

Chapter 9

Growing Economic Base Industries



*“Having a culture and tools
that allow for innovation and
entrepreneurship.”*

*“Economic stability for residents,
businesses, and persons looking to
do business in the city...”*

| GOALS | POLICIES FOR DECISION MAKERS |
|---|---|
| A diversified, knowledge-driven economy, anchored by established and emerging industry sectors, built on the city's competitive strengths, and providing job opportunities in a range of occupations and skill levels. | • Target city resources and support to existing and emerging economic base industries. |
| | • Support the development of a diverse economy that provides a wide range of employment opportunities and shields the city from over-dependence on any single industry. |
| | • Leverage city resources through collaboration with key partners in the private and nonprofit sectors. |
| | • Engage with the business community to ensure that city policies are responsive to business needs. |
| | • Advocate for state policies and investments that support the city's economic development. |
| | • Collaborate at the regional level when regional action is required to advance the city's economic interests. |
| A city and its government that are focused on economic development. | • Strive to create and maintain an award-winning educational system, both in the Pre-K and K-12 systems and in higher education. |
| | • Ensure that the City's workforce development programs are meeting the needs of its citizens and of current and future employers. |
| | • Catalogue available sites for expanding and new businesses. |
| | • Be active in State economic development efforts. |
| | • Work collaboratively to increase employment. |

findings

The city is transitioning from a traditional manufacturing to a knowledge economy.

The healthcare industry is the city's largest single industry and has experienced strong recent growth.

Other important industries are retail, "other services" (notably personal household services and religious organizations), finance and insurance, and professional, technical, and scientific services.

City residents are most likely to be employed in healthcare, followed by retail, education, manufacturing, and accommodation and food services.

Employment trends among industries show a mixture of growth and decline. The strongest growth has occurred in other services, healthcare, management of companies and enterprises (e.g., corporate headquarters), and finance and insurance, while the most severe declines have occurred in manufacturing, construction, information, and retail.

The city has a significant research base that supports new technology-oriented business formation. UAB is a major center of life sciences research as well as engineering, materials science and computer technologies. The Southern Research Institute focuses on life sciences, advanced engineering, environment and energy. I2i is a new collaboration of the UAB Research Foundation, UAB Business School and the BBA to license and commercialize technologies locally.

Among the regional target industries identified in Blueprint Birmingham, the city is in the strongest position in healthcare, finance and insurance, biological and medical technology, and arts, recreation, and tourism, with potential growth opportunities in automotive-related manufacturing.

challenges

Employment in the city declined during the past decade in contrast to growth in the region, state and nation.

Birmingham residents have relatively low labor force participation rates and relatively high unemployment rates.

City residents are more likely to be represented in lower-wage occupations.

City residents are heavily employed in a number of declining occupations and thus may be vulnerable to job loss.

A mismatch between occupational skills and the workforce needs of emerging industries put city residents at a disadvantage and threaten these industries with labor shortages.

The city's often non-attainment status for ozone levels makes clean industries a priority.

The lack of development-ready industrial sites limits the city's ability to attract industrial firms with immediate development needs.

A. What the Community Said

- Industries most frequently identified as offering growth opportunities:
 - > medical technology
 - > health care
 - > life sciences research
 - > higher education
 - > tourism
 - > distribution
- Others identified included:
 - > automotive and light manufacturing
 - > computer and internet-related businesses
 - > financial activities
 - > food products
 - > green industries
- UAB is seen as the center of a nexus between research, higher education, health care and technology industries.



UAB was identified by the community as the most important entity in the city connecting higher education, health care and technology.

B. Recommendations

Birmingham's economic base industries are the key to wealth creation and economic prosperity. These industries sell their products and services to businesses and consumers from elsewhere—regionally, nationally, and internationally—and therefore import income that circulates within the local economy, creating jobs and increasing business revenues. Sustaining and growing these industries is therefore central to fostering the City's overall economic development and growing its population. It also drives key economic development decisions, including the nature and scale of commercial and industrial real estate development, infrastructure investments, education and workforce development, and business assistance.

Birmingham's economic base industries include established industries such as health care, primary and fabricated metals manufacturing, tourism, distribution, financial services, and emerging industries such as life sciences, digital information and media, and certain advanced manufacturing specializations. The ability to sustain and strengthen these industries is key not only to the City's economic future, but the entire region's. Economies are regional and the City and its surrounding communities are economically interdependent. The City plays a unique role as a center of research and technology entrepreneurship, notably in the life sciences, healthcare, tourism, and many financial and professional services that continue to gravitate to center city locations that facilitate interactions with collaborators and clients and attract talented workers.

Birmingham should take an active role in influencing the State government in the types of industries on which it focuses to ensure that the city can experience the same growth recently enjoyed by Huntsville and Mobile. Birmingham should convene local and statewide teams to assist it in its growth. No longer should turf wars be the reason that Birmingham is passed by.

The industries that should be targeted by Birmingham change with economic need, the training possessed by the work force, and the types of business sites that are available. The City should look forward, to meet the next wave of needs.

In addition, Birmingham must be willing to look to the future. Birmingham must expand workforce training and brownfield site development, and when necessary greenfield site development to ensure that it is prepared for the future. The City should take an active role in the development of State economic development to ensure that it experiences growth in the future. By working collaboratively, industries and businesses can be attracted that would continue Birmingham's role as the centerpiece in Alabama's economy.

The recommendations below focus on ways the City and its economic development partners can support the development of its established and emerging economic base industries. Businesses that primarily serve local residents, both downtown and in the City's neighborhoods, and the benefits of arts and culture development and urban agriculture, are discussed in Chapters 7, 8, 10, and 11.

goal 1

A diversified, knowledge-driven economy, anchored by established and emerging industry sectors, built on the city's competitive strengths, and providing job opportunities in a range of occupations and skill levels.

POLICIES

- Target city resources and support to existing and emerging economic base industries
- Support the development of a diverse economy that provides a wide range of employment opportunities and shields the city from over-dependence on any single industry
- Leverage city resources through collaboration with key partners in the private and nonprofit sectors
- Engage with the business community to ensure that city policies are responsive to business needs
- Advocate for state policies and investments that support the city's economic development
- Collaborate at the regional level when regional action is required to advance the city's economic interests

The Health Care Industry

Health care is the largest industry in Birmingham. Private health care employment totaled 33,800 in 2010. Public sector health care employment, including UAB Health System, Cooper Green Mercy Health Services, and the Birmingham VA Medical Center, is aggregated under government employment but is estimated at approximately 18,470. Private health care employment increased by eight percent between 2001 and 2010.

There are three major segments of the health care industry: hospitals; ambulatory care; and nursing and residential care facilities. The most important segment from an economic development standpoint is hospitals because they are more likely to attract nonlocal patients and thus draw income into the local economy.

The city serves as a hospital center for the MSA and the larger central Alabama region, with approximately 80 percent of total MSA hospital employment. Major hospitals in Birmingham include University Hospital, Trinity Medical Center, St. Vincent's Birmingham, St. Vincent's East, Princeton Baptist Medical Center, Birmingham VA Medical Center, and Children's of Alabama.

A number of local hospitals have received high national rankings in certain specialties, particularly University Hospital and Children's of Alabama. University Hospital ranks within the top 40 hospitals in 11 specialties, including pulmonology, neurology and neurosurgery, kidney disorders, cardiology and heart surgery, and cancer. Children's of Alabama ranks among the top 40 children's hospital in 10 specialties, including neurosurgery, pulmonology, orthopedics, diabetes, cardiology and heart surgery, and cancer. Princeton Baptist Medical Center received a high ranking in one specialty: neurology/neurosurgery.

A number of local hospitals have also initiated or are planning modernization, expansion or relocation projects to upgrade their facilities. These include Princeton Baptist Medical Center's current \$57 million hospital expansion, Children's of Alabama's recently completed construction of a new \$400 million campus on the Southside, St. Vincent's East's new psychiatric unit, and Trinity

Hospital's planned move to the unfinished Health South facility on Highway 280.

While not part of the health care industry, firms in other industries that provide products and services to the health care industry are drawn to Birmingham by its large agglomeration of health care services. Others develop specializations targeted to the industry. These firms often serve larger regional and national markets, drawing income into the community. Examples include:

- Chicago-based Accretive Health, which recently decided to locate a specialized call center with 250 employees at the Medical Forum office building in the Birmingham-Jefferson Convention Complex. The center will provide appointment reminders, registration, insurance verification and customer billing and collections services to hospitals, doctors and other health care businesses.
- IMS, a Birmingham-based surgical instrument management and consulting company offering management and repair of surgical instruments and devices, real time management data and tools, and consulting and implementation in the surgical suite and sterile processing department. IMS not only serves local healthcare facilities, but more than 2,500 others throughout the United States. To make way for its continued growth, IMS recently purchased a 55,000-square-foot building near its repair facility in Birmingham. The purchase will enable IMS to develop a single, 10-acre campus to accommodate its corporate headquarters, a repair facility and Wedge Manufacturing, a division that produces precision parts.
- Medical Properties Trust, a Birmingham medical real estate investment trust, with a total of 78 hospital facilities in 24 states.

A number of small startup and early-stage technology firms are developing software and web-based and mobile applications for the health care industry. These include:

- Definicare, a real-time clinical research platform for both clinical research and patient care;
- MedSeek, which develops mobile health applications;
- SuccessEHS, which develops customized electronic health records and practice management systems;

- Proxsys, a provider of cloud-based care coordination services between physicians and hospitals; and
- ComplyMD, which offers software that allows physicians to update medical records in real time.

STRATEGY

A. Maintain and enhance Birmingham's position as a regional medical center with select top-tier specializations.

ACTIONS

1. Incorporate the health care industry into local and regional marketing programs.

Birmingham's position as a major regional health care center creates a large local market for related goods and services that can act as a base for local companies seeking to expand into regional and national markets as well as non-local companies establishing regional operations. Marketing should focus on opportunities generated by the area's large concentration of health care institutions for related services to hospitals, health care IT, and medical facility development. Key action steps include preparing background information for state, regional, and local recruitment organizations, incorporating information into web-based and print marketing materials, and promoting coverage in healthcare industry publications.

2. Support increases in local life sciences research.

Discoveries achieved through life sciences research at UAB and SRI can not only lead to the spin-off of new companies but can result in treatment advances that can be used by medical staff to improve patient care. Increasing the ability of University Hospital and local partners such as Children's Hospital to develop more advanced treatment in specialty areas will not only improve health outcomes for local residents but raise their national stature and draw more patients from outside the region. Specific strategies for supporting increases in local life science research are detailed in the life science research section below.

3. Ensure timely local review and approval of health care facility Master Plans.

The city should assess local regulatory development review processes to identify ways to reduce costs and time involved in approval of new health care facilities consistent with the public interest.

Manufacturing

Once a manufacturing powerhouse and center of the south's steel industry, Birmingham has seen its manufacturing base decline dramatically during the past several decades. Total manufacturing employment in 2010 was 13,377, a decline of 34 percent from 2001. This decline continued throughout the decade, although it became somewhat more pronounced during the 2007-9 recession. By 2010, manufacturing accounted for only 4.6 percent of total city employment, about one-half the state average and two-thirds the national average, indicating that the City of Birmingham is no longer a significant manufacturing center.

Reflecting its industrial heritage, manufacturing in Birmingham continues to be dominated by metals manufacturing. Major manufacturing sectors in Birmingham, with approximate employment, are primary metal manufacturing (3,700), fabricated metal product manufacturing (2,500), food processing (1,300), and printing (1,100). All of these industry segments experienced significant declines during the 2001–2010 period.

Within primary and fabricated metals manufacturing, the largest industry segment is foundries, with approximately 2,400 employees. This industry is dominated by a single employer, American Cast Iron Pipe, with approximately 2,000 employees. Other important segments are



American Cast Iron Pipe is the largest fabricated metals manufacturer, with approximately 2,000 employees.

architectural and structural metals (800), machine shops (700) and iron and steel mills (700).

As the economy gathers steam after the the Great Recession of 2007–9, there are some indicators that at least some firms in this industry are beginning to increase employment. Unfortunately, two Birmingham firms planning major expansion, Bermco Aluminum and Precision Grinding, have selected new locations in Bessemer. This underscores the difficulty of retaining this legacy industry within the city as expanding firms seek new sites. The city has identified a shortage of large plots of industrial zoned land as an impediment to new manufacturing development.

While Alabama's automotive industry is a major employer that continues to expand robustly, Birmingham has not benefited significantly from this development. While automotive suppliers have located within the region, they tend to select sites in suburban and rural locations. The city had only about 300 automotive-related jobs in 2010, although firms in other industries such as metals, electrical equipment, and instruments may have automotive industry customers. This job number continues to grow.

One issue that has proved a limiting factor to manufacturing industry development in the past was Jefferson County's poor air quality, which led the federal Environmental Protection Agency to require the county to improve air quality levels to federal standards. In recent years, however, air quality has improved significantly and recently reached attainment levels. Although permits are still required for new industrial plants, regional economic development officials report that air quality is not an issue for most prospective manufacturing facilities.

Birmingham has experienced significant growth in a handful of small manufacturing segments, which may point to more significant growth opportunities. These segments, with 2010 employment and percentage growth between 2001 and 2010, include medical equipment manufacturing (315, +18 percent); navigational, measuring, electromedical, and control instruments (172, +341 percent); and plastics and rubber product manufacturing (551, +16 percent).

The UAB School of Engineering may be a resource that can support modernization or new product development among existing firms and the startup of new technology-oriented manufacturing firms. The school has particular strengths in materials engineering, notably metals and composites, and in modeling and simulation. It recently established a Materials Processing and Application Development Center to help industry design and test new materials, technologies and applications. The Center is the largest academic research facility to combine metals and composites research under one roof. With a strong focus on applied research, it has particular relevance to medical, defense, automotive, and aerospace product development.

A number of companies have already been established using technologies developed at the School of Engineering. These include BioHorizons, a Hoover-based firm that sells dental implants in international markets. The School has an entrepreneur-in-residence charged with accelerating this process by identifying product development and commercialization opportunities, and is seeking to hire additional staff to further support these efforts.

Given its expertise in materials and modeling and simulation, there are also opportunities for the School to work more closely with the state's automotive industry on cooperative research that could help it increase its research capacity and potentially result in additional commercial spin-offs. George Barber of Barber Motorsports Park has raised the possibility of using his track as a test facility to support these activities.

School officials believe that developing a meaningful partnership with the automotive industry may require hiring additional research staff at the outset to offer a more appealing partnership to automotive manufacturers. The School remains small, with 60 faculty, and has absorbed state funding cuts during the past few years.

STRATEGY

B. Promote the growth of advanced manufacturing, particularly related to specialty fabricated metals, composites, and automotive products.

ACTIONS

1. Promote expansion of UAB's School of Engineering with a focus on specialties aligned with local and regional manufacturing industry needs.

The School of Engineering should work with local and regional economic development professionals and the manufacturing community to develop a strategic plan for expanding cooperative university-industry applied research. The plan should identify focus technologies and industries, and requirements for faculty and other staffing, facilities and funding. The plan should include short-term and long-term actions assuming that building these capabilities will be a long-term process. Collaborations with other UA engineering schools where potential synergies exist should be considered. In addition, opportunities to involve students in undergraduate engineering and engineering technician programs at Jefferson State and Lawson State community colleges and Birmingham-Southern College should also be explored. An initial actions step could be to convene a working group with university, industry, and economic development representation to explore the idea and determine the feasibility of proceeding.

2. Support the development of collaborative engineering projects between Alabama's automotive manufacturers and UAB.

The School of Engineering should contact the major automakers and automotive suppliers in the region to identify product engineering, design and testing needs. The School could develop a short-term plan to undertake initial projects that could be done with existing resources or limited additional resources. A cooperative project fund could be established, with contributions from the university, industry, and the city. The objective for city involvement would be to support capacity-building for the School of Engineering that could result in increased research activity within the city and the potential for the growth of smaller enterprises involving automotive technologies. A first step would be to for the university to conduct outreach to automotive industry to identify product design, engineering and testing needs.

3. Explore the establishment of a center for automotive research at UAB.

Depending on the outcome of Action 2 above,

consideration should be given to establishing a center for automotive research as part of future strategic planning by the School of Engineering.

4. Develop additional industrial parks and other sites suitable for small and mid-size manufacturing operations.

As the city and the Jefferson County Economic and Industrial Development Authority consider developing additional industrial parks and sites within Birmingham, they should take into account the site requirements of smaller, technology-oriented firms that are likely to lead new manufacturing development. These may include smaller sites, higher-level amenities, and more multi-tenant facilities. These sites should be made development-ready, including completion of all necessary site preparation and infrastructure construction. Outreach to developers specializing in technology business parks should be part of the approach. In Alabama, the Cummings Research Park in Huntsville may offer models for Birmingham. (See Chapter 10, Goal 8, pp. 10.24–10.25).

Tourism

Tourism makes a significant contribution to the Birmingham economy. According to a study conducted for the Greater Birmingham Convention and Visitor's Bureau, 4 million tourists visited Jefferson County in 2010, generating revenues of \$1.38 billion and accounting for over 20,000 full-time-equivalent jobs.

Tourism employment was relatively stable during most of the past decade although it fell off somewhat during the recent recession. While more recent comprehensive data is not yet available, data on hotel occupancy and room rates as well as reports from individual venues and events indicate that the industry has begun to recover. Moreover, recent investments by the City, the Convention and Visitor's Bureau and others suggest that the city is positioned for industry growth in the years to come

Birmingham's tourism industry has four important segments: conventions; sports; heritage; and group tours. In addition a wide variety of arts, cultural and entertainment venues support and expand tourism by drawing visitors from within the region and encouraging visitors who come

to experience the city's major tourism attractions to extend their stays.

Conventions. In 2010, the Convention and Visitor's Bureau helped to arrange or provide services to 565 meetings and conventions with 686,182 attendees. This does not include meetings that were arranged with individual meeting facilities without the assistance of the Bureau. The geographic scale of meeting sponsors ranged from international to state-level. The types of organizations varied, with religious, educational, and medical being the most frequent. Tourism officials cite a number of factors that draw conventions to Birmingham, notably the low airfares, the high quality of facilities for a "second tier" convention location, and the many attractions and entertainment and dining options that enhance the convention experience.

The construction of a 300-room Westin Hotel and 60,000 square foot Entertainment District in the vicinity of the Convention Center is expected to increase the number of conventions. The \$70 million project, funded jointly by the City and the Convention and Visitor's Bureau, will bring the number of rooms adjacent to the Convention Center up to 1,000 and will provide conventioners with convenient entertainment and dining options.

Sports. Birmingham and its environs offer a wide range of active and spectator sports activities that have earned it a reputation as a sports tourism destination. A study conducted for the Convention and Visitor's Bureau estimates that sporting events generated in excess of \$200 million revenue for the metro Birmingham economy in 2011.



The \$46 million newly constructed Birmingham Crossplex at Fair Park hosts youth and college track, swimming, and other sports events.

The city and surrounding communities host annual spectator events in a number of sports, including NCAA college sports at UAB and Birmingham-Southern College, a college bowl game at Legion Field, the Magic City Classic, the Indy Grand Prix of Alabama at the Barber Motorsports Park, the Southeastern Conference College Baseball Championship, and the Red Diamond Vulcan Cup youth soccer tournament. The city has also hosted major golf tournaments at its world-class Robert Trent Jones golf courses.

Two new sports facilities funded by the City promise to increase the number of sporting events held in Birmingham. The recently completed \$46 million multi-purpose Birmingham Crossplex at Fair Park is already hosting youth and college track, swimming and other sports events. The \$64 million Region's Field in downtown adjacent to Railroad Park is home to the Birmingham Barons' minor league baseball team and is available for other sports and entertainment events. And Birmingham Race Course officials are studying bringing back live horse racing for the first time since 1995.

The city and surrounding communities offer many active sports activities for visitors and are in the process of adding others. Within the city, the two golf courses along the Robert Trent Jones Golf Trail attracted over 500,000 visitors in 2011, and the city has a number of other first class courses. New active sports venues include Red Mountain Park and the Red Rock Ridge & Valley Trail System. Red Mountain Park, which recently opened a new tree canopy course consisting of seven zip runs, plans to develop additional recreational facilities including miles of hiking and biking trails and a 22-acre fishing and paddle sports lake. The planned Trail System would provide hundreds of miles of walking, bike and recreation trails around the metro area.

Outside the city, the new owner of Alabama Adventure in Bessemer plans to re-open the facility as Splash Adventure, expanding the water park portion by adding four new water attractions. Oak Mountain State Park in Pelham has 17-mile mountain bike trail that attracts bikers from throughout the southeast. In 2012, the park is hosting the International Triathlon Union's Cross Triathlon World Championship, which is expected to draw more than 450 world-class athletes.



Students visiting the Kelly Ingram Park within the Civil Rights District.

Heritage. Birmingham's heritage tourism focuses on its central role in the civil rights movement and its industrial history. The city's Civil Rights District is home to leading historical markers of the civil rights struggle, notably the 16th Street Baptist Church, as well as the Civil Rights Institute, a center of civil rights education and discussion, and includes a newly completed heritage trail. The planned Negro League Museum at Region's Field will complement these venues. In the realm of industrial history, leading sites are the Sloss Furnaces National Historic Landmark and Red Mountain Park. A new visitors' center for Sloss Furnaces is expected to be under construction soon .

Group Tours. Birmingham is a stop on many group bus tours. These typically involve a one-night stay. Major attractions include civil rights heritage sites and the Barber Motorsports Park. Among the Park's attractions is the Barber Vintage Motorsports Museum, recently cited by Four Seasons magazine as one of the must-see private museums in the world

Arts, Culture, and Entertainment. Birmingham is the cultural capital of Alabama with a strong foundation of both non-profit and for-profit creative industries. The city has a wide range of arts, culture and entertainment venues that, while they may not be a primary tourism draw, support and expand tourism activity by drawing visitors from within the region and encouraging non-local visitors to extend their stays. These include the Birmingham Zoo, the Birmingham Botanical Gardens, the McWane Science Center, Birmingham Museum of Art, and various performance venues including the Alabama and Carver

theaters. According to a study released by Americans for the Arts in 2012, almost 1.6 million visitors from outside Jefferson County attended arts and cultural events in the county in 2010, spending over \$80 million on event-related purchases, including hotels, meals, transportation, and gifts, in addition to event admission costs. The city also offers an increasingly lively entertainment scene and several award-winning restaurants. The cultural economy contributes to quality of life for residents and businesses, as well as the tourism industry. 0

Tourism officials identify a number of opportunities and challenges facing the industry including:

- The City of Birmingham has many fewer hotel rooms than comparable areas.
- Improving circulation for visitors through expanded transit services. The mayor recently proposed creation of a tourist transit system to take visitors to downtown hotels and attractions to complement the BJCTA's DART trolleys.
- Increasing cross-promotion among visitor attractions.
- Improving transit for the hospitality workforce.
- Addressing the deteriorated condition of Legion Field.

STRATEGY

C. Expand tourism by targeting segments in which Birmingham has demonstrated an historically strong position or significant growth potential.

Actions

1. Capitalize on development of new sports facilities to expand the sports tourism market.

The City, GBCVB, and individual sports venues should establish a working group to fully inventory the community's sports resources, develop ideas for additional events, and consider ways to maximize synergies between venues and events. The group should also consider new marketing strategies to capitalize on new market opportunities generated by the new

facilities. This could include, as appropriate, updating marketing targets, channels, and materials.

The city along with private and nonprofit partners should also strategically invest in new sports facilities.

2. Continue to develop established markets, including civil rights and other heritage tourism, event tourism, and conventions (e.g., religious, medical, education).

This should include developing mechanisms to communicate regularly with key participants in these markets, identifying required investments in sites, facilities, events, and amenities and development funding plans. Marketing approaches should be updated to more effectively communicate with target markets and adapt to changing market conditions.

3. Develop additional cultural and entertainment amenities.

Similar to the working group on sports tourism opportunities, the City and partners in the arts, culture and entertainment industry should establish a working group to fully inventory resources, develop ideas for additional events and activities, and enhance synergies. The Cultural Alliance of Greater Birmingham and its successful event website, www.birmingham365.org, can serve as the organizer and foundation for this working group. The city's arts and cultural development planning should also incorporate input from the visitor industry on how to more closely link arts and cultural development with tourism development. One key initial priority is the further development of the Theater District, including restoration of the Lyric Theater. A fund could be established to seed new cultural venues and events, particularly downtown, with support from the visitor industry.

4. Improve wayfinding and transit services between the convention center, historic sites, cultural amenities and entertainment venues.

Of particular importance will be developing coordinated, financially sustainable transit services to connect visitors to venues and events. Improving pedestrian routes will also be important. (See Chapter 11, pp. 11.24–11.26.)

Distribution

The distribution sector includes wholesaling, and transportation and warehousing. The major industry segments in this sector within the City of Birmingham and their 2010 employment are durable goods wholesalers (7,500), non-durable goods wholesalers (3,700), truck transportation (3,900), and warehousing and storage (1,300). Employment increased during the past decade only in warehousing and storage (30 percent). It declined by 23 percent in durable goods wholesaling, 24 percent in non-durable goods wholesaling, and 11 percent in truck transportation. Despite these losses, Birmingham continues to have a relatively high concentration of employment in both wholesaling and trucking relative to national averages. Its proportion of employment in warehousing is about average but has increased. This suggests that it has some competitive strengths as a location for distribution activities. Despite the tendency of trade and distribution activities, particularly trucking-related, to locate in suburban areas with more and cheaper land and less traffic congestion, Birmingham fares relatively well in this cluster in comparison to the rest of the MSA. While it has a slightly lower concentration of wholesale employment, it has a slightly higher concentration of trucking employment and a significantly higher concentration of warehousing employment. The city likely has the opportunity to capture a share of any regional growth opportunities that occur in this cluster.

The Birmingham area is well-positioned as a distribution center for the Southeast region. At the juncture of three major interstates with a fourth to be completed by 2014, the region provides convenient highway access to many southeastern cities. It is also served by four major and two regional rail lines. While it is competing with other southeastern cities such as Nashville, Memphis, and Atlanta with similar or more extensive distribution infrastructure, certain firms are likely to find it a desirable location for distribution facilities based on proximity to their particular customers or retail outlets.

Recent expansions by a number of distribution companies within Birmingham underscore the city's continued viability as a distribution location. These include the purchase of a building by Church Transportation to

expand its logistics and warehousing division, the move into a new facility by Access America Transport, a third party logistics company with plans to significantly increase its local workforce, the relocation of R.E. Michel Co. Inc., a wholesale distributor of HVACR equipment, parts and supplies, into a larger office and warehouse space, the expansion by Mill Steel of its Birmingham processing center and distribution operations, and plans by Southern Gas and Supply to construct a new packaging and distribution center.

The area's position as a regional distribution center has been strengthened by the construction of a \$97.5-million regional intermodal rail-truck hub adjacent to the Jefferson Metropolitan Park in McCalla by Norfolk Southern Railway. The Birmingham Regional Intermodal Facility will eventually have the capacity to handle 165,000 containers and trailers annually. The facility is part of the railroad's multi-state Crescent Corridor initiative to establish an efficient, high-capacity intermodal freight rail route between the Gulf Coast and the Northeast.

This new intermodal facility could position the area to become an inland port for seaports such as Mobile, Savannah, and Charleston. With the potential shipping growth to Gulf and East Coast ports generated by the Panama Canal expansion, ports with limited capacity for expansion may prefer to ship containers directly by rail to inland ports in order to reduce truck congestion. The new facility could make Birmingham a competitor to established inland ports such as Atlanta and Memphis.

The expansion of Birmingham-Shuttlesworth International Airport presents opportunities for air cargo expansion. The Airport Authority's Phase II Air Cargo expansion added more than 400,000 square feet to its original cargo site, doubling its size and allowing enough space for up to five aircraft of various sizes. In addition, the project included the widening of an existing taxiway to allow for the wider wing span on larger inter-continental cargo airplanes. An additional 50,000–75,000 sq. ft. storage building is planned as well as an access roadway connecting the expanded cargo area to Airport Highway. At the same time, Birmingham will have to compete with Huntsville International Airport, which has established dedicated cargo service to several destinations and developed

extensive intermodal distribution infrastructure, as well as Hartsfield-Jackson Atlanta.

The potential for increased water-based transportation and distribution through the Port of Birmingham is less promising. A recent feasibility study for port expansion completed by AECOM concluded that aggregating enough cargo to justify regular barge service would be problematic and would require extensive marketing and incentives, and significant commitments by shippers to justify additional infrastructure investments.

STRATEGY

D. Position Birmingham as a regional distribution center, leveraging transportation infrastructure improvements and multi-modal options.

Actions

1. *Ensure timely completion of transportation infrastructure that supports regional distribution.*

Projects such as completion of I-22 and future Highway 280 improvements will be important to making sites within the city competitive for distribution. The City should work with ALDOT to ensure timely planning and completion of these and other key highway projects

2. *Promote the development of international air cargo service at Birmingham-Shuttlesworth Airport.*

A market study should be conducted to determine demand for air cargo services among shippers into and out of Alabama and adjacent states, and Birmingham-Shuttlesworth's cost- and time-competitiveness versus other accessible airports. If market potential is found to be sufficiently strong, the airport should be marketed aggressively to dedicated air cargo carriers. Based on the degree to which the market develops, future decision can be made regarding investments in the development of more sophisticated intermodal distribution infrastructure at the airport.

3. *Prepare and market sites with close proximity to transportation infrastructure.*

This work should include identifying and marketing key sites to wholesaling, transportation and distribution firms, identifying road network improvement needs

to improve highway access, and investing in public improvements in conjunction with private investment commitments by distribution firms. Because of the difficult topography in many areas of the city, funds should be budgeted and speculative sites prepared in advance for immediate development by newly relocating or expanding firms. (See Chapter 10, Goal 8, pp. 10.24–10.26.)

The Financial Services Industry

Birmingham's financial services industry employed 20,257 workers in 2010, approximately seven percent of total city employment. The industry experienced relatively robust growth of 11 percent between 2001 and 2010.

The industry is diverse, with three important segments: commercial banking and other lending; insurance; and securities and other financial investment activities.

Commercial Banking and Other Lending. Local employment in commercial banking stood at 5,264 in 2010. During the past decade, employment peaked in 2003 at 7,276 and then declined by 28 percent through 2010. Traditionally an important regional banking center, the city has seen a number of mergers and acquisitions that have led to a reduction in the number of locally-headquartered banks and the consolidation or elimination of some corporate and back office functions. As elsewhere in the U.S., the industry was also affected by the financial crisis of 2007-8, resulting in retrenchment and some failures. In the past few years, the industry appears to have stabilized, with some positive developments including the acquisitions of two failed banks by new banks that have increased employment and are projecting future growth. The city remains the headquarters of two large super regional banks, Regions Financial Corporation and BBVA Compass Bank, NA, and has seen the entry into the market of non-local banks including IberiaBank, BB&T, Wells Fargo, BancorpSouth, PNC, Service 1st and Cadence Bank. Also important is the location the city of a number of community or independent banks, some of which are experiencing significant growth and expansion.

Despite the dramatic changes in the local industry landscape, the Birmingham MSA remains the ninth-largest banking center in the U.S., the same rank it held a decade ago. And the industry comprises a 75 percent higher share

of total city employment than the U.S. average, reflecting the city's relatively strong competitive position as a banking location.

Other lending and related activity, including credit card lending, trade financing, consumer lending and mortgage brokering, employed 1,968 workers in 2010. Employment in this part of the industry remained relatively stable during the past decade.

Insurance. Employment in Birmingham's insurance industry was 5,897 in 2010. This is almost equally divided between insurance carriers (firms that underwrite insurance), with 3,070 employees, and insurance agents and brokers (firms that sell insurance on behalf of carriers), with 2,817 employees. During the past decade, employment among insurance carriers peaked in 2006 at 3,995, and then declined by 23 percent through 2010. Nevertheless, there remain a number of mid-sized carriers based in Birmingham that do business regionally or nationally. These include Infinity Property and Casualty, ProAssurance, and Protective Life (headquartered just outside the city limits). And the industry comprises a 50 percent higher share of total local employment than the U.S. average, reflecting the city's relatively strong competitive position as a location for insurance carriers.

Employment among insurance agents and brokers remained stable during the past decade. This part of the industry serves a primarily local clientele. Its share of local employment was about the same as MSA and national averages.

Securities and Other Financial Investment Activities. This industry segment includes investment banking, securities brokerages, portfolio management, and financial advisory services. Of all industry segments, it is the only one to have experienced growth during the past decade. In fact, between 2001 and 2010, employment increased by an impressive 119 percent from 2,940 to 6,424. The most dramatic growth was in portfolio management and investment advisory services.

A number of these firms are headquartered in Birmingham, while others have established regional offices in the city.

Major Birmingham-based firms includes Stern Agee and Leach, one of the largest investment banking firms outside of Wall Street; Founders Investment Banking; Welch Hornsby Investment Advisors; New Capital Partners, a private equity firm; Harbert Management, an asset management firm; and Pittman Financial Partners, a financial advisory firm acquired in 2010 by Memphis-based Strategic Financial Partners. Non-local firms that have recently located regional offices in Birmingham include Allgen Financial Services, an Orlando-based financial advisory firm, and Cortview Capital, a Virginia-based broker-dealer and investment banking firm.

While concerns have been expressed about the move from Birmingham to Homewood by the local Merrill Lynch office, firms in this industry remain more likely to locate in the city than elsewhere in the MSA. Moreover, during the past decade, the industry's share of city employment has risen from below to above the national average, indicating that Birmingham has become an increasingly desirable location for this type of business.

STRATEGY

E. Make the financial services industry a target of recruitment, retention and expansion efforts, in collaboration with the BBA's regional efforts.

Action

1. *Create a tailored program to support continued location of the financial industry in the City of Birmingham.*

The BBA has identified financial services as one of the region's target industries. The Mayor's Office of Economic Development should work with the BBA and through its own programs to ensure that support for the financial industry is tailored to the particular needs of firms within the city or most likely to locate within the city. This includes working with REV Birmingham to market the downtown as a location for corporate and regional headquarters, marketing the Jefferson Metropolitan Park Lakeshore as a site for data centers and ensuring that the Park maintains state-of-the-art broadband services, assisting existing firms with

expansion needs, and working with higher education institutions to develop educational programs addressing the professional workforce needs of firms of all three industry segments.

Life Sciences Research

Birmingham is a nationally significant center of life sciences research, led by the UAB Medical Center and the affiliated Southern Research Institute.

According to the UAB Research Foundation, which markets and licenses UAB patents and supports the development of local life sciences startups using UAB-licensed technologies, UAB has technologies in every medical therapeutic area, including technologies for the diagnosis and treatment of cancer, autoimmune diseases, cardiovascular diseases, and central nervous system disorders. They encompass every type of technology, from platform technology and research tools to diagnostics and therapeutics (such as gene therapy and vaccines), and every stage, from very early stage to late stage (including clinical trials). UAB also has a strong portfolio of engineering, biomaterials and computer technologies with a variety of medical applications. In 2010, UAB received about \$450 million in total research funding, primarily in life sciences. It ranked 31st nationally among all research institutions in federally funded research, and 20th in funding from the National Institutes of Health.

The Southern Research Institute is a self-sustaining contract research organization and an affiliate of UAB. SRI is recognized internationally for the discovery and evaluation of anticancer therapeutics and the evaluation of antiviral and antimicrobial drugs, biologics, and vaccines, with additional competencies in central nervous system and neurodegenerative diseases. SRI and UAB have long-standing relationships in breast cancer research, glial biology, cystic fibrosis research, and gene therapy.

Both UAB and SRI continue to make advances in their life science research capacity. For example, in 2011, UAB became one of 25 inaugural members of NIH's NeuroNEXT, a neuroscience research network that serves as a conduit for translational research—taking new discoveries from the laboratory and translating them into therapies for patients.

In 2012, it established a Comprehensive Cardiovascular Center that will help doctors and researchers work together to find new ways to fight heart disease in Alabama, based on the successful model of its Comprehensive Cancer Center. It is also working to expand its research capacity in bioinformatics. SRI, meanwhile, is proceeding with plans to build a new 40,000 square foot laboratory building focusing on research and drug discovery related to medicinal chemistry.

Despite this strong track record and growth opportunity, local research and economic development professionals acknowledge a number of obstacles to translating research advances into local job-creating enterprises. These include:

- The absence from the region of a major pharmaceutical company, which can absorb the high cost and extended timeline involved in bringing new drugs to the market.
- Recent and prospective declines in federal research funding, and declines in state funding through the Education Trust Fund (about 25 percent between 2008 and 2001).
- The limited availability of state incentives for private investment in research and technology transfer relative to many other states.
- The limited number of local entrepreneurs with the skills to move life sciences technologies into the commercial marketplace.
- The image, whether real or perceived, that the region lacks some of the key attributes such as high quality of life and a strong entrepreneurial support network to attract research and entrepreneurial talent.

At the same time, new and proposed initiatives could help to accelerate the movement of local life science research into the marketplace, significantly increasing its role in generating local businesses, jobs, and income.

In late 2011, UAB Medical Center released a strategic plan that called, among other things, for recruitment of 50 new research faculty and 30 to 50 new National Institutes of Health-funded biomedical researchers to build on its existing research strengths. The cost of these initiatives would exceed \$100 million.

The Birmingham Business Alliance, in its Blueprint Birmingham, has made a strong commitment to supporting research, development and technology transfer at UAB and other higher education and research institutions in the region. Specific objectives include partnering with UAB on the design, development and launch of a comprehensive statewide and national economic impact awareness campaign, and enhancing UAB's research, technology transfer and enterprise support capacity. To implement these efforts, the BBA created a new position, vice president of innovation and technology.

In part as a result of the BBA's commitment, the BBA, UAB Research Foundation, UAB Business School and other stakeholders formed Invention to Innovation (I2I), a new partnership to accelerate technology transfer and related local enterprise formation. The objective of the initiative is to build local management teams to commercialize locally-developed technologies, establish intensive mentorship teams with a combination of marketing, management and technology skills, and develop a robust financing pipeline for every stage of firm development. In a related move, UAB's business school is reviving a certificate in life sciences entrepreneurship program. The initiative is particularly focusing on developing enterprises in areas such as health care IT and medical devices that do not require the lead time of drug development.

Some positive developments are also occurring at the state level. The state's Accelerate Alabama plan, released in early 2012 includes commitments to develop a statewide organization to increase technology commercialization and develop a legislative agenda to build research and development capacity and provide financial support to innovation-based commercialization. And the state's Innovation Fund, which provides grant funding for collaborative university-industry research, will begin awarding \$4 million in funding in 2013.

STRATEGY

F. Solidify and expand Birmingham's role as a major life sciences research center.

Actions

1. *Advocate for increased state investments in the state's research universities.*

The BBA has already identified this as a key priority of the Blueprint. A coordinated advocacy effort, including the BBA, UAB, SRI, the City of Birmingham, and local civic leaders, should be undertaken to advocate for significant increases in state investments in life sciences research at UAB and other public research universities. These efforts should initially be specifically tied to UAB's recently developed plan to expand its research capacity in its areas of existing strength. Collaborative efforts should be undertaken with research institutions in other parts of the state, as appropriate. One possible model for state-level support, already under consideration, is the Georgia Research Alliance, a non-profit that receives state, foundation, and industry funding to support university research and leverage federal research dollars.

2. *Promote increased local philanthropic investment in local life sciences research.*

Increased local funding will be important to show local support for life sciences research and leveraging state and other non-local funds. The business and philanthropic communities, working with UAB, should organize a fundraising campaign to raise substantial corporate and philanthropic investments. This could focus on life sciences research, but could also be directed to UAB's other research strengths. The UAB Research Foundation could lead this effort.

3. *Establish an innovation fund to support researchers developing technologies with commercialization potential.*

Another priority established by the BBA in its Blueprint, and innovation fund could be funded by UAB, with corporate, philanthropic, and public sector support (potentially through the fundraising campaign described above). Revenue from licenses of patents developed through the research could be recycled to make the fund fully or partially self-sustaining. One possible model is the University of Massachusetts' Technology Development Fund, which provides grants averaging about \$25,000 to university researchers to accelerate commercialization of their early-stage technologies.

4. Work toward timely implementation of the UAB Master Plan consistent with city planning objectives

UAB's Master Plan includes new student housing and a green connection between the main campus and Railroad Park, helping to integrate UAB into the urban fabric of downtown. Collaboration with UAB to ensure that the new university development contributes fully to the revitalization of downtown is critical to support working conditions and quality of life that will attract researchers.

5. Market the city as a location for other research centers.

As Birmingham gains in stature as a center of life sciences research, there is potential to attract additional life science research institutions such as pharmaceutical company research centers or national laboratories. While Birmingham is not among the top tier of life science research centers, it is developing specializations that may offer attractive collaboration opportunities for other research institutions. The task force studying reuse of the soon-to-be-vacated Trinity Medical Center campus has identified attracting a federal research laboratory as one potential option. The city, working with UAB could develop a targeted marketing effort to promote this possibility. This effort could include developing detailed informational materials documenting the area's research strengths, organizing marketing teams representing a range of local constituencies to demonstrate broad local commitment, and developing personalized outreach methods including detailed presentations and site visits.

Life Sciences Industry

As noted above, the extensive biomedical research conducted at UAB and the presence of a large health care sector has the potential to spawn the development of new firms in this cluster. A number of small startups and early stage firms are already operating in Birmingham. However, as yet, the employment impact has been modest. Components of the cluster and their employment in 2010 include research and development in physical, engineering, and life sciences (500); pharmaceutical and medicine manufacturing (120); and medical equipment and supplies manufacturing (430). During the past decade, employment in these industries grew by 10 percent, 18 percent, and eight percent, respectively. Birmingham has low concentrations of employment in all of

these industries. A more expansive definition of this cluster could include medical-related information technology, including software and web-based and mobile applications. A number of small firms of this type are located in Birmingham, some of which were described in the Health Care section of this chapter (pp. 9.5–9.7), but again the aggregate employment appears to be relatively small.

Despite its uncertain trajectory, there are hopeful signs that this cluster is gaining momentum. There are 10 biomedical firms and at least four health care IT firms currently in the Innovation Depot alone, and access to early stage financing for these and other firms is on the increase. In addition, as described above, the UAB Research Foundation is working with the members of the research, education, and economic development communities on a new initiative to accelerate the movement of research and development at UAB into the local commercial marketplace.

There are several examples of local biomedical firms that have made progress in developing and commercializing new projects in recent years. Among them are the following:

- **Agenta Biotechnologies** drew \$1.1 million in governing grants to fund the research and development of bone and skin reproduction treatment.
- **BioDtech** received \$600,000 in venture capital for its work detecting and removing biological toxins from researchers' test samples.
- **DiscoveryBioMed**, a UAB spinoff, obtained a \$1.38 million federal grant to continue its development of a promising cystic fibrosis drug.
- **Vista Engineering**, founded by a former UAB professor, secured a \$750,000 federal grant to help commercialize a locally developed diamond-growing technology for use in the biomedical implant industry.
- **Soluble Therapeutics** received \$500,000 from the Birmingham Technology Fund, a seed capital fund capitalized by the University of Alabama System and the Health Services Foundation, and \$1 million in venture capital to market a technology developed in part at UAB that dramatically speeds up the development of protein-based drugs and vaccines.

- **Vaxin** received a \$21.7 million contract from the federal Biomedical Advanced Research and Development Authority to complete development of its proprietary anthrax vaccine, and test its effectiveness in human subjects. It also won a \$1 million grant toward further developing a vaccine that researchers hope might be an alternative to spaying and neutering pets.

Birmingham also has more well-established biomedical firms. One of these, **Hygia Health Services Inc.**, reprocesses medical equipment for reuse by health care providers. The firm, which employs about 150, began a 45,000-square-foot expansion in late 2011 with plans to hire additional workers. It is also expanding its research and development in order to reprocess and market additional types of medical devices for reuse. Another, **Birmingham Laboratories**, with about 80 employees, designs and develops biodegradable implants to deliver medicine over periods of up to several months.

Changes in the pharmaceutical industry are creating additional opportunities for local drug development firms. Large pharmaceutical companies are relying less on developing drugs internally and more on licensing drugs developed by smaller firms. As the opportunity to develop “blockbuster” mass market drugs diminishes, they are also becoming more interested in developing “niche” drugs with smaller markets. This could create additional licensing opportunities for research institutions and local companies, and promote the formation of new companies focused on drug development.

STRATEGY

G. Capitalize on Birmingham’s research base to develop a life sciences industry cluster.

ACTIONS

1. Develop a public-private partnership to fund technology commercialization.

A “proof-of-concept” fund would support pre-startups or startups that have developed or are in the final stages of developing a product but have yet to prove it in the marketplace. Such funds are difficult to obtain, even from angel or venture capital sources because of the

high risk involved. Like the Innovation Fund, this fund could be capitalized with a combination of university, corporate, philanthropic, and public investment. It would be professionally managed. Initial action steps would include establishing a working group reflecting a business-university-public partnership, selecting an organization to lead the effort, selecting a fund manager, developing a business plan, and soliciting investments. One potential model is the Akron (Ohio) Development Corporation Seed Fund, which provides investments of \$100,000–250,000 to companies that are in the latter stages of product development but not yet generating revenues. The initial investors were a local insurance company and utility.

2. Incentivize the development of multi-tenant facilities suitable for early-stage firms, with an initial focus on the Entrepreneurial District.

The City and REV Birmingham should develop a master plan for the Entrepreneurial District that lays out principles for private development consistent with the space needs of early-stage companies, describing public infrastructure investments, undertaking rezoning as appropriate, and offering targeted development incentives. The Entrepreneurial District should be

PROVIDENCE KNOWLEDGE DISTRICT

Like Birmingham, Providence, RI, is in the process of transition from a manufacturing to a technology-driven economy. In a major initiative to provide space for research facilities and technology companies, the city and state are collaborating to develop a knowledge district in the city’s downtown. Known as the Jewelry District, This area was the center of U.S. jewelry manufacturing in the 19th and early 20th centuries. At the center of the new knowledge district is a 20-acre site made available through the relocation of Interstate-195. The state established a commission to plan redevelopment of the site, including environmental remediation and the development of roads, walkways utilities, and open spaces. The state also issued a \$45 million bond to fund the purchase and redevelopment of the property. Meanwhile, the City updated zoning regulations to facilitate the district’s development, including illustrated regulations and a streamlined approval process. The district is already home to Brown University’s School of Medicine, the Roger Williams Medical Center’s Center for Biological Research Excellence, and several life sciences and other technology firms.

particularly targeted to companies as they graduate from the Innovation Depot so that they remain in the city. Some emerging companies have reported that even if they want to stay downtown, it is difficult to find suitable space for rent, despite the existence of empty buildings. Action steps would include preparing the master plan in consultation with technology facility developers and technology companies; enacting zoning changes as necessary; making initial infrastructure investments to catalyze private investments; marketing the district to appropriate developers; and making additional infrastructure investments in conjunction with private investments, possibly through use Tax Increment Financing. A potential model is Providence, Rhode Island's Knowledge District (see inset).

3. *Develop initiatives to attract entrepreneurs in the life sciences to Birmingham to form new companies.*

Broader strategies to attract entrepreneurs to Birmingham are laid out under Goals 4 and 6 in Chapter 10 (pp. 10.14–10.20). As part of these efforts, local life sciences entrepreneurs should be encouraged and provided with marketing tools to reach out to their peers in other cities as well as emerging local entrepreneurs through direct contacts and social media in order to increase attraction and retention of entrepreneurial talent.

Medical-related Industry Niches

Birmingham is home to a number of firms in the area of digital information and media. This is a loosely-defined cluster linked by the use of computers and telecommunications hardware as a platform to deliver products and services to businesses, institutions, and consumers. This segment of the economy has been growing rapidly nationally, particularly with the development of ever more powerful computers and the increasing use of the internet and mobile devices. Businesses include those in bioinformatics (the application of computer science and information technology to the fields of biology and medicine), software development, internet-based services, and mobile applications.

While employment in this cluster is hard to track because employment data is often embedded in broader data for other industries, there is evidence of that Birmingham

has a small but growing number of firms in the cluster, with further growth potential. This includes a number of firms tied to the health care industry, but also to banking, telecommunications, media, and others. In the health care industry, a number of small startup and early-stage technology firms are developing database services, software, and internet-based and mobile applications, as described earlier. Firms outside the health care field include:

- **Blue Ocean Technologies**, a provider of cloud-based telephony and VoIP technology.
- **Kinetic Communications**, a web development firm.
- **Huebris**, a web design and social media marketing company.
- **Verafin Inc.**, a provider of compliance, anti-money laundering and fraud detection software to the banking industry.
- **2B Solutions**, developer of a mobile app used by venues such as museums, theaters, and sports stadiums to track inventory or attendance.
- **Infomedia**, a developer of websites and custom, online products for clients in a wide range of industries, including retail, real estate, construction, professional services and transportation.
- **Telelinks**, a provider of data storage and management services.

In addition, five firms in the financial services and utility industries have established data centers in JeffMet Lakeshore Park, taking advantage of the park's high-capacity broadband services.

The further development of the digital information and media cluster will be closely tied to the research and research professionals at UAB. Many new firms in this cluster are reported to be closely linked to UAB. In addition, UAB research in areas such as bioinformatics, cyber security (UAB recently established a Center for Information Assurance and Joint Forensics Research), and other areas of information technology creates the potential for new spin-off enterprises.

One indicator of the current growth of this cluster is the shortage of technical staff to meet the needs of area

firms. Local technology executives have recently reported difficulties finding experienced software engineers and a range of other technology specialists, including database administrators, business analysts and production support technicians.

STRATEGY

H. Develop targeted niches in digital information and media, particularly in bioinformatics and other technologies related to the medical field.

ACTION

1. *See actions related to development of life sciences cluster above.*

goal 2

A City and its government that are focused on economic development.

POLICIES

- Strive to create and maintain an award-winning educational system, both in the Pre-K and K-12 systems and in higher education.
- Ensure that the City's workforce development programs are preeminent meeting the needs of its citizens as well as current and future employers.
- Catalogue available sites for expanding and new businesses.
- Be active in State Economic development efforts.
- Work collaboratively to increase employment.

The Future of Economic Development

Birmingham must be willing to look to the future. Birmingham must expand workforce training and brownfield site development and when necessary greenfield site development to ensure that it is prepared for the future. The City should take an active role in the development of State economic development to ensure that it experiences growth in the future. By working collaboratively, industries and businesses can be attracted that would continue Birmingham's role as the centerpiece in Alabama's economy.

STRATEGY

A. Create and maintain an award-winning educational system, both in the Pre-K to 12 system and in higher education.

ACTIONS

1. *The City must provide leadership for the City School system.*

The City must constantly recognize and eliminate barriers to the receipt of a world-class education for each of its children. For more see Chapter 10, Goal 1, pp. 10.5–10.8.

2. *Work with higher education to deliver an education to the City's adults.*

For more see Chapter 10, Goal 2, pp. 10.9–10.13.

B. Ensure that the City's workforce development programs meet the needs of its citizens as well as current and future employers.

ACTIONS

1. *For more see Chapter 10, Goal 2, pp. 10.9–10.13.*

C. Catalogue available sites for expanding and new businesses.

ACTIONS

1. *Develop a database of sites for new businesses.*

Recent efforts by the Regional Planning Commission and Birmingham Business Alliance to catalogue brownfield sites in the City should be continued. For more see Chapter 10, Goal 8, pp. 10.24–10.26.

Identify areas where the City's boundaries could be expanded.

2. *Assist with obtaining EPA grants for development sites with some level of pollution that must be remediated.*

The City should partner with the Birmingham Business Alliance and private industry to secure such funding.

D. Be active in State economic development efforts.

ACTIONS

1. Advocate for economic development policies that will help Birmingham.

The State's economic development policies have been developed over a number of decades. Generally, new policies (generally tax-driven) have been adopted to attract new mega-projects to the State. The City, in cooperation with BBA, should examine State and local tax policy and other factors that influence the location of industries. In conjunction with this effort, the City, in cooperation with BBA, should solicit the support of the Alabama Department of Commerce to lobby the legislature for passage of general or local laws that would benefit the economic development of the City.

2. Participate in the economic development process.

The City's leaders regularly attend local, regional, and statewide meetings about economic development. The City should build on these ties and use them to its advantage.

E. Work collaboratively to increase employment.

ACTIONS

1. Build networks of pre-existing resources to increase economic development successes.

The City should bring groups such as Birmingham Business Alliance, Economic Development Partnership of Alabama, UAB, JCEIDA, Alabama Power Company, Alabama Department of Commerce and others concerned with economic development together regularly to focus on local economic development issues.

C. Getting Started

| ACTIONS | RESPONSIBLE PARTY |
|---|---|
| Establish a working group to develop a sports tourism development plan. | GBCVB; Mayor's Office of Economic Development; venue owners and events organizers |
| Establish a working group to develop an arts, culture and entertainment plan. | Cultural Alliance of Greater Birmingham; Mayor's Office of Economic Development; cultural institutions; venue owners; events organizers; Alabama School of Fine Arts; arts organization |
| Conduct a market study on increasing cargo service at Birmingham-Shuttlesworth International Airport. | Birmingham Airport Authority |
| Organize advocacy efforts related to life sciences research funding. | BBA; Mayor, UAB, SRI |
| Inaugurate a local funding campaign to support expansion of life sciences research. | UAB; local entrepreneurial support community |
| Initiate strategic planning for expanding the applied research capacities of UAB school of engineering. | UAB; BBA bringing relevant industry representatives to the table |
| Capitalize an Innovation Fund. | BBA; UAB, private philanthropic investors; city |
| Capitalize a proof-of-concept fund. | BBA; private investors; City |
| Develop an Entrepreneurial District Master Plan. | REV Birmingham and City Planning Division; input from entrepreneurial support community |