics data shows that computer systems design and management services is among the fastest growing industries, with employment projected to increase by 656,400 jobs by 2018. This represents an annual growth rate of 3.8 percent. In addition to the increasing demand for sophisticated networks, Internet and intranet sites, other factors driving growth include the need for compatibility with mobile technologies, the adoption of e-prescribing and electronic health records, and increasing requirements for computer-related security services.¹⁰² Protecting computers and servers from intruders has grown nearly 10 percent a year since 2006, with companies expected to spend \$75.6 billion in 2011, up from \$63 billion in 2010. Security and data breaches have cost U.S. companies nearly \$96 billion in the first six months of 2011, almost as much as the 2010 total.¹⁰³ In addition, the federal government has allotted more than \$13 billion annually for cybersecurity over the next five years.¹⁰⁴

The field of bioinformatics is expected to grow in importance over the next two decades, as biological data becomes increasingly abundant and more complex biological processes are investigated. The need for data integration will continue across all sectors employing bioinformatics, including industry and healthcare.¹⁰⁵

In addition, despite growing concerns of a global economic slowdown, companies that construct and operate data centers that run the Internet and store vast amounts of corporate and government data expect growth next year to reach almost 20 percent.¹⁰⁶

Areas of Focus

- Bioinformatics
- Cybersecurity
- Data Centers
- Defense – Software Development
- Emerging Media
- Modeling & Simulation

Definition

BIOINFORMATICS involves the use of computers to store, retrieve, analyze, predict or simulate the composition or structure of biomolecules. It also includes information from data arising from the study of DNA and genomics.

CYBERSECURITY is the body of technologies, processes and practices designed to protect networks, computers, programs and data from attack, damage or unauthorized access. A **DATA CENTER** is a centralized repository, either physical or virtual, for the storage, management, and dissemination of data and information organized around a particular body of knowledge or pertaining to a particular business. **SOFTWARE DEVELOPMENT** includes research, new development, prototyping, modification, reuse, re-engineering, maintenance or any other activities that result in software products. **EMERGING MEDIA** is communications of all types based on digital technologies and interactive components that increase volume and speed of communication. **MODELING AND SIMULATION** is a discipline for developing a level of understanding of the interaction of the parts of a system and of the system as a whole. Simulations may be live, virtual or constructive.



ALABAMA ADVANTAGES

Alabama offers IT companies a strong base of research and education to support product development and workforce needs. The Center for Materials for Information Technology at the University of Alabama performs research ranging from studies on materials for data storage to the application and technologies of industrial fields related to all types of information technology.¹⁰⁷ The City of Huntsville is partnering with the Space and Missile Defense Command, the University of Alabama - Huntsville (UAH), Auburn University, and major defense contractors, such as Lockheed Martin, Raytheon, Boeing and General Dynamics to create the Cyber Systems Integration and Security Center (CSISC), which will be a large R&D facility devoted to cyber security research in support of Huntsville's vast amount of weapons systems development. The proposed location for the center is the new Redstone Gateway Center, a 4.2 million-square-foot office and commercial facility. In addition, UAH recently added a Master of Science in Information Assurance and Security degree program.

The University of South Alabama Center for Forensics, Information Technology and Security is involved in the study and application of digital forensics and information technology security and assurance. The National Security Agency (NSA) and the Department of Homeland Security (DHS) have designated the University of South Alabama as a National Center of Academic Excellence in Information Systems Security Education.¹⁰⁸

The Gunter Complex in Montgomery is comprised of approximately 2,500 IT professionals including active duty military, Department of Defense civilians, and civilian contractors, as well as more than 20 companies outside the base that provide IT support to the Air Force and the Department of Defense. IT services provided include network operations, network security, and maintenance of the classified and unclassified Air Force network worldwide. Many are also involved in software maintenance with such activities supported by two 24/7 technical support centers. In addition to the activities that support the Air Force, the Defense Information Systems Agency on Gunter is the home for all electronic medical records for the entire Department of Defense.¹⁰⁹

Alabama A&M University offers a Masters and Doctorate degree in Plant and Soil Science with a specialization in Bioinformatics, a program focused on the application of computer-based technologies and services to biological, biomedical, and biotechnology research.

Alabama has four sites which have been designated as Primary Data Center Sites by TVA. Such sites are located in the communities of Florence, Guntersville, Hartselle, and Huntsville. Primary Data Center Sites have been certified by Deloitte Consulting as ready-for-development and meet the requirements to support a major data center. Selection criteria used in the certification process included accessibility, telecommunications

Location Criteria

- Latency/telecommunications infrastructure
- Cost of construction
- Cost of electricity
- Access to skilled workforce
- Financial incentives
- Access to research and development capacity

Representative Alabama Companies

Adtran, Inc.
 CGI Group, Inc.
 Dynetics
 Intergraph Corporation
 Northrop Grumman Mission Systems
 SAIC
 STI



infrastructure, electric power availability and reliability, and other characteristics beneficial to data center development. ¹¹⁰

Alabama is one of the nation's recognized leaders in the development and application of modeling and simulation technologies. UAH's Center for Modeling, Simulation, and Analysis conducts leading-edge research on modeling, simulation and systems engineering. The Alabama Modeling & Simulation Council is a non-profit organization focused on encouraging the growth and development of the industry in the state. Alabama's collaborative efforts between the military, academia and private industry ensures its position as a location for growth.



Technology

Enabling Technologies

Many business sectors, such as automobiles and aerospace are easily categorized and targeted from a supply-chain perspective. There are, however, core technologies that Alabama possesses that span multiple sectors with an almost infinite number of potential applications. These technologies are critical to the state because their advancement enables future development of existing targeted sectors, while contributing to the creation of new sectors as well. Thus, as according to Webster’s definition of “enable”, these technologies “provide the means or opportunity” for future innovations.

Whereas Alabama’s recommended target business sectors are defined market sectors with identifiable supply chains, the state is also the home to some specific technologies that defy industry categorization. Although these technologies may primarily support one or two of Alabama’s sectors, they have the potential to positively impact virtually all of the recommended sectors through an almost infinite number of potential applications as outlined in the chart below.

TECHNOLOGY	ADVANCED MANUFACTURING						TECHNOLOGY	OTHER		
	Aerospace/ Defense	Automotive	Agricultural Products/ Food Production	Steel/ Metal	Forestry Products	Chemicals		Biosciences	IT	Distribution/ Logistics
Nanotechnology	X	X	X	X	X	X	X	X	X	*
Photonics	X	X	X	X	X	X	X	X	X	*
Robotics	X	X	X	X	X	X	X	X	X	*

**Indicates that Corporate Operations can represent virtually any technology and is also influenced by virtually all technologies.*



Nanotechnology

Nanotechnology is developing rapidly with a myriad of potential applications. Research at the nano particle level has applications in medicine, electronics, environmental, energy, space, food, consumer products, chemicals, microelectromechanical, and well as many more areas. It is not an exaggeration to say that virtually everything we use in our daily lives will be affected by nanotechnology in the future.

ALABAMA ADVANTAGES

The Nano and Micro Devices Center (NMDC) at the University of Alabama - Huntsville (UAH) focuses on a broad range of micro and nano technologies. The state of the art facilities and quality faculty provide Alabama with cutting-edge research and development capacity in nanotechnology. The NMDC strives to integrate its expertise with other established fields, such as electrical, chemical, biology, physics and materials engineering. Nano research is also taking place in the engineering, biology, physics and chemical departments of Alabama's other research universities.

In addition the broad range of nanotechnology research ongoing throughout the state of Alabama demonstrates a particular competitive edge in the design and development of nanosatellites. Auburn University, Marshall Space Flight Center, Space and Missile Defense Command, Von Braun Center for Science and Innovation, and multiple private companies are working on and delivering nanosatellites to the market.

Robotics

Although robotics will become more and more prevalent in the industrial setting as the drive toward greater efficiencies and productivity accelerates, the applications that are just emerging will explode in the future. Like nanotechnology, robotics creates applications across virtually every field, including but not limited to the following: aerospace; agriculture and forestry; bioscience and bioengineering; chemicals; construction; electrical engineering; information technology; logistics and transportation; and safety and security.

ALABAMA ADVANTAGES

The creation of the Robotics Technology Park (RTP) in Decatur has demonstrated a commitment to this technology. The RTP will not only generate skilled technicians to work in the robotics field, it will partner with public and private researchers to develop new robotic systems and technologies. In addition, many Alabama universities including Auburn University, the University of Alabama, and the University of Alabama - Birmingham are all not only conducting leading-edge research in the robotics field, but are also very active supporting

Areas of Focus

- Nanotechnology
- Robotics
- Photonics

Definition

NANOTECHNOLOGY is the science of manipulating materials on an atomic or molecular scale, between 1 and 100 nanometers (A human hair is approximately 100,000 nanometers wide).

ROBOTICS is the development of automatic devices that perform functions normally ascribed to humans or a machine in the form of a human.

PHOTONICS is the technology of generating and harnessing light and other forms of radiant energy whose fundamental element is the photon. The range of applications of photonics extends from energy generation to detection to communications and information processing.



robotics camps and competitions for high school and undergraduates.

The technology driving many of Alabama's sectors overlaps with robotics as well. Aviation/aerospace, modeling, simulation & training, agriculture, forest products, life sciences and distribution/logistics will all influence the future use of robotics. The results of the work being done in robotics in these respective sectors will transform the industries themselves.

Photonics

Numerous technologists have stated that whereas developments in the 20th Century were based on the electron, the 21st Century advancements will be based on the photon. Photonic applications use the photon in the same way that electronic applications use the electron. Since light travels 10 times faster than electricity, data transmitted photonically can travel correspondingly faster. As applications and devices evolved from the invention of the transistor, new and increasing diverse applications are emerging in the field of photonics. As with the other enabling technologies, these applications span virtually all industries in Alabama. A few examples of industries that use applied photonics include aviation/aerospace, consumer equipment, telecommunications, medical devices, manufacturing, construction, information processing and agriculture.

ALABAMA ADVANTAGES

As evidence of the emerging nature of the photonics industry, it has yet to coalesce around one single name. Although photonics is becoming more prevalent, optics and electro-optics are often used in a virtually synonymous fashion. Unless a university has created a focus for this enabling technology, research and courses can take place in various departments with physics and electrical engineering as the most common.

UAH has created the Center for Applied Optics and also offers a Master of Science degree in optics and photonics technology through its Department of Physics. In addition, the Marshall Space Flight Center has created the Space Optics Manufacturing Technology Center, which partners with UAH and other leading Photonics research universities in the U.S. Alabama A&M University has an alliance with the Space Optics Manufacturing Technology Center and offers graduate level course in optics/lasers and space science.

Location Criteria

- R&D capacity
- R&D Investment Tax Credits
- Ability to recruit engineers

Representative Alabama Companies

Draper Laboratory

Dynetics, Inc.

Jenoptick, Inc.

Marshall Space Flight Center

Nalux Nano Optical

PeopleTec, Inc.

Science Applications International Corporation (SAIC)

Teledyne Brown Engineering



Distribution and Logistics

GROWTH OPPORTUNITY AND TRENDS

This distribution and logistics sector is growing and is expected to continue to grow in the United States with employment in the transportation and warehousing industry projected to increase 11 percent from 2008 to 2018.¹¹¹ Major trends driving this growth include increasing U.S. freight traffic and foreign trade, as well as more demand from online sales.

By 2020, it is expected that U.S. freight traffic will increase 100 percent and foreign trade will increase nearly 200 percent. Containerized cargo volume is expected to increase 350 percent in the same time period.¹¹² Currently it is estimated that 70 percent of imports from Asia come to the U.S. through the West Coast. With the completion of the expansion of the Panama Canal in 2014, it is expected that some of this cargo will begin entering the U.S. through the Gulf Coast.¹¹³ The expansion will create an all-water route from Asia to the Gulf Coast. The Gulf Coast also provides an alternative to the congested East Coast ports for larger ships.¹¹⁴

Related to retail sales, online sales increased at twice the rate of retail store sales in the second quarter of 2011.¹¹⁵ According to the U.S. Department of Commerce, online sales are projected to be more than \$180 billion in 2011 and nearly \$270 billion by 2015.¹¹⁶ This creates additional demand for the transportation and logistics industry, which includes trucking, transportation and warehousing.

Other trends impacting the distribution and logistics industry include increased oil and diesel prices that are leading to companies decentralizing distribution operations and locating closer to their end customers, and the outsourcing of distribution functions to trucking and warehousing companies.¹¹⁷

Niche Sectors

- Port Related
- Internet Fulfillment

Definition

DISTRIBUTION is the traveling of goods from the source to the final customers. Logistics includes managing inventory throughout distribution channels.

Distribution centers allow a single facility to maintain an inventory on a variety of products. Retail and direct to consumer distribution operations can be handled out of the same facility, allowing the sharing of space, equipment, labor resources and inventory. Distribution centers are demand driven.



ALABAMA ADVANTAGES

Alabama has transportation resources to support the distribution and logistics sector, especially the Port of Mobile. The port is currently ranked as the ninth largest seaport in the U.S. in terms of total volume and can handle containerized, bulk, break bulk, roll-on/roll-off, and heavy lift cargoes. It includes 41 ship berths, more than four million square feet of warehouse and open yard space, and handled approximately 23.4 million tons of freight in fiscal year 2010. The Port of Mobile is served by 100 overseas shipping lines, all five Class I railroads in Alabama, and Interstates 10 and 65.¹¹⁸ Other interstate highways in Alabama include Interstates 20, 59, and 85 as well as Interstate 22, which is scheduled to be completed in 2014 and will run from Birmingham to Memphis.¹¹⁹ Alabama also has seven commercial airports.¹²⁰

The Port of Huntsville is an inland port that is comprised of the Huntsville International Airport, International Intermodal Center, and Jetplex Industrial Park, which provides quality multi-modal transportation services. The International Intermodal Center located Interstates 65 and 565 in the Port of Huntsville Global Logistics Park is a single location specializing in receiving, transferring, storing, and distributing international and domestic cargo via air, rail, and highway. Air freight service is provided by FedEx, UPS, Cargolux and Panalpina, and rail service is provided by Norfolk Southern.¹²¹ In 2010, the center handled nearly 156.3 million tons of freight, an increase of more than 19 percent over 2009.¹²²

Brookley Aeroplex in Mobile is one of the world's largest industrial parks on the Gulf Coast with more than four million square feet of industrial space on 1,650 acres. The Brookley Aeroplex offers the logistical advantages of rail, road and water, as well as a general aviation airport that includes two runways.¹²³

In June 2011, Norfolk Southern broke ground on its \$97.5 million regional intermodal freight facility in McCalla, which is to be located on 316 acres adjacent to the Jefferson Metropolitan Industrial Park.¹²⁴ Also in June of 2011, Dollar General broke ground on a \$100 million facility in Jefferson County. The one million square foot distribution center will employ 650 people when it is fully operational.¹²⁵ Other retailers operating distribution centers in Alabama include but are not limited to the Children's Place, Home Depot, Target and Walmart.¹²⁶ In September 2011, Pharmavite selected Opelika as the location for its new \$74 million dietary supplement manufacturing plant and distribution facility creating 280 jobs.

Other advantages for the distribution and logistics sector include an available workforce with nearly 50,000 people employed in the transportation and warehousing industry.¹²⁷ Alabama also has designated foreign trade zones in Birmingham, Huntsville, Mobile, and Montgomery and does not levy tax on inventory.¹²⁸

Location Criteria

- Multi-modal transportation resources
- Proximity to suppliers and customers
- Affordable and reliable workforce
- Telecommunications infrastructure
- Cost of utilities
- Financial incentives

Representative Alabama Companies

AAA Cooper Transportation

Ace Retail Support Center

Children's Place

Dollar General

Home Depot

McClane Company, Inc.

SYSCO

Target

Walmart



Corporate Operations

GROWTH OPPORTUNITY AND TRENDS

The relocation of a corporate headquarters is rare but the potential for major corporations to move or establish new regional headquarters is more common. Such moves often occur as a result of a change in management, a merger or acquisition, the need for cultural or other internal changes, the desire to move closer to customers and/or suppliers, rising costs at the existing location, a lack of available and qualified workers, a lease expiring, and transportation issues.¹²⁹

Many corporations are seeking ways to lower their operating costs. One way some companies can save money and increase efficiency is by moving select administrative functions away from their corporate headquarters and establishing a regional headquarters in an area with lower overall costs of doing business.¹³⁰ Corporate headquarters have traditionally been established in large cities in the Northeast and Midwest but a trend seen over the last 20 years has been the shift of operations to lower cost Southern cities such as Atlanta, Charlotte, Dallas, Nashville and Raleigh.¹³¹

Employment in the customer contact center sector is expected to grow by 18 percent over the ten- year period between 2008 and 2018 and add 400,000 jobs according to the U.S. Bureau of Labor Statistics.¹³² One trend driving growth is the emphasis companies increasingly place on customer service. The best way to retain customers is through proactive, positive relationship management and outstanding customer service.¹³³ Another trend driving growth is the move away from outsourcing customer service functions overseas in an attempt to cut costs, which has resulted in a diminished quality of the service provided, causing customers to leave. Many companies realize customer support is too important to be outsourced, and will increasingly be transferring this function back to the U.S.¹³⁴ Additionally, new advances in technology and the introduction of new electronic products such as smart phones, laptop computers and tablet computers, and others often need customer contact representatives who have technical expertise and can interact with customers via telephone, email or live chat.¹³⁵

Areas of Focus

- Regional Headquarters
- Customer Contact Centers

Definition

A **REGIONAL HEADQUARTERS** is a primary business unit of a corporate headquarters that has managerial control over offices in the region.

CUSTOMER CONTACT CENTERS can be used to handle services that include billing, receivables management, employee care, technical support, member information for healthcare plans, and sales.



ALABAMA ADVANTAGES

Alabama has a strong cluster of corporate operations including regional headquarters and customer contact centers. Four companies headquartered in Alabama are ranked on *Fortune* magazine's list of the largest 1,000 public companies in the U.S. Such companies include Regions Financial, Vulcan Materials, Protective Life and HealthSouth.¹³⁶ Major companies including State Farm, Verizon Wireless, DirectTV, Blue Cross and Blue Shield, and AT&T operate regional headquarters or customer contact centers in Alabama.

Alabama also offers a business environment that may be attractive to companies looking for a new location for a regional headquarters or customer contact center. The state is ranked 11th on CNBC's 2011 "*Top States for Doing Business*," list in the individual category of Cost of Living and is also ranked 16th in Cost of Doing Business.¹³⁷

Transportation resources, especially related to airports, give the state an advantage to attracting regional headquarters or customer contact centers, which may require easy access to airports for executives who may need to travel from the corporate headquarters location. Alabama has seven commercial airports, including Birmingham-Shuttlesworth International Airport and Huntsville International Airport, which offer more than 300 daily passenger flights on 13 airlines into and out of the state.¹³⁸ Additionally, Atlanta's Hartsfield-Jackson International Airport, one of the busiest airports in the world, is located within close proximity to several parts of the state and offers direct flights to more than 150 destinations in the U.S. and more than 80 international destinations. Many flights from Atlanta are within two hours of 80 percent of the United States' population.¹³⁹

Approximately 29 percent of Alabama's residents have earned an Associate's degree or higher. Universities offering a Masters of Business Administration degree include Alabama A&M University, Auburn University, Auburn University Montgomery, Jacksonville State University, Troy University, University of Alabama, University of Alabama – Birmingham, University of Alabama – Huntsville, University of Montevallo, University of North Alabama, and the University of South Alabama.¹⁴⁰

Location Criteria

- Cost of doing business, including affordable labor
- Availability of commercial office space and flexible lease options
- Transportation resources, including airport access
- Availability of an educated workforce
- Low cost of living and overall quality of place
- State support and financial incentives

Representative Alabama Companies

AT&T

Blue Cross and Blue Shield of Alabama

HealthSouth

Protective Life

Regions Financial

State Farm Regional Headquarters

Verizon Wireless

Vulcan Materials



Economic Development Drivers



Economic Development Drivers

The Alabama Economic Development Alliance was created to organize and direct the preparation of a strategic economic development plan for the state to ensure the recruitment, retention and renewal of business and industry in Alabama. These three economic development drivers are defined as follows:

Recruitment: Programs that focus on the attraction of new business and industry.

Retention: Programs that focus on the retention and expansion of existing business and industry.

Renewal: Programs that focus on job creation through innovation, entrepreneurship, research and development, and commercialization.

In order to successfully compete for the jobs of tomorrow in each of the targeted business sectors, the state must diversify its economic development efforts through a balanced emphasis on recruitment, retention and renewal. To maximize opportunities, there must be a coordinated and strategic effort over the next three years within each of these three economic development drivers. Each recommendation is designed to accelerate the state's economic development efforts with each tactic providing a path to success. The accelerators are organized within the context of the three economic drivers, but most will require collaborative efforts across the full spectrum of Alabama's economic development community. There are some economic development accelerators that transcend the three primary economic drivers. These recommended initiatives have been presented after the three drivers in an "Other" category.



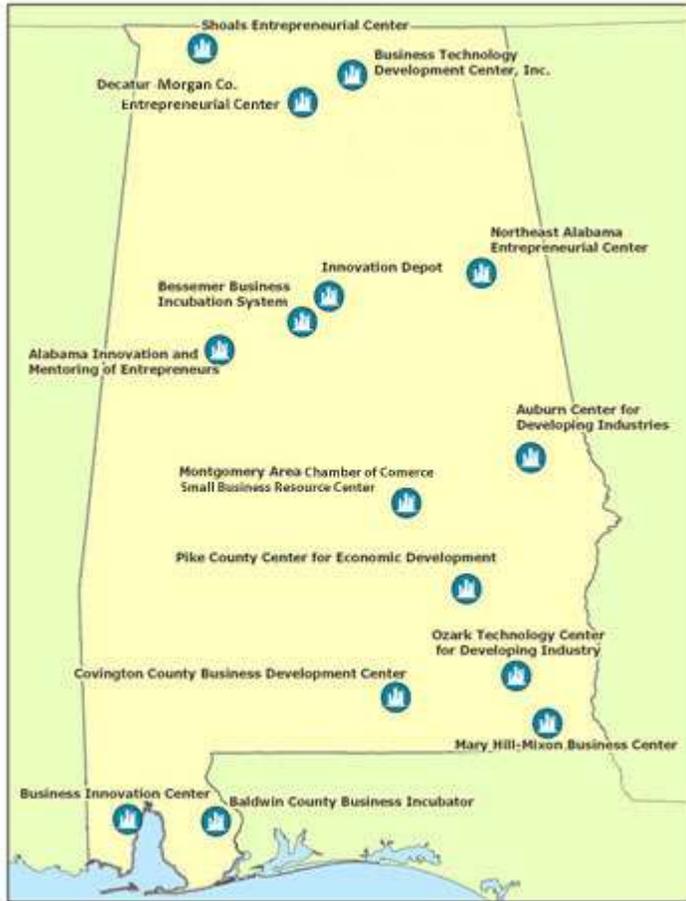
Below is a master list of acronyms of the organizations referenced in this section:

Alabama Commission on Higher Education	ACHE
Alabama Community College System	ACCS
Alabama Department of Economic & Community Affairs	ADECA
Alabama Department of Transportation	ALDOT
Alabama Development Office	ADO
Alabama Industrial Development Training	AIDT
Alabama Research Alliance	ARA
Alabama Small Business Development Center	ASBDC
Alabama State Department of Education	ALSDE
Alabama Technology Network	ATN
Alabama Workforce Training System	AWTS
Economic Development Association of Alabama	EDAA
Economic Development Organizations	EDOs
Economic Development Partnership of Alabama	EDPA
Education Trust Fund	ETF
Export Alabama Alliance	EAA
Governor's Office of Workforce Development	GoWD
North Alabama International Trade Association	NAITA
Office of Minority Business Enterprise	OMBE



Alabama Incubators

Below is a map and list of Alabama Incubators referred to in this section.



Alabama Innovation and Mentoring of Entrepreneurs Center – Tuscaloosa	Auburn Center for Developing Industries – Auburn	Baldwin County Business Incubator – Robertsdale
Bama Technology Incubator – Tuscaloosa	Bessemer Business Incubation System – Bessemer	Business Innovation Center – Mobile
Business Technology Development Center, Inc. (BizTech) – Huntsville	Covington County Business Development Center – Andalusia	Decatur Business Incubator – Decatur
Enterprise Business Incubator – Enterprise	Innovation Depot – Birmingham	Mary Hill-Mixon Business Center – Dothan
Montgomery Area Chamber of Commerce Small Business Resource Center – Montgomery	North Alabama Business & Technology Center – Arab	Northeast Alabama Entrepreneurial System – Anniston
Ozark Technology Center for Developing Industry – Ozark	Pike County Center for Economic Development Small Business Incubator – Troy	Shoals Entrepreneurial Center – Florence



Economic Development Driver: Recruitment

Although retention of existing companies and creation/renewal of new ones will grow in importance, recruitment of new job-creating investment from outside Alabama will continue to be of paramount importance. ADO will lead these efforts, but because of the interdependent nature of the factors of success, they will require the involvement and cooperation of all other organizations involved with economic development in Alabama. With that said, the recommendations outlined below, although focused on recruitment of new business/industry to Alabama, are also applicable in most cases to expansion of existing industry.

Human Capital

Alabama cannot be successful with new recruitment without providing a workforce whose skills are aligned with the needs of future prospects. As prospects in all sectors require increasingly higher level of skills to achieve their productivity objectives, Alabama must enhance its ability to provide them. The Governor and ADO will support those organizations coordinating the various federal, state and local workforce/education programs. Other organizations will support the initiative through implementation of action steps in their respective areas of responsibility.

Physical Capital

In addition to a trained workforce, sites and infrastructure must be available that meet prospects' criteria. Programs that help the state and its communities prepare for future economic development are critical to success. The Governor and ADO will support those organizations with the coordination of programs designed to address site and infrastructure needs.

Financial Capital

The third required resource that will determine the fate of Alabama's future efforts is the level of financial assistance and investment the state provides to develop and secure future prospects. ADO should lead a coordinated effort to determine current competitive requirements in this area.

Lead Generation

In today's competitive climate a state cannot rest on its past laurels but must proactively reach out to suspects and prospects to engage them in serious consideration of Alabama as a viable location for their future investment. ADO should lead this effort in conjunction with the Alabama Marketing Allies and other market-specific partners.

The Alabama Film Office is now part of ADO. Video entertainment is now delivered through multiple mediums and screen sizes. As Alabama has recently expanded its motion picture incentives to television production, it should also consider further expansion into interactive video game production. Not only do global video game sales exceed that of movies, the employees tend to be full-time and reside in the community of the production office. In addition, Alabama's technological strengths in simulation & training provide synergy and potentially trained workforce for this growing sector of the entertainment industry.



Global Lead Generation

Foreign prospects have continued to invest in the U.S. even in the current economic climate. Alabama should also continue to have a specific strategy and focus on global lead generation. ADO should also lead this effort in conjunction with the Alabama Marketing Allies and other market-specific partners.



Economic Development Driver: Recruitment

Accelerator

HUMAN CAPITAL: PROVIDE A WORKFORCE WHOSE SKILLS ARE ALIGNED WITH THE NEEDS OF FUTURE PROSPECTS.

Tactics

- Support those programs coordinating the various federal, state and local workforce/education programs.
- Assess curricula and programs at two-year institutions to determine alignment with target sectors; identify strengths that can be used in marketing/recruiting, as well as gaps that the state can begin to address.
- Use available data/information and existing industry input to assess current workforce needs; identify skill sets and job classifications that are in greatest demand.
- Develop programs (high school, two-year, four-year) to produce qualified workers with skills that are in urgent demand, such as maintenance technicians, industrial and electrical engineers, IT professionals, etc.
- Assess how technology, long-distance learning, etc. is being used to extend education and training resources in the state to more Alabamians; develop strategies for enhancing awareness of opportunities.
- Support the AWTs program alignment to ensure training services are available after AIDT completes start-up.

Funding

- State appropriations
- ACCS workforce dollars
- ADECA workforce dollars
- ALSDE (K-12) technical education dollars

Metrics

- Survey feedback from existing industry and new locations
- Tracking number of "open" positions for various skilled positions
- Tracking length of time various skilled positions remain "open"
- Percent of skilled positions filled from "out-of-state"

Timeline: 2012 - 2013

Goal/Objective

Enhance services to existing and future Alabama businesses by providing a trained and skilled workforce.

Responsible Parties

Governor

ADO

ADECA

ALSDE

EDPA

ACCS

Four-year University System

K-12

Local EDOs



Economic Development Driver: Recruitment

Accelerator

PHYSICAL CAPITAL: ENSURE SITES AND INFRASTRUCTURE ARE AVAILABLE TO MEET PROSPECT CRITERIA.

Tactics

- Coordinate programs designed to address site and infrastructure needs.
- Evaluate existing studies to identify, by region, the infrastructure projects that would have the greatest impact on economic development recruitment.
- Assess gaps in sites needed for the state to compete for projects of all sizes in target sectors. Determine where infrastructure improvements could enhance the marketability and competitiveness of existing sites.
- Determine what transportation (water, rail and air) or community infrastructure (water, sewer, and telecom) investments can create opportunities in the state, including in rural, underserved regions.

Funding

- ADECA
- Local
- Federal
- Private

Metrics

- Increase in number of 100-500 acre sites in state that are "prospect ready" in all parts of the state
- Increase in number of 50-100 acre sites in state that are "prospect ready" in all parts of the state
- Increase in number of port or river-served sites in the state
- Increase in number of rail-served sites in all parts of the state
- Increase in number of interstate-served sites in all parts of the state
- Improvements in airport infrastructure

Timeline: 2012 - 2013

Goal/Objective

Ensuring Alabama has sufficient and geographically diverse industrial sites that meet anticipated infrastructure requirements.

Responsible Parties

Governor

ADO

ADECA

ALDOT

EDPA

Utilities

Local EDOs



Economic Development Driver: Recruitment

Accelerator

FINANCIAL CAPITAL: DETERMINE AND ADDRESS COMPETITIVENESS OF FINANCIAL ASSISTANCE PROVIDED TO SECURE PROSPECTS.

Tactics

- Conduct a competitive assessment of statutory and other incentives to determine the best opportunities to enhance Alabama's competitiveness. Some incentives that must be supported and considered include:
 - Support and encourage passage of the proposed Jobs Creation and Retention Act, which will provide a withholding incentive for new or existing companies that create or retain jobs.
 - Support and encourage passage of the proposed Data Center Incentive to encourage the location of data center projects, a targeted area of focus for the state.
- Evaluate the possibility of a discretionary closing fund for high-impact projects.
- Develop criteria that can be used to evaluate and establish priorities for new incentives.
- Address ADO funding needs in order to implement the recommendations in this plan.
- Develop legislative agenda to support proposed new incentives.

Funding

- Legislative appropriation
- Other TBD

Metrics

- New incentives approved by the legislature to support recruitment, expansion and retention
- Benchmarking of state-level economic development funding

Timeline: 2012 - 2013

Goal/Objective

Develop specific new recruitment incentive programs with proposed funding objectives, as well as required funding needs, for Alabama to be competitive moving forward.

Responsible Parties

Governor

ADO

ADECA

Alabama Allies

Alabama State Legislature

EDAA



Economic Development Driver: Recruitment Accelerator

LEAD GENERATION: PROACTIVELY REACH OUT TO SUSPECTS/PROSPECTS.

Tactics

- Continue to develop how market research will be conducted to identify suspects/prospects in key industry sectors.
- Continue to develop process for using research to guide marketing activities. Determine where existing research resides and how universities and others can contribute to the market research effort.
- Continue to determine process for gathering and incorporating existing industry input about supply chain into the marketing effort.
- Continue to conduct research to determine which events, trade and industry shows, and other forums provide the best opportunities to reach target audiences.
- Determine which materials and tools are needed in order to reach key audiences with data/information and positioning about Alabama’s strategic advantages. Determine how these materials/tools can be developed in a collaborative effort.
- Develop a strategy for marketing to site consultants and company representatives using Alabama’s strategic assets such as the Robotics Center, Port of Mobile, the HudsonAlpha Institute and others for recruiting. Create opportunities to host consultants and company representatives at the facility and develop supporting materials that can be used in marketing and proposal materials.
- Develop an annual marketing plan based on the long-term strategy.
- Establish metrics for a state economic development marketing plan.
- Develop strategy to leverage military commands to recruit additional commands through collaboration with the Job Creation and Military Stability Commission.
- Develop strategy to recruit R&D and technology-based defense contractors that support existing Alabama-based military commands.

Funding

- TBD

Goal/Objective

Increase the number of investment inquiries, projects leads, projects and locations.

Responsible Parties

- Governor
- ADO
- Alabama Marketing Allies
- EDPA
- Job Creation and Military Stability Commission
- Local EDOs
- Port of Mobile



Metrics

- Number of investment inquiries (to be defined)
- Number of project leads (to be defined)
- Number of active projects (to be defined)
- Number of established projects (Jobs; Capital Investment; Square-footage) – Determine baseline and increase

Timeline: 2012 - 2014



Economic Development Driver: Recruitment

Accelerator

LEAD GENERATION: PROACTIVELY BUILD CAPACITY AND RECRUIT ENTERTAINMENT PRODUCTION.

Tactics

- Market new film production incentives to target audiences.
- Extend current film production incentive to commercial productions that meet the same spending thresholds as now provided for TV series.
- Extend current film production incentive to video game production.
- Promote and encourage development of video game and computer animation curricula in Alabama universities.
- Identify synergies between simulation & training companies and entertainment technology companies and highlight existence of connections.

Funding

- Legislative appropriation

Metrics

- Total expenditures on all entertainment production in state
- Total payroll to Alabama residences working on entertainment production
- Number of production scouting visits in state
- Number of video game leads, prospects and projects

Timeline: 2012 - 2014

Goal/Objective

Increase the volume of in-state television, motion picture and video game production work in Alabama.

Responsible Parties

ADO – Alabama Film Office

AIDT EMPACT



Economic Development Driver: Recruitment

Accelerator

GLOBAL LEAD GENERATION: DEVELOP A GLOBAL LEAD GENERATION STRATEGY.

Tactics

- Leverage existing foreign direct investment (FDI) company representatives to develop a lead generation strategy based on global supply chains and personal networks.
- Identify countries that have strong research and corporate presence in each of the target industry sectors and develop lead generation marketing strategies in identified countries.
- Collaborate with Export Development International Marketing Missions to ensure an FDI recruitment element is part of each mission.
- Collaborate with Port of Mobile to identify countries with direct shipping connections and companies using port to develop lead generation marketing strategy that leverages port activities.

Funding

- TBD

Metrics

- Number of investment inquiries (to be defined)
- Number of project leads (to be defined)
- Number of active projects (to be defined)
- Number of established projects (Jobs; Capital Investment; Square-footage) – Determine baseline and increase

Timeline: 2012 - 2014

Goal/Objective

Increase the number of foreign investment inquiries, projects leads, projects and locations.

Responsible Parties

Governor

ADO

Alabama Marketing Allies

EAA

Local EDOs

Port of Mobile



Economic Development Driver: Retention

Alabama has been very successful with industrial recruitment through combined efforts that rival that of any state. The state must also continue to focus on retaining and expanding jobs of existing industries by ensuring the workforce is well trained and training needs of business/industry are met. Other areas important to the retention and expansion of jobs in the state include continuing support for export development and the military assets and contractors in the state. In addition to the recommendations in the recruitment section, other recommendations in these areas that are important for retention and expansion of jobs in Alabama are outlined below.

Formal alignment of workforce services within the Alabama Community College System (ACCS) under the umbrella of the Alabama Workforce Training System (AWTS).

ACCS, which is governed by the State Board of Education, is comprised of 22 comprehensive community colleges and four technical colleges, as well as Athens State University, and extensive workforce development initiatives, including the Alabama Industrial Development Training (AIDT) Institute and the Alabama Technology Network (ATN).¹⁴¹ The AWTS is part of Governor Bentley's plan to streamline workforce training efforts in the state. Formally aligning these efforts will result in better training for employees and services for companies in Alabama.

Develop ACCS Strategic Plan based on business and student needs aligned with current and future job opportunities across Alabama.

A well-educated and trained workforce for Alabama's existing business/industry is essential, resulting in their growth and development in the state long-term.

Strengthen the Training for Existing Business and Industry (TEBI) at each college through a "re-engineering" and "re-focus" process facilitated by the Governor's Office of Workforce Development (GoWD).

In order to ensure existing businesses in Alabama are fully served from a training and workforce development perspective, the GoWD should work with TEBI to ensure all staff are fully trained, job descriptions are in place for TEBI Directors and the program is re-branded.



Develop and Implement Governors Small Business Assistance initiative through the ACCS, AWTS and TEBI programs.

Create a statewide Small Business Advocacy Network focused on connecting resources and services to all small business as needed. The ADO Small Business Advocacy Office and AWTS will partner to coordinate this action.

Develop and implement marketing/advertising program to communicate all education and workforce services available to businesses, employees and students.

It is important that businesses, employees and students are cognizant of the workforce services available in the state through a media program, which may include a new comprehensive AWTS website, print media, television advertisement and use of other media forums.

Increase exports from Alabama.

In 2010, international trade was a \$15.5 billion industry in Alabama with manufactured goods from Alabama shipped to more than 1,900 foreign destinations, an increase of 25.5 percent from 2009. More than 300,000 jobs were supported by the \$15.5 billion in manufactured exports from the state to destinations such as Canada, China, Germany, Mexico and Brazil.¹⁴² The state of Alabama's Office of International Trade, which is part of ADO, assists Alabama businesses with export promotion and development.¹⁴³ It is important that export development continues to be supported as it provides a valuable service to existing business and industry in the state.

Support presence of military assets and support contractors.

The military has a significant role in the state of Alabama with four army bases, two Air Force bases and three Coast Guard units together employing more than 66,000 people. Alabama must continue to support the presence of these military assets and related support contractors.



Economic Development Driver: Retention

Accelerator

THE FORMAL ALIGNMENT OF WORKFORCE SERVICES WITHIN THE ACCS UNDER THE UMBRELLA OF THE ALABAMA WORKFORCE TRAINING SYSTEM.

Tactics

- Implement common strategies that are business focused to stay current and meet the needs of existing industry.
- Build a more efficient and collaborative alignment of programs.
- Ensure that designated staff in the system are trained at the appropriate levels for maximum knowledge of all training services to assist companies and individuals.
- Develop user-friendly and easier access to workforce training services.
- Create a database that indicates services a company has received or needs.
- Integrate WIA and other federal and private workforce funds and services with AWTS.

Funding

- ETF
- Appropriate Federal Funds

Metrics

- Compare numbers at the end of the fiscal year 2012 and 2013 to determine the number of people served as compared to 2009/2010.
- Monitor program evaluations completed by all trainees and companies.
- Implement a return on investment/third party evaluation.

Timeline: 2012 - 2013

Goal/Objective

Enhance services to Alabama businesses with successful training, retention and expansion.

Responsible Parties

ACCS Chancellor and Executive Vice Chancellor

AIDT/AWTS Executive Director



Economic Development Driver: Retention

Accelerator

DEVELOP ACCS STRATEGIC PLAN BASED ON BUSINESS AND STUDENT NEEDS ALIGNED WITH CURRENT AND FUTURE JOB OPPORTUNITIES ACROSS ALABAMA.

Tactics

- Review, redesign and introduce curriculum focused on current and future business needs and requirements for academic transfer.
- Focus on Adult Education to reach citizens lacking high school diploma/GED.
- Implement formal plans to align K-12, ACCS and four-year universities.
- Implement strategies to increase funding for the ACCS from state and federal sources.
- Promote ACCS through marketing/advertising plan.
- Implement formal plan to evaluate effectiveness of all academic, technical, workforce and Adult Education programming.

Funding

- ETF
- Appropriate Federal Funds

Metrics

- Develop and implement scorecard to track progress of initiatives.
- Formalize evaluation process of all strategic plan actions.

Timeline: 2012 – 2014

Goal/Objective

Develop a “road map” with appropriate goals and initiatives based on real data, stakeholders’ input, workplace trends and academic requirements to provide a well-educated and trained workforce that will assist with successful retention of existing business and their sustainable growth.

Responsible Parties

ACCS Chancellor and Executive Vice Chancellor; Vice Chancellors; Directors



Economic Development Driver: Retention Accelerator

STRENGTHEN THE TEBI AT EACH COLLEGE THROUGH A “RE-ENGINEERING” AND “RE-FOCUS” PROCESS FACILITATED BY THE GoWD.

Tactics

- Provide professional development training for all TEBI staff at least quarterly through ACCS/GoWD staff.
- Re-brand TEBI.
- Offer incentive to each college to assist with salary for full-time TEBI Directors.
- GoWD will develop job specifications for TEBI Directors and distribute to colleges through Chancellor.
- GoWD will offer continued assistance to TEBI to ensure success.

Funding

- ETF
- Appropriate Federal Funds

Metrics

- All TEBI Directors should be full-time within 24 months of plan implementation.
- Program evaluation and feedback process is implemented within 12 months.

Timeline: 2012

Goal/Objective

Ensure the existing businesses are fully served. Full-time and trained professional staff are employed at each college and are regionally based on business density. Clear job descriptions are in place for TEBI Directors.

Responsible Parties

ACCS Chancellor and Executive Vice Chancellor

GoWD Director

AIDT/AWTS Executive Director



Economic Development Driver: Retention

Accelerator

DEVELOP AND IMPLEMENT GOVERNORS SMALL BUSINESS ASSISTANCE INITIATIVE THROUGH THE ACCS, AWTS AND TEBI PROGRAMS.

Tactics

- Review all existing Small Business Resources and develop training plan for ACCS Resource Team Members.
- Train all ACCS Resource Team Members on all available Small Business assistance and on the ACCS Small Business Advocacy process flow.
- Include ADO Small Business Advocate Staff and ADECA/OMBE staff.
- Implement follow-up process to ensure that clients are served appropriately.

Funding

- ETF
- Appropriate Federal Funds

Metrics

- 100% of all Small Business Advocates will complete training within 24 months of implementation.
- Survey/evaluation feedback from small business clients is tracked.

Timeline: 2012

Goal/Objective

Create statewide Small Business Advocacy Network to connect resources and services to all small business as needed. Train/educate TEBI, ATN, AIDT and other appropriate ACCS staff as small business advocates. Implement a process flow to ensure immediate and sustainable assistance.

Responsible Parties

ACCS Chancellor and Executive Vice Chancellor

ADECA – OMBE

ADO – Office of Small Business Advocacy

AIDT/AWTS Executive Director



Economic Development Driver: Retention

Accelerator

DEVELOP AND IMPLEMENT MARKETING/ADVERTISING PROGRAM TO COMMUNICATE, IN DETAIL, ALL EDUCATION AND WORKFORCE SERVICES AVAILABLE TO BUSINESSES, EMPLOYEES AND STUDENTS.

Tactics

- Form a "System-wide" Team to develop and implement the plan.
- Develop a "System/Institution" budget with all ACCS Institutions, agencies and department input.
- Develop a three to five year implementation timeline.
- Develop a comprehensive AWTS website with all of the services located in one spot for business and industry.
- Implement an 800 number for training questions.

Funding

- ETF

Metrics

- Full program developed and implemented in 2012
- Increased numbers of trainees, students and/or clients
- Include in programs surveys/evaluations "How did you hear about us?"

Timeline: 2012 – 2014

Goal/Objective

Communicate, to all markets, the current, developing and future ACCS services for academics, Career and Technical Education, Adult Education and Workforce Development. Use all media forums to include Internet, print media, television, etc.

Responsible Parties

ACCS Chancellor and Executive Vice Chancellor

AIDT/AWTS Executive Director

Government Relations and Communications Director



Economic Development Driver: Retention

Accelerator

INCREASE EXPORTS FROM ALABAMA.

Tactics

- Continue international trade partnerships.
- Increase capacity for export development at ADO.

Funding

- TBD

Metrics

- Increased number of companies receiving export development technical assistance
- Increased number of companies opening new export markets
- Increase in Alabama Export Volume

Timeline: 2012

Goal/Objective

Increase profitability and create new jobs through expanding exports in the state, especially with small and medium-sized companies.

Responsible Parties

ADO – Alabama Office of International Trade
Alabama International Trade Center
Alabama World Trade Association
EAA
Local EDOs
NAITA



Economic Development Driver: Retention

Accelerator

SUPPORT PRESENCE OF MILITARY ASSETS AND SUPPORT CONTRACTORS.

Tactics

- Support efforts of Jobs Creation and Military Stability Commission in preparation for Base Realignment & Closure (BRAC) 2016.
- Develop subject matter expertise to support military commands as an existing industry.
- Incorporate defense contractors who support Alabama bases into overall existing industry programs.

Funding

- TDB

Metrics

- Number of active base commands in Alabama
- Number of active duty military based in Alabama
- Number of civilian defense employees in Alabama
- Number of defense contractors supporting commands
- Number of defense contractors employees
- Number of university research and degree programs supporting military and defense contractor presence

Timeline: 2012 - 2013

Goal/Objective

Maintain and grow Alabama's military assets and the defense contractors who support them.

Responsible Parties

Jobs Creation and Military Stability Commission

ACCS

Four-year University System

ADO

Local EDOs



Economic Development Driver: Renewal

At the state level, Alabama has historically viewed economic development in the context of new industry recruitment. In recent years, however, there has been a growing appreciation of the potential to diversify the state's economic development efforts through creating and fostering a system that enhances the growth potential of jobs through the exploitation of innovations and technology developed within the state. Although there are pockets where successful innovation-based economic development is already present, the state has lacked a state-wide, coordinated initiative to maximize the economic impact of the technology assets in the state.

Create a sustainable statewide organization focused on innovation

Although there are various groups working on innovation-based economic development in Alabama, the statewide effort is somewhat fragmented, both geographically, as well as between various industries and in some cases between the universities and the private sector. The purpose of this organization is to ensure connectivity between the various components of the Renewal initiative through establishment of goals, priorities, metrics and strategies.

Coordinate and increase commercialization efforts

As the unified Renewal plan is developed, it is anticipated that the existing programs designed to facilitate innovation-led economic development will be coordinated, gaps will be identified and filled with an increased state and private sector support for emerging innovation-based companies in the areas determined to have the greatest impact.

Develop a legislative agenda focused on innovation

Since the state has not previously had a developed innovation-based economic development strategy, it will be necessary to develop the legislative strategy to secure the resources required for the most critical elements.

Build research and development capacity

Innovation is driven through the application of research. Not only does there need to be more research, but a significant portion of the research should be focused on sectors the state is targeting for future growth. In addition, research dollars should be leveraged through partnerships, especially via closer working relationships between university and private sector supported researchers.



Support existing industry through renewal activities

Innovation is critical to existing industry as it allows them to stay competitive and continue employing Alabama citizens. The efforts of the Renewal and Retention initiatives must be linked through the creation of an Industrial Renewal Alliance. This Alliance will not only facilitate linkages between existing industry, their associations and identified expertise within the two and four year colleges and ATN, but it will also enhance the collaboration between the two and four year systems in order to maximize private sector interaction with each.

Support and develop the Information Technology sector

The Information Technology (IT) sector is an identified targeted business sector for the state of Alabama. It is important that the state work to develop this sector further through investment in IT infrastructure, employee training and increased university R&D in the IT area.

Foster entrepreneurship and small business development

Innovation goes beyond pure technology. Companies and employment are also built through creative adaptation of ideas and process. Alabama should continue its efforts to provide entrepreneurial and small business support, while working to instill a greater entrepreneurial spirit through programs at the middle and high school level.

Financial support for innovation-based commercialization

Ideas require a full spectrum of funding to complete the commercialization cycle. Increased funding from the state as well as companies and investors will be required to be successful. In addition to additional hard research dollars, the state should create policies that encourage additional private sector investment in R&D, as well as private sector investment in early stage companies.



Economic Development Driver: Renewal

Accelerator

CREATE A SUSTAINABLE STATEWIDE ORGANIZATION FOCUSED ON INNOVATION.

Tactics

- Create the Alabama Innovation Council (AIC) as a subsidiary of EDPA.
- Establish clear policies and metrics for vetting state investment.
- Base all fiscal resource commitments on merit.
- Require that all state dollars are matched with funds from other sources.
- Facilitate the setting of stretch goals for all programs.
- Designate ARA funds to expand Alabama Launchpad commercialization programs.

Funding

- None

Metrics

- Creation of the AIC
- Creation of policies and metrics
- Leverage on awards

Timeline: 2012 - 2014

Goal/Objective

Create a sustainable statewide organization to give direction and provide accountability for the state's effort to stimulate economic development through innovation.

Responsible Parties

- Governor
- Legislative Leadership
- ACCS Chancellor
- ARA
- EDPA
- Alabama Incubators
- Universities
- Venture Community



Economic Development Driver: Renewal

Accelerator

COORDINATE AND INCREASE COMMERCIALIZATION EFFORTS.

Tactics

- Integrate renewal allies including the universities' Office for Technology Transfer (OTT), Launchpad, angel investors, venture community and incubators.
- In conjunction with the venture community develop the following:
 - Pre-seed and seed support
 - Start-up support
 - Early and late stage support
- Assess the performance potential of the various incubator facilities in the state to determine which could most effectively use state support.
- Expand Alabama Launchpad.

Funding

- \$2.0 million in state funds annually matched with local funds of \$2.0 million

Metrics

- Successful completion of statewide venture network
- Assessment of incubator-mentoring services to tenants, and standardized processes with accountability
- Local support of the state match

Timeline: 2012 - 2014

Goal/Objective

Create a statewide, coordinated initiative that addresses the many phases of commercial development, from idea creation and market analysis, to intellectual property protection, proof of concept development, prototype development, management team formation, commercial launch and growth and scale.

Responsible Parties

Finance Director

Governor's Chief of Staff

ADO

Alabama Incubators

ARA

EDPA

Representatives of successful start-ups

Venture Community



Economic Development Driver: Renewal

Accelerator

DEVELOP A LEGISLATIVE AGENDA FOCUSED ON INNOVATION.

Tactics

- Draft legislation and secure sponsors for a comprehensive package to address the following:
 - Creation of the AIC as an EDPA subsidiary;
 - Creation of the Commercialization Scholars Program; and
 - Creation of a mechanism for state support for grant matching for basic research, Small Business Innovation Research (SBIR), and Small Business Technology Transfer (STTR).

Funding

- \$300,000 for governmental relations

Metrics

- Passage of legislative package

Timeline: 2012 - 2013

Goal/Objective

Develop and secure funding for a comprehensive initiative to generate a forward-looking innovation based economic development program.

Responsible Parties

Governor

Legislative Leadership

Alabama Incubators

Universities



Economic Development Driver: Renewal

Accelerator

BUILD RESEARCH AND DEVELOPMENT CAPACITY.

Tactics

- Select two or three targets of investment in research from the following:
 - Advanced Manufacturing
 - Agriculture/Biosciences
 - Energy and Environment
 - Health and Life Sciences
 - Information Technology and Cyber Security
 - Transportation and Logistics
 - Travel/Tourism
- Link university and private research institutions together around targets and develop coordinated plan to expand capacity.
- Create university, industry, and federal assets (Redstone) consortia.
- Set target funding aspirations for universities.
- Commit to leveraging of resources for investments in research.
- Create Commercialization Scholars Program.
- Utilize the 501(c)(3) status of universities for tax credits for contributions to support incubator initiatives.

Funding

- | | | |
|--|-----|--|
| <ul style="list-style-type: none"> • State Education Trust Fund • State 6-6-6 fund • University operating funds • Federal • Private sector investment | \ / | \$20 million annually from state
\$20 million annually from other sources |
|--|-----|--|

Goal/Objective

Increase research and development capacity at the state's four-year research universities, private research institutions, and government assets.

Responsible Parties

- Governor
- Legislative Leadership
- ADO
- ACHE Executive Director
- Alabama Incubators
- Business Council of Alabama
- EDPA
- University Leadership
- Venture Community



Metrics

- Measure funds generated for research investment
- Assess growth in funded research

Timeline: 2012 - 2014



Economic Development Driver: Renewal

Accelerator

SUPPORT EXISTING INDUSTRY THROUGH RENEWAL ACTIVITIES.

Tactics

- Create an Industrial Renewal Alliance.
- Conduct a comprehensive assessment of industry needs.
- Map university capabilities that match industry needs.
- Link the various Alabama manufacturers' associations (Alabama Auto Manufacturers Association, Alabama Textile Manufacturing Associate, etc.) to university technical support programs.
- Add entrepreneurship expertise to the Alabama Technology Network.

Funding

- Existing funding

Metrics

- Formation of the Industrial Renewal Alliance
- Comprehensive assessment
- University capabilities assessed

Timeline: 2012

Goal/Objective

Form a strong alliance between the four-year universities, the two-year colleges, EDPA, the local EDOs and Alabama manufacturers to create an effective existing industry renewal initiative.

Responsible Parties

Alabama Incubators

ATN

EDPA

Two-year and four-year schools



Economic Development Driver: Renewal Accelerator

SUPPORT AND DEVELOP THE INFORMATION TECHNOLOGY SECTOR.

Tactics

- Provision of state (and/or local) incentives for infrastructure development with Internet Service Providers.
- Develop statewide fiber optic networks linking universities through providers like National LambdaRail.
- Allocate increased funding (state or internal to university) for IT-related departments and degree programs.
- Establish university centers for IT degrees, advanced training and continuing education.
- Provide state financial support for two-year training in communications work (similar to AIDT and automotive sector).

Funding

- National Telecommunications and Information Administration
- State and Local Government
- Universities

Metrics

- Statewide broadband coverage
- Creation of policies and metrics
- Number of graduates entering IT field in Alabama after graduation
- Number of persons in Alabama employed directly in an IT-related position or at an IT company

Timeline: 2012 - 2014

Goal/Objective

To create an information society by enhancing the existing Information Technology (IT) sector in Alabama and accelerating growth through investment in IT infrastructure, employee training, and university R&D. Specific objectives required to achieve this broad goal include:

- Increase and improve IT infrastructure for public and private sector renewal.
- Develop an IT capable labor force .
- Enhance Alabama IT knowledge base through competitive university R&D.
- Establish high standards for cutting edge IT infrastructure.
- Provide IT access for all individuals and regions in Alabama (equality of access).
- Place special emphasis on Cyber Security facilitating research; education and training; and workforce development in a multi-level unclassified and classified environment.
- Accelerate efforts in Bioinformatics.

Responsible Parties

Governor

Legislative Leadership

Alabama Incubators

EDPA

Universities



Economic Development Driver: Renewal

Accelerator

FOSTER ENTREPRENEURSHIP AND SMALL BUSINESS DEVELOPMENT.

Tactics

- Encourage development and implementation of entrepreneurship programs in middle and high school.
- Promote and facilitate increased government procurement sales through increased technical assistance.

Funding

- TBD

Metrics

- Increase in number of entrepreneurship classes and/or programs being offered in K-12 public school system
- Increase in number of companies securing government procurement contracts as a result of technical assistance

Timeline: 2012 - 2014

Goal/Objective

Create a system that encourages an entrepreneurial culture with specific tools to increase the potential of success of new companies.

Responsible Parties

EDPA – Alabama Launchpad
Alabama Incubators
ALSDE
ASBDC Network
State of Alabama Procurement
Technical Assistance Centers



Economic Development Driver: Renewal

Accelerator

PROVIDE FINANCIAL SUPPORT FOR INNOVATION-BASED COMMERCIALIZATION.

Tactics

- Increase financial commitment to Alabama Innovation Fund to a minimum of \$25 million.
- Create R&D Tax Credit.
- Create and fund SBIR/STTR Matching Grant Program.
- Create and fund Applied R&D Matching Grant Program to encourage private sector/university research partnerships.
- Create Angel Investment Tax Credit Program.
- Facilitate creation and gathering of angel investment networks.

Funding

- ETF
- State general revenue
- Private-sector matching R&D dollars

Metrics

- Track number of angel investment networks in the state and number of investments made by each
- Track number of companies securing government procurement contracts as a result of technical assistance
- Increase in participation in angel investment networks in the state and number of investments made by each

Timeline: 2012 - 2014

Goal/Objective

Increase the state's capacity to foster creation of companies from public and privately funded research.

Responsible Parties

Legislative Leadership
EDPA – Alabama Launchpad
Four-year R&D Universities
Alabama Incubators



Economic Development Driver: Other

There are a number of recommendations that either cross over the recruitment, retention and renewal economic development drivers or cannot be easily categorized. These include the following:

Support Rural Development

Alabama's Black Belt and certain other areas of the state include some of the poorest and most rural counties in the United States. Along with high rates of poverty, these areas are represented by declining populations, high unemployment, poor access to education and medical care, high rates of crime and a primarily agricultural landscape.¹⁴⁴ In January 2011, Governor Bentley created by Executive Order the Alabama Office of Rural Development to improve and advance the education, healthcare and economic development in the rural areas of Alabama.¹⁴⁵ ADECA's Resources for Economic Assistance Programs (REAP), also created under Governor Bentley, works to assist Alabama's citizens, communities, and regions by providing information in the areas of community and economic development, and managing specialized community grants and projects. REAP's programs are often focused on more rural areas of the state. The creation of the Alabama Office of Rural Development and REAP shows a commitment by the state to focus on and address the issues of the rural areas in the state but it is critical that programs be put in place to further support rural development.

Continue to Enhance Alabama's Economic Development Brand

Marketing and communications is one of the most important functions of economic development organizations today. It is important that the strengths of Alabama are communicated correctly to both internal and external audiences, particularly corporate prospects. One thing heard consistently in the surveys and visioning sessions conducted for this project was that Alabama needed a new economic development brand. The new brand should be focused more on the key strengths of Alabama that would be important to a company prospect considering locating a new operation in Alabama.

Inventory and Understand Sustainability Efforts

Sustainable development was first defined in 1987 by the United Nations World Commission on Environment and Development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."¹⁴⁶ Sustainability is about changing habits, values and priorities, as well as acknowledging true costs of ignoring sustainable practices. Sustainable development may include addressing needs related to a:

- Healthy environment, which could include creating more green spaces, pollution-free communities, and access to fresh, local food;
- Strong economy, which may include green job creation, as well as successful local farms and businesses; and



- Vibrant society, which may include livable neighborhoods, access to basic education, and cultural opportunities.¹⁴⁷

Sustainability is no longer a topic that is limited to environmentalists and conservationists. Today, corporations worldwide have embraced sustainability. In a recent study conducted by Accenture, 93 percent of CEOs surveyed said they believe sustainability will be important or very important to the future success of their company. This corporate commitment to sustainability has tremendous implications for economic development.

In fact, in a survey on corporate sustainability conducted by CoreNet Global, nine out of ten times when companies make a location decision, they are taking sustainability into account as a primary consideration. In addition, almost 90 percent of the corporate real estate executives who participated in the survey say that green building certifications and energy labels are considered, while half say they are willing to pay more for green buildings. The survey also showed that corporate real estate executives are highly involved in providing sustainability performance data and funding sustainability investments, with the drivers being reduced costs and increased employee satisfaction.¹⁴⁸

Due to the growing importance of sustainability to corporations worldwide, ADO must be prepared to respond to questions regarding sustainable practices in the state in future Request for Proposals by corporate prospects who will not locate in a state that does not show a commitment to sustainability.

Support Downtown Redevelopment Programs and Other Community Development Initiatives

A healthy and vibrant downtown boosts the economic health and quality of life in a community by creating jobs, providing a home for small businesses, reducing sprawl, and increasing a community's options for goods and services. Alabama needs to dedicate resources to a statewide Main Street Program, the Alabama Community of Excellence Program and other similar community development programs. The state should also ensure that all Alabama organizations assisting small towns are working together in order to encourage the revitalization of downtown areas throughout the state.



Economic Development Driver: Other Accelerator

SUPPORT RURAL DEVELOPMENT.

Tactics

- Consider support for a Rural Infrastructure or Development Fund targeted to Alabama's favored geographic areas that provides financial assistance for infrastructure and other activities that enhance economic growth and development.
- Create a fund, perhaps called the Alabama Rural Innovation Fund, which targets existing small or start-up business with growth potential in Alabama's favored geographic areas for investments ranging from \$100,000 to \$300,000.
- Partner with the Center for Rural Entrepreneurship to develop other programs in Alabama to support small business/entrepreneurs.
- Consider support for a Rural Healthcare Professional Credit to encourage health care providers (doctors and nurses) to practice in underserved or rural areas.

Funding

- State general revenue
- ADECA

Metrics

- Include all proposed programs in a legislative agenda
- Passage of a Rural Infrastructure or Development Fund
- Passage of a Rural Innovation Fund
- Passage of a Rural Healthcare Professional Credit

Timeline: 2012 - 2014

Goal/Objective

Develop and support programs to increase the ability of rural areas in Alabama to be more successful in recruiting and retaining business/industry.

Responsible Parties

ADECA

ADO

Alabama Office of Rural Development

EDPA – Alabama Launchpad – related to Rural Innovation Fund only

Legislative Leadership



Economic Development Driver: Other

Accelerator

CONTINUE TO ENHANCE ALABAMA'S ECONOMIC DEVELOPMENT BRAND.

Tactics

- Develop a series of key messages that showcase Alabama's assets for business and demonstrate the state's progressive and dynamic activities and accomplishments.
- Consider engaging a brand development firm to create a new logo and positioning statement that is memorable and presents Alabama's unique benefit message from an economic development perspective.
- Develop a marketing plan that is designed to build equity in the new brand and enhance awareness of Alabama as a business location.

Funding

- State general revenue
- Possible public/private partnerships

Metrics

- Development and use of strong key messages
- Successful development and implementation of new brand
- Increased marketing funding for program to positively influence perception

Timeline: 2012 - 2014

Goal/Objective

Improve overall perception of Alabama as a business location and enhance awareness of the state's assets for business.

Responsible Parties

ADO
EDPA
Alabama Marketing Allies



Economic Development Driver: Other Accelerator

INVENTORY AND UNDERSTAND SUSTAINABILITY EFFORTS.

Tactics

- Partner with the Green Resource Center for Alabama to inventory all sustainable efforts in Alabama currently, including those at the university level.
- Develop key messages on sustainable efforts in Alabama to share with prospects.
- Ensure the local EDOs are aware of key messages to utilize in responding to RFIs/RFPs issued by prospects.

Funding

- TBD

Metrics

- Complete inventory of sustainability efforts
- Develop key messages
- Communication of key messages to EDOs

Timeline: 2014

Goal/Objective

Gain awareness and understanding of sustainability efforts in the state.

Responsible Parties

ADO
Green Resource Center for Alabama
Local EDOs
Universities



Economic Development Driver: Other

Accelerator

SUPPORT DOWNTOWN REDEVELOPMENT PROGRAMS AND OTHER COMMUNITY DEVELOPMENT INITIATIVES

Goal/Objective

Improve and revitalize downtown areas throughout Alabama.

Tactics

- Support a statewide Main Street Program, Alabama Communities of Excellence Program and others that area identified to have a significant impact on community development and job creation.
- Link the Alabama Main Street Program to other Alabama organizations that assist small towns throughout the state.

Responsible Parties

Alabama Communities of Excellence Program
Alabama Main Street Program
Local EDOs

Funding

- TBD

Metrics

- Resources dedicated to a statewide Main Street Program
- Resources dedicated to the Alabama Communities of Excellence Program
- Coordinated effort statewide
- Increase in number of Main Street communities

Timeline: 2014



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