

A Three Pillar Strategy for a Resurgent Atlanta Economy

DECEMBER 2014





Reproduction, display or distribution of this document is prohibited without the prior written consent of Invest Atlanta.

We intend to be a city where the world's most innovative companies thrive and where our diverse, dynamic population prospers."

Mayor Kasim Reed

TABLE OF CONTENTS

Preface	4
Strategy Overview	7
Pillar One: Solidify Fundamentals	10
Pillar Two: Foster Innovation and Entrepreneurship	23
Pillar Three: Attract, Retain, and Grow Investment	32
Conclusion	44
Methodology	45
Acknowledgements	46
Endnotes	47
Appendix A: Sample Performance Metrics	48
Appendix B: Focus Group and Electronic Survey Report	51
Appendix C: Local Specialization Analysis	78
Appendix D: Understanding Geographies and Data Availability	96
Appendix E: Operational Targeting Analysis	114

PREFACE

Atlanta's symbol is the Phoenix, the legendary bird that rose from the ashes. In Atlanta's case, the Phoenix represents the city's rise following the Civil War; it adorns the City's seal along with the motto "Resurgens," which means "rising again." The Phoenix is an apt symbol for the city, which has a long and proud history of self-reinvention – a place where entire industries have been reimagined and where Dr. King's hopes have been realized in ways few other American cities can boast of.

Atlanta is the capital and most populous city in the State of Georgia; it is the cultural and economic center of the Atlanta metropolitan statistical area (MSA), the ninth largest MSA in the United States.¹ The Atlanta MSA is home to almost 5.5 million people and 150,000 businesses.² More than two-thirds of all goods and services produced in Georgia are produced in the Atlanta MSA.³ The sustainability of the state's economy, as well as that of the Southeast region – a region of 78 million people – is tightly tied to Atlanta's success.

The Atlanta MSA is home to almost 5.5 million people and 150,000 businesses.

Since its founding as "Terminus," at the intersection of two railroad lines, Atlanta has played a critical role as a transportation hub. Today, Atlanta boasts the busiest airport in the world with over 94 million passengers in 2013. The city's strength as a hub of passenger transportation has helped to attract and grow a strong base of Fortune 1000 corporate headquarters, including Coca-Cola, Turner Broadcasting, Delta, Porsche, Equifax and PulteGroup. It has also fostered the growth of smaller businesses in the financial technology, health information technology, global non-profit, logistics, and film/television production sectors, among a host of others.

Today, Atlanta is once again reinventing itself – as a hotbed of innovation and entrepreneurship, made possible by the city's robust knowledge-based economic ecosystem and highly skilled workforce. The region is home to 66 colleges and universities with 275,000 students. In fact, Atlanta ranks seventh in student enrollment among America's largest urban areas, and Forbes ranked Atlanta as a top 10 city for new college graduates.⁵

Global access, a low cost of living and doing business, and educational and cultural amenities all provide a strong foundation for Atlanta's economy. Atlanta attained international

prominence in the decades following the civil rights movement for its progressive views and powerful public-private partnerships.

However, Atlanta faces challenging economic headwinds. From 2001 to 2012, the MSA's GDP per capita fell by 7.2 percent while by the same measure, the average US MSA increased by 6.5 percent.⁶ The relative weakness of the last decade's economic performance has manifested itself in housing values, among other indicators. In 1991 housing prices in the Atlanta MSA were comparable to national averages; they are now 25 percent lower than the national average.⁷

Atlanta's historic strengths and success in periodic self-reinvention offer a means to reverse these trends.

Atlanta's historic strengths and success in periodic self-reinvention offer a means to reverse these trends. Indeed, resurgence may already be underway: the region's growth in GDP since 2009 has outpaced that of both the New York City and Los Angeles regions, making it the country's seventh largest in total GDP. In the coming decades, Atlanta's challenge and its great opportunity will lie in its ability to capture an appropriate share of regional growth: for the region to continue to prosper, its urban core must thrive as a place to live, work, and do business.⁸

In an effort to build on strengths and mitigate weaknesses, Mayor Kasim Reed, Chair of Invest Atlanta, commissioned this Economic Development Strategy. It builds on previous

efforts, notably including a 2004 effort called the "New Century Economic Development Plan," conceived as an impetus to focus City government on supporting business growth and development. That Plan contained a set of specific action items; a 2007 audit by the City of Atlanta's City Auditor's Office concluded that the City had completed half the action items and was progressing well on the remainder. In addition, this strategy builds upon and provides a framework for advancing the goals detailed in other economic development plans, such as the Atlanta Regional Commission's (ARC's) Regional Economic Competitiveness Strategy, ARC's Livable Center Initiative, and the City of Atlanta's Strategic Community Investment Report.

Seeking to build on this progress, Mayor Reed convened a steering committee to guide this effort. It was comprised of representatives from the Atlanta BeltLine Inc., Central Atlanta Progress, the Atlanta Housing Authority, Georgia Power, Invest Atlanta and constituencies from around the

city. The result of their work and that of the Invest Atlanta staff and their consultants is this document, Without Limits: A Three Pillar Strategy for a Resurgent Atlanta Economy.

As with the New Century Economic Development Plan of ten years ago, this strategy contemplates setting the stage for concrete, implementation-oriented plans. Its principal aim is to focus public and private entities throughout the city on what needs to be done in order to achieve sustainable economic growth and maintain Atlanta's global competitiveness. Success in constructing the three pillars of the strategy and implementing the recommendations that compose each pillar will require building a broad collaboration to enhance Atlanta's economic future. Deeper analysis and focused action plans will be required. Simply put, this strategy outlines where the city wants to go and describes why those aspirations are plausible. Subsequent plans will develop specific and measurable steps needed to get there.

STRATEGY OVERVIEW

This document begins with Mayor Kasim Reed's call to action: "Atlanta must be a city where the world's most innovative companies thrive and where our diverse, dynamic population prospers." Achieving this vision requires a comprehensive understanding of Atlanta's competitive position and a commitment to leverage its strengths in order to overcome its weaknesses. As the authors of this strategy considered how to frame their presentation of baseline conditions and the recommendations that flow from them, they conceived of the strategy as a platform from which economic resurgence can spring – a platform built on three pillars, the building blocks of each are a set of recommendations. The three pillars of this economic development strategy are:

PILLAR ONE Solidify Fundamentals

In order to compete for 21st Century talent and businesses, certain prerequisites must be in place. Economically successful cities are safe, well-managed, well-educated, easy to traverse, exciting, and attractive. Just as importantly, they are perceived to be all those things as well. Ensuring balanced growth throughout the city is a central tenet of Mayor Reed's administration. Every neighborhood needs to thrive; every individual who wants to and can work should be well-prepared for the workforce.

PILLAR TWO Foster Innovation and Entrepreneurship

Sustainable growth requires innovation and entrepreneurship, which create wealth opportunities for Atlanta's residents, enhancing the competitiveness of existing businesses, and increasing the city's economic diversity.

PILLAR THREE Attract, Retain and Grow Investment

Atlanta is already a hub for certain industries, and increasing jobs and productivity in those sectors is a priority. Atlanta also has the opportunity to foster emerging industries that are nascent in Atlanta and/or growing elsewhere. By focusing on ways to bring investment and

development to both traditional employment centers and areas of the city that have not traditionally experienced growth, Atlanta will have a more balanced, stronger economy.

This strategy also recognizes that the city is part of a dynamic metropolitan region. While Atlanta is at the core, other jurisdictions within the region derive benefit from each other and from being part of an integrated regional economy. As such, several of the recommendations within this report transcend governmental jurisdictions and apply to the entire metropolitan area.

WITHOUT LIMITS:

A Three Pillar Strategy for a Resurgent Atlanta Economy

PILLAR ONE

Solidify Fundamentals

RECOMMENDATION 1

Make Atlanta a great place to live.

RECOMMENDATION 2

Align tax regime to address the fundamentals.

RECOMMENDATION 3

Improve public safety through community partnerships.

RECOMMENDATION 4

Create a workforce development ecosystem agenda.

RECOMMENDATION 5

Ensure K-12 education is meeting employer needs.

RECOMMENDATION 6

Re-establish an economic development subcabinet.

PILLAR TWO

Foster Innovation and Entrepreneurship

RECOMMENDATION 7

Promote entrepreneurial connections.

RECOMMENDATION 8

Increase capital for innovation businesses at every stage.

RECOMMENDATION 9

Enhance the City's business support services.

PILLAR THREE

Attract, Retain And Grow Investment

RECOMMENDATION 10

Convene public-private industry working groups.

RECOMMENDATION 11

Bolster exports.

RECOMMENDATION 12

Market Atlanta's strengths.

PILLAR ONE Solidify Fundamentals

PILLAR ONE SOLIDIFY FUNDAMENTALS

Economic growth requires certain fundamentals be in place to provide citizens and businesses with an environment to invest capital and raise families. Further, strong fundamentals allow cities to minimize the effects of global and national recessions. Atlanta must be – and be perceived to be – safe, affordable, diverse, well-managed, well-educated, easy to traverse, exciting, and attractive.



Atlanta has made great strides in improving safety. Atlanta's crime rate is at its lowest level since 1969. The crime rate dropped 38 percent from 2000 to 2012, compared to a 12 percent decrease nationally during the same time period. The City now has the largest number of police officers in its history, with 2,000 men and women on the force. Atlanta's continued investments in public safety are a way to guarantee safe business districts and neighborhoods.

Despite record-breaking decreases in the City's overall crime rate, however, Atlanta's violent and property crime rates remain higher than those of benchmark cities (Boston, Dallas, Denver, and Seattle, as described in the Methodology chapter). The perception that many of Atlanta's neighborhoods are not safe places to raise families and conduct business is a deterrent to investment in the city by both residents and employers. Atlanta's efforts such as the establishment of the Community Oriented Policing Section, which has deployed 50 officers to build community partnerships, the opening of the Loudermilk Video Integration Center for centralized surveillance, and the realignment of the Police Department's beat structure to improve response times are important steps toward ensuring that all types of crime will decrease, enhancing the city's safety for its residents and businesses.

14,000 12,000 10,000 8.000 6.000 Seattle **Dallas** 4.000 Denver Boston 2,000 0 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

Figure 1: Part 1 crime rate per 100,000 residents in Atlanta and select peer cities

Source: Federal Bureau of Investigation

Atlanta has improved its financial footing, providing confidence to investors and businesses.

Businesses and investors may be unwilling to place their capital in cities that cannot effectively manage their own finances. They need confidence that a city has the resources to provide services during both good and bad times, whether a natural disaster or a global recession. Over the last five years, the City of Atlanta has grown its reserves from \$7.4 million to \$138 million, the highest level in the City's history, driving an improved bond rating of Aa2 and A1.¹¹ Mayor Reed, in collaboration with Atlanta City Council and the City's employee union, ushered in pension reform legislation that will save Atlanta \$270 million over ten years and \$500 million over 30 years.¹² The City has balanced its budget, and has also made critical investments in infrastructure, without raising property taxes. The current administration is keenly focused on continuing to make strides in this area.

PROGRESS IN ATLANTA THE ATLANTA BELTLINE

The Atlanta BeltLine will be an interconnected system of public parks, multi-use trails and transit built alongside historic railroad corridors encircling downtown. Construction is already underway on the parks and trails components of the BeltLine. Completed portions on the east side of the city have catalyzed new real estate development. While funding is still being pursued for subsequent phases of the project, including an innovative light rail network that will connect 45 neighborhoods, the project recently received an \$18 million grant from the Federal Transit Administration, and Mayor Reed has made implementation a priority of his administration.

Atlanta must become a city recognized nationally for its high quality of life. Atlanta is a city of distinctive neighborhoods, many of which are well-maintained, offer excellent open space infrastructure, rich cultural amenities and a high quality of life. Atlanta's welcoming environment attracts new talent to the city building a stronger community for all Atlantans. A rich sports culture includes an embrace of the city's three major professional teams, two universities that compete in Division I NCAA athletics, investment in a new football stadium, and the recently opened College Football Hall of Fame. A robust park and open space system is found through much of the city; these spaces improve public health, bolster property values, and attract talent. The BeltLine is the City's signature investment in beautifying and improving its public realm. Smaller-scale initiatives such as the "Love Your Block" campaign demonstrate that Atlantans are passionate about their neighborhoods.

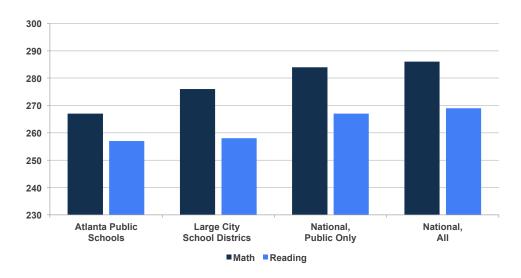


Atlanta boasts a \$300 million arts industry, supporting 9,400 full-time equivalent jobs, anchored by institutions such as the Woodruff Arts Center, which is home to the Atlanta Symphony Orchestra, the Alliance Theatre and the High Museum of Art. Atlanta is a culturally rich city that offers a diverse theater and arts environment, including a variety of exhibitions, events, concerts, and festivals for citizen enjoyment. Continuing to enhance the city's culture, art and creative infrastructure is a critical component of a long-term strategy for economic development aimed at attracting and retaining businesses and residents, especially among population segments for whom urban living has become increasingly attractive.

Atlanta's residents are highly educated. The city is home to over 20 colleges and universities and 120,000 students. In addition to being a draw for students, its top tier universities and research institutions, such as the Georgia Institute of Technology, Emory University, and the Centers for Disease Control and Prevention help attract a highly educated workforce from around the world. Compared to the state and nation, Atlanta has a higher share of population with a bachelor's, graduate, or professional degree. It is widely recognized, however, that Atlanta must improve its public K-12 system and provide residents the skills to match the needs of 21st century employers. A Workforce Development Strategy commissioned by the Mayor was recently completed and recommended a framework for aligning labor supply with industry demand to meet the needs of current and prospective employers.



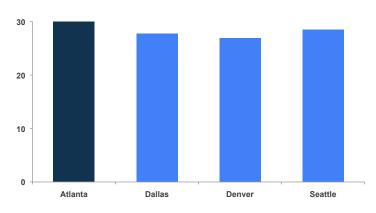
Figure 2: Average Scores on National Assessment of Educational Progress Tests, 8th Grade, 2013



Source: U.S. Department of Education, National Center for Education Statistics

Transit and infrastructure conditions require attention to ensure access to jobs for those with limited means. Compared to residents of the benchmark cities of Dallas, Denver, and Seattle, Atlantans face significantly longer commutes. Unlike each of those cities, Atlanta has not significantly expanded its regional rail transit network since 2000, a way to enhance alternatives to auto commuting. The significant costs in time and money of commuting in Atlanta limits the ability of low-income and captive riders from participating in the employment opportunities elsewhere in the city and region. Efforts such as Invest Atlanta's Comprehensive Housing Strategy, to be completed in 2014, seek to enhance affordable housing options throughout the city and will be critical to addressing this imbalance. Additional strategies that either enhance mobility through transportation investments or attract jobs to affordable neighborhoods will support both local economic development and alleviate the cost of congestion.

Figure 3: Average Commute Time, 2012



Source: US Census Bureau, American Communities Survey



Also important to the fundamentals are the tools and infrastructure allowing seniors to age in their communities of choice. Some of these include integrating healthcare into neighborhoods, having a variety of housing options and ensuring transit access for seniors. The City should continue to support current efforts while finding ways to expand on these opportunities.



PILLAR ONE Recommendations

Make Atlanta a great place to live.

While the city remains a desirable place to work, it must also compete as a place to live. Approaches to growing the residential base and bolstering Atlanta's attractiveness as a place to live might include modernizing neighborhood, intra-city and regional infrastructure; concentrating new mixed-income housing at transit nodes, such as MARTA, the streetcar and the BeltLine, which will connect residents with employment centers throughout the city; and incentivizing public employees to live in the city (perhaps inspired by the Atlanta Police Foundation's Housing Incentive Program), among a host of other initiatives for which there are strong national precedents. Since 1994, the Atlanta Housing Authority has partnered with the private sector to leverage \$300 million of public housing development funds into \$2 billion of new investments in mixed-income housing, deconcentrating poverty, and increasing neighborhood attractiveness. ¹⁴ In Downtown Atlanta, the city is taking a mixed approach through the creation of the streetcar system to enhance mobility and increasing vibrancy through an expanded university presence, among other initiatives.

PROGRESS IN ATLANTA PONCE CITY MARKET

One of the largest buildings in the Southeast is gaining new life in a redevelopment project billed as the largest adaptive reuse project in Atlanta's history. Ponce City Market will revitalize 1.1 million square feet of the historic Sears, Roebuck & Company building, creating 300,000 square feet of retail and restaurants, 450,000 square feet of Class A loft office space and 260 residential units adjacent to the Atlanta BeltLine. Jamestown Properties, the developer of Ponce City Market, purchased the property from the City of Atlanta in 2011.

EXAMPLE REVITALIZATION OF CENTER CITY PHILADELPHIA

In the early 1990s, Center City Philadelphia was widely viewed as dirty, dangerous, and, after office workers left for the day, empty. Through a multifaceted and coordinated effort by city agencies and the Center City District (CCD), a business improvement district, the neighborhood has been transformed. Intensive marketing, signage, cleaning, greening, and safety programs by CCD have made the area more attractive for residents, and a tenyear property tax abatement on new construction has led to a boom in the development of both residential and commercial property in the area. The growth in the residential population that followed (a 26 percent increase from 1991 to 2011) helped support a fourfold increase in fine dining establishments as serious crimes in the neighborhood fell by half. The benefits associated with the revitalization of Center City have spilled over into other neighborhoods, broadening the appeal of urban living throughout the City.

Align tax regime to address the fundamentals.

New programs and infrastructure to solidify fundamentals will require creative funding approaches without further burdening businesses or residents. Atlanta's Tax Allocation District (TAD) program is one method for financing economic development projects without relying on the State or additional local sources of revenue. Through a \$170 million TAD investment in parking, roads, utilities, and environmental remediation at Atlantic Station, Invest Atlanta helped catalyze 20 million square feet of new development that has supported 15,000 permanent jobs and 30,000 construction jobs. That project, among others, demonstrates the potential of this program. By taking a more active role in identifying and supporting significant transformational projects, Invest Atlanta can position the TAD program to address comprehensive, place-based strategies for economic development. Through more intensive evaluation of projects in meeting the City's economic development goals and monitoring progress toward these goals, the TAD program will be better able to make investment decisions over the life of each district. Through this orientation, the TAD program can more effectively leverage non-TAD funding resources, including private investment, thus maximizing its impact on the ground and replicating success stories like Atlantic Station throughout the city.

EXAMPLE THE CAPITOL RIVERFRONT IN WASHINGTON, DC

In 2008, the District of Columbia created a new Tax Increment Finance (TIF) district around the Nationals Ballpark, which provided \$1.8 billion in financing for the completion of the Ballpark, further investment in public infrastructure, and a community benefits fund for neighborhood revitalization. This financing strategy, which was conceived as a component of a comprehensive development framework for the Anacostia Waterfront, helped catalyze one of the most successful neighborhood transformation efforts in the last decade. This 350-acre neighborhood surrounding the Washington Navy Yard has attracted more than 12 million square feet of mixed-use development and more than \$3.3 billion in public and private development that is completed or currently under construction. There are currently 4,000 residents in market-rate and affordable housing living in the Capitol Riverfront, a daytime population of 35,000 workers, and new waterfront parks. The Capitol Riverfront Business Improvement District estimates that 2.6 million people attended events at Nationals Park, the Navy Museum, and the Yards Park during 2012.

Improve public safety through community partnerships.

Economic prospects will be enhanced not only through a lower crime rate, but also an enhanced image of the city as one with safe neighborhoods and business districts. Place management organizations, such as Community Improvement Districts (CIDs), neighborhood and civic associations, and other community-based organizations can foster place-based public safety improvements. These districts, often self-taxed, employ community liaisons to provide "eyes on the street," a significant deterrent to crime and a method of fostering a sense of security. To the extent that these entities are able to achieve lasting changes to the patterns and perceptions of crime in their areas, they also complement Atlanta Police Department resources for areas of the city with less community organization infrastructure.

EXAMPLE UNIVERSITY CITY DISTRICT IN PHILADELPHIA

In Philadelphia, business improvement districts have had notable successes in improving many neighborhoods. The University City District (UCD), an alliance of businesses, residents, and major institutions in West Philadelphia, including the University of Pennsylvania, Drexel University, the University City Science Center, and the Children's Hospital of Philadelphia is a notable example. Prior to UCD intervention, the area represented by the UCD experienced high poverty and violent crime rates, which were believed to be barriers to attracting talent to businesses. Through a multi-faceted program that includes a commitment to public safety, the UCD has helped achieve a 20 percent reduction in serious crime and has helped attract nearly \$4.5 billion in new investment to the neighborhood.

Create a workforce development ecosystem agenda.

Atlanta has a plethora of people, businesses, organizations, and resources dedicated to ensuring members of the current and future workforce are prepared and connected with meaningful work in the region's economy. Together, these entities comprise the region's "workforce development ecosystem." This ecosystem is complex and operates among multiple geographic, customer, funding, and service boundaries and networks. The ecosystem requires a clear agenda for action, which includes developing a better understanding of the current capacity of workforce programs/services; strengthening ties with industry to ensure workforce development programs are actually meeting employer needs and are aligned with the City's economic development strategy; and starting a broader conversation about how the city might better position itself so that the region's human capital enhances its competitive advantage and spurs economic growth.

EXAMPLE HEALTHCARE INDUSTRY TRAINING IN BALTIMORE

After consultation with the Baltimore Workforce Investment Board, local hospital employers and the State, the Community College of Baltimore County (CCBC) created a program to address the health industry's workforce needs. The CCBC's School of Health Professions and Division of Continuing Education added training capacities to meet the staff needs of hospitals, skilled nursing homes, and other providers of healthcare professionals. CCBC realized that these opportunities were only possible when they cultivated relationships with industry. In turn, the health industry helped CCBC identify gaps in its curriculum and how to address the gaps in a manner that best met industry's needs.

Ensure K-12 education is meeting employer needs.

Across the country, employers and cities are finding that new job opportunities are being created at a range of skill levels: it is not the case that all 21st century jobs require four years of college. Nonetheless, those same employers and cities are finding that the local labor force is largely unprepared to meet emerging needs. Internships and mentoring programs should be expanded, and should focus on both college and high school students, promoting interest and excellence in Science, Technology, Engineering, and Mathematics (STEM) occupations.

EXAMPLE PATHWAYS IN TECHNOLOGY EARLY COLLEGE HIGH IN NEW YORK CITY

Founded in 2011 as a partnership among the New York City Department of Education, IBM, and City University of New York, Pathways in Technology Early College High (P-Tech) focuses on graduating students that are equipped with the skills to immediately enter the technology workforce. Housed in the former Paul Robeson High School in Crown Heights, Brooklyn and graduating 100 students annually, P-Tech's curriculum is focused on STEM subjects and information technology. In addition to its focus on workforce readiness, P-Tech is distinguished by its unique program that extends beyond traditional high school by including two years of post-secondary education.

Re-establish an economic development subcabinet.

An empowered economic development subcabinet could address the fundamental issues critical to the health of Atlanta's economy. This subcabinet would be composed of key Mayoral staff, relevant departmental heads, and, in an advisory capacity, private and nonprofit sector leaders. The subcabinet would be tasked with addressing neighborhood-specific livability issues related to providing neighborhood amenities, improving education, and reducing crime. The subcabinet's agenda would be explicitly focused on establishing and strengthening the links among these issues and the economic health of the city by:

- Matching problems with opportunities
- Creating a prioritized agenda with actionable items
- Designating responsibility for specific projects
- Overseeing research and strategic programs
- Measuring progress

EXAMPLE PlaNYC

New York City's PlaNYC initiative represented a comprehensive effort to address urban fundamentals. Mayor Bloomberg commissioned PlaNYC to plan for the sustainable growth of New York City's population from 8 million to 9 million over the next 20 years. PlaNYC sets forth city-building policies, describes specific projects, and lays out performance measures, which are regularly updated and tracked. Atlanta's own BeltLine Subcabinet, which charted a strategy and funding plan to deliver the BeltLine, serves as a similar, locally-relevant precedent for a strategy of this type.

PILLAR TWO Foster Innovation & Entrepreneurship

PILLAR TWO FOSTER INNOVATION & ENTREPRENEURSHIP

Atlanta is a hotbed for entrepreneurship and innovation. These are critical elements of a healthy and sustainable economy. Increasing entrepreneurship and fostering innovation will create jobs, support wealth creation, and diversify the industrial makeup of the city. There is a strong base

The higher education infrastructure in Atlanta, from

Georgia Tech to
Georgia State,
supports innovation
in a variety of ways.

to grow from in Atlanta and recent momentum, but challenges remain and must be addressed.

Innovation in Atlanta is supported by a strong institutional research and development (R&D) base. Innovation in Atlanta stems from the R&D and commercialization activity occurring at its educational institutions and businesses. The higher education infrastructure in Atlanta, from Georgia Tech to Georgia State, supports innovation in a variety of ways. These institutions graduate nearly 3,200 undergraduate students in STEM fields each year, providing the talent needed for innovation

industries and to enhance business. Atlanta outpaces the benchmark cities in the number of STEM undergraduates and all but Boston in the number of STEM master's students. Atlanta's educational institutions also house a robust R&D apparatus, innovating new ways of doing businesses and advancing science. The R&D functions of these institutions continue to grow, with the National Science Foundation reporting that R&D expenditures by academic institutions in metropolitan Atlanta have grown by 35 percent since 2007.¹⁵

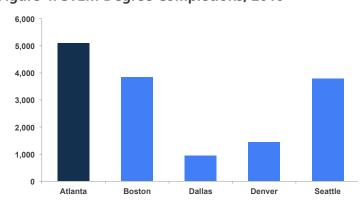


Figure 4: STEM Degree Completions, 2010

Source: Garner Economics

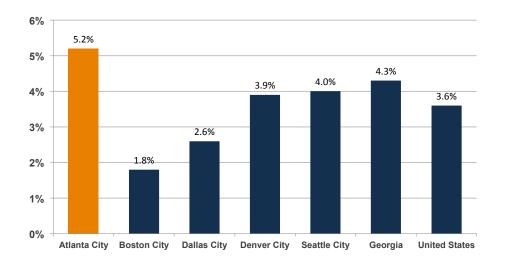
From 2000 to 2011, businesses in the Atlanta metropolitan area had the 20th highest number of industry patents at 14,400.¹⁶ Innovation can occur in any industry, but certain sectors are generally considered "innovation sectors," and their importance in Atlanta has increased. From 2007 to 2012, the number of innovation jobs grew seven percent to roughly 132,000 jobs, making up six percent of total jobs in Atlanta. Greater efforts to support college mentorships and internship programs could help to connect the city's students to its employers and to retain talent within the region.

Incubators, collaboration venues, and a citywide fiber strategy would foster greater entrepreneurial opportunities. Venues such as the Advanced Technology Development VentureLab, Center, Flashpoint, Atlanta Tech Village, Startup Atlanta, the Iron Yard, the AT&T Foundry, and the Goat Farm, to name only a few, bring entrepreneurs together and increase the probability that their businesses will succeed. Support for entrepreneurs has grown, as evidenced by growth in the Small Business Innovation Research Program which reported \$127 million in grants in 2012, a 52 percent increase since 2007. Other considerations for increasing



entrepreneurial activity include the need to better market Atlanta's assets and resources to potential entrepreneurs, foster entrepreneurship opportunities for the high volume of minority engineering graduates and a fiber network to support smart city technologies.

Figure 5: Share of Population (Ages 16+) Self-Employed in Own Incorporated Business, 2006-2011



Source: US Census Bureau, Garner Economics













A recent Kauffman Foundation study, however, found that Atlanta's entrepreneurial activity ranking had slipped to ninth out of 15 studied metropolitan areas. Research suggests entrepreneur outmigration is occurring, in part due to a lack of local venture capital to expand growing businesses, as well as a lack of connections between early stage ventures/startups and larger companies. According to PricewaterhouseCoopers Money Tree data, venture capital firms invested \$403 million in Georgia companies in 2013, a 7 percent decrease from 2007. 22

PILLAR TWO Recommendations

Promote entrepreneurial connections.

Successful entrepreneurship in the 21st century economy requires a robust network that provides connections and support to inexperienced entrepreneurs. Without effective links to venture capital and management expertise, entrepreneurs may not be able to access the resources necessary to overcome challenges and expand when ready. Likewise, without a pool of desirable investment opportunities, funders may direct their investments to other cities. While Atlanta rates highly in terms of the ability to start businesses, it lacks the physical, social, and financial networks to help bring these enterprises beyond their early stages. In order for Atlanta to maximize the impact of its citizen entrepreneurs, its STEM graduates, and spinoff from its institutional base, it must better connect these potential entrepreneurs to the resources and acumen necessary to transform ideas into businesses and sustain those businesses.

These connections can be fostered through programmatic interventions as well as through place-based strategies. In the Silicon Valley, Y-Combinator is a private entity that brings seed capital, advice, networking, and connections to venture capital together under one umbrella and has helped bring high-growth startup companies from around the country to the Silicon Valley region. Boston has implemented a strategy that focuses on the creation of an "Innovation District," described in greater detail below. Atlanta Tech Village is a small-scale version of this strategy, a 103,000 square foot space composed of collaborative work spaces, mentorships, and programming aimed at "creating engineered serendipity." However, Atlanta Tech Village has been primarily sponsored through private companies, rather than public entities. By adopting a combination of both types of strategies, and increasing its direct involvement supporting entrepreneurs, Atlanta can strengthen its brand as a premier destination for employers and make important strides in advancing its already strong base of entrepreneurial activity.

EXAMPLE BOSTON INNOVATION DISTRICT

As a part of its redevelopment efforts in the South Boston Waterfront, the City of Boston has established an "Innovation District." This neighborhood has been marketed as a destination of new businesses, having been outfitted with infrastructure aimed at promoting collaboration through proximity, public space, and programming (including public meeting spaces aimed at germinating innovative ideas). The development of new housing, retail, food service, and entertainment options is also being encouraged as a means of attracting high skilled workers to a new, 24-hour neighborhood. In addition to providing critical support for innovation, this District also helps create a physical destination for the investment of venture capital.

PROGRESS IN ATLANTA STARTUP ATLANTA



Startup Atlanta, a program initiated by Invest Atlanta, serves as an entrepreneurial connector and portal for Atlanta's entrepreneurs. This independent non-profit serves as an information conduit, connecting entrepreneurs, enabling

organizations (such as incubators and business development programs), and sources of capital (including both angel and seed investors) to each other, as well as supporting activities, programs, and initiatives. Through these efforts, Startup Atlanta not only helps advance individual entrepreneurial enterprises, but also builds a network of trust, support, and knowledge among these entities, helping to form a foundation for structural change in the city's innovation economy.

RECOMMENDATION 8

Increase capital for innovation businesses at every stage.

The deeper pools of venture capital in regions such as the Silicon Valley and Boston provide those regions with a competitive advantage in retaining and attracting innovative businesses. By expanding the resources available to innovative businesses in Atlanta, the city will be better able to leverage its existing innovation infrastructure, commercialize innovation, and create innovation jobs. The Startup Atlanta Pre-Seed Fund Project provides a template. This fund aims to fill a critical gap in Atlanta's innovation ecosystem, funding for businesses that have advanced beyond the point where they can expand on the basis of investments from friends and family, but are still too early-stage to attract institutional capital. Through small investments of \$50,000 to \$250,000, this fund aims to advance innovative businesses to the point where they are sufficiently established to draw interest from private sources of venture capital. However, while this fund helps to advance innovation businesses in Atlanta, it must be matched by additional, complementary funds in order to make Atlanta competitive with other regions rich in venture capital resources.

EXAMPLE EARLY-STAGE LIFE SCIENCES FUNDING INITIATIVES IN NEW YORK CITY

In 2013, New York City, in partnership with members of the pharmaceuticals industry and other venture capital organizations, launched a \$100 million venture capital fund which includes a \$10 million City share. This fund is aimed at fostering innovation in the biosciences to develop new companies engaged in scientific research as part of the New York Early-Stage Life Sciences Funding Initiative. The purpose is to improve New York City's competitive position against that of other cities that have traditionally offered greater resources both in terms of funding and lab space. It is anticipated that the Funding Initiative will help to launch 15 to 20 breakthrough ventures by 2020.

RECOMMENDATION 9

Enhance the City's business support services.

Business attraction and retention can be improved through enhancements to the myriad points of interaction between businesses and city government. Whether determining parking requirements for a new restaurant, reviewing building permits for an office expansion, or evaluating requests for export assistance, each interaction provides an opportunity for the City to either engage and support business owners or deter their efforts. These interactions not only have a direct impact on the ability for businesses to grow and thrive in Atlanta, but also contribute to an overall sense within the business community regarding whether or not Atlanta is a good place to do business. By reducing fragmentation among departments, improving coordination, streamlining permitting and licensing processes, and improving online services, Atlanta can promote a more accessible, effective, and well-regarded City government. Responsiveness to businesses' needs can be achieved through a robust Business Retention and Expansion (BRE) program, that provides assistance to business owners in streamlining the approvals process which reduces business costs, facilitates growth, and improves Atlanta's brand as not only a low-cost place to do business, but also as an effective place to do business. In 2013 the Invest Atlanta BRE program visited and surveyed over 200 businesses which had earned annual revenue of approximately \$255 million. The BRE program projects approximately 400 business visits in 2014.

EXAMPLE LICENSING AND PERMITTING WIZARD IN BOSTON

The City of Boston helps businesses learn about permitting requirements through an online "Licensing and Permitting Wizard." New and expanding businesses can take a short questionnaire and receive a customized checklist with the permits required for their specific business type and – where applicable – the renovations their business will be undertaking. The checklist also includes contact information for each city department and links to online applications. This improves the prospects for businesses to successfully navigate the sometimes onerous permitting processes by helping to make the steps and requirements clearer to business owners. This constitutes critical support to businesses when they are in their most vulnerable, early stages of development.

PILLAR THREE

Attract, Retain, & Grow Investment

PILLAR THREE ATTRACT, RETAIN, & GROW INVESTMENT

Atlanta is an attractive location for employers. Employers choose Atlanta because it has numerous world-class institutions of higher education, high enrollment in college and graduate school, and high rates of graduation. Companies likely to succeed in the globalized 21st century economy, including long-standing Atlanta-based corporations like Coca-Cola and newcomers to Atlanta like Porsche and Dell SecureWorks, choose Atlanta because of its talent pool. Institutions including Georgia Tech, Emory University, Georgia State, Morehouse College, Spelman College, and Clark Atlanta University ensure that local talent has the skill sets employers need. In fact, a higher percentage of Atlantans are enrolled in college and graduate schools than in Boston, Dallas, Denver, or Seattle. Further, graduates of local institutions are particularly likely to have become skilled and choose careers in STEM fields - Atlanta is home to more undergraduate and graduate students in these fields than all of the aforementioned cities.

Atlanta has unparalleled market access, with the world's busiest airport and the ability to reach 80% of the USA's population within 2 hours of flight time.

Atlanta has unparalleled market access, with the world's busiest airport and the ability to reach 80 percent of the United States' population within two hours of flight time, and a short distance from the airport to Midtown/Downtown. Atlanta's proximity to the Savannah Port, the fourth busiest in North America and the most rapidly growing seaport in the world; its interstate highway access; and the city's Southeast Rail Terminus all provide businesses with high-quality, multimodal freight access, and will do so for years to come. With this access, the Atlanta region is becoming an increasingly cosmopolitan area. Its rapidly growing international population (8.1 percent foreign-born in 2010) and high degree of foreign investment (130,000 of the region's jobs are

attributable to companies headquartered outside of the US) testify to the region's increasingly global connectedness.^{23, 24}

Atlanta offers a business-friendly regulatory regime that can be enhanced through other business-government interactions. In its 2014 Competitiveness Alternatives report, KPMG ranked Atlanta as having the third-most favorable tax structure for business among US cities.²⁵

Being seen as business-friendly through tax policy fosters economic development, but must be accompanied by improving other business-government interactions. Responsiveness to business needs and streamlining approval processes reduces business costs, facilitates growth, and improves Atlanta's brand.

Atlanta is particularly attractive to firms in six key sectors. These sectors, which were identified in stakeholder conversations and by research conducted by Garner Economics, should be targeted for additional growth, building on existing assets and addressing any challenges to future growth.

SECTOR 1 DIGITAL ARTS AND MEDIA PRODUCTION

Digital arts and media production refers to motion picture production, software and computer programming, audio production, broadcasting, and internet publishing. Georgia film and



100

2005

2006

television productions generated a record \$3.3 billion in economic activity during 2013, anchored by Atlanta's four major production facilities – Tyler Perry Studios, Screen Gems Studios, CNN and Turner Broadcasting.²⁶ Atlanta offers these companies a talented pool of potential employees, as well as access to the State's attractive Film, Television, and Digital Entertainment Tax Credit (which includes a generous 30 percent tax incentive for qualified production expenses) and excellent broadband availability. In-state spending on film and TV production increased 75 percent between fiscal year 2009 and fiscal year 2010. Employment in this sector is forecast to grow nine percent over the next five years.

\$200

\$0

2013

500 \$1,000 Number of Productions 400 \$800 **Total Spending by Productions** 300 \$600 200 \$400

2009

2010

Total Spending by Productions

2011

2012

Figure 6: Film/TV Production Counts and Direct Spending Trends in Georgia

Source: Georgia Film, Music & Digital Entertainment Office

2007

Number of Productions

2008

SECTOR 2 LIFE SCIENCES

Life Sciences refers to the use of living organisms or molecular and cellular techniques to produce chemicals, foods and services. Atlanta offers a deep labor pool, well-trained by the region's research institutions and medical schools, including the Emory School of Medicine, Morehouse School of Medicine, Georgia Center for Oncology Research and Education, Georgia Bioscience Commercialization Center, Emory's Saint Joseph's Translational Testing and Training Laboratories and Technology Enterprise Park, Atlanta Medical Center, the





Centers for Disease Control and Prevention, and more. Employment in this sector is forecast to grow nine percent over the next five years, particularly in medical and diagnostic laboratories and related industry subsectors.²⁷

PROGRESS IN ATLANTA EMORY PROTON THERAPY CENTER

More than 2,200 cancer patients a year will receive the next generation of radiation oncology in Midtown Atlanta when the new Emory Proton Therapy Center opens its doors in 2016. Located just blocks from Emory University Hospital Midtown, patients at the facility will undergo treatment that minimizes radiation to healthy tissue and provides more effective treatment with fewer side effects. The \$200 million, 107,000 square foot facility will be operated by Emory Healthcare and funded by the Georgia Proton Treatment Center. Construction on the facility will create 950 jobs and the Center will employ approximately 150 full-time highly-skilled professionals, once fully operational.

SECTOR 3 APPLIED COMPUTATIONAL PROCESSING AND ENGINEERING

Applied computational processing and engineering refers to industries using highly specialized engineering applications and techniques. Local firms include AMEC Engineering, Analytical Environmental Services, Byers Engineering, GE Energy Management, Georgia Power, Newcomb & Boyd, Scientific Research Corporation, Southern Company and TRX, among others. Atlanta can offer these companies high-quality broadband access and a talented pool of potential employees, many with graduate degrees in engineering, including the nearly 5,000 students who graduated with STEM degrees in Atlanta in 2010. Employment in this sector is forecast to grow 17 percent over the next five years.²⁸

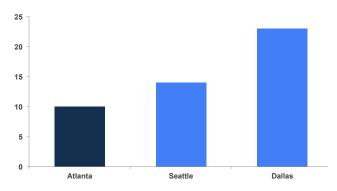




SECTOR 4 CORPORATE HEADQUARTERS AND PROFESSIONAL AND MANAGEMENT SERVICES

headquarters professional Corporate and and management services refer to headquarters and administrative management as well as management consulting. Local firms include Kurt Salmon Associates, Capgemini, Bain & Company, McKinsey & Company, and The Boston Consulting Group, among others. The metropolitan area provides a robust customer base for these companies with 16 Fortune 500 companies and 12 additional Fortune 1000 companies. Furthermore, Atlanta's premier national and international air access and short distance to the airport reduce costs and improve quality of life for traveling employees. Employment in this sector is forecast to grow 15 percent over the next five years.²⁹

Figure 7: Distance from Downtown to Airport



Source: Garner Economics





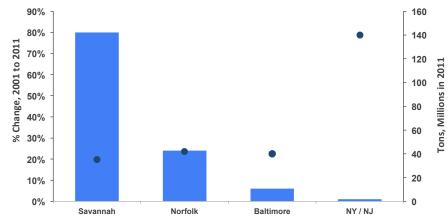




SECTOR 5 ADVANCED LOGISTICS

Advanced logistics refers to freight and air transportation as well as distribution and logistics consulting services. Firms in this sector include Delta Air Lines, Genuine Parts, The Home Depot, UPS and Advanced Technology Logistics, among others in the region. Atlanta provides unparalleled access and freight activity via Hartsfield-Jackson International Airport and the Savannah Port. Port tonnage at Savannah Port grew by nearly 80 percent between 2001 and 2011, significantly faster than in competitor ports in Norfolk and Baltimore.³⁰ Employment in this sector is forecast to grow 11 percent over the next five years.³¹

Figure 8: Port Tonnage Trends, 2001 to 2011



Source: US Bureau of Transportation Statistics

SECTOR 6 CONVENTIONS AND TOURISM

Conventions and tourism refers to services that cater to convention, business, and leisure travelers, such as transportation services (e.g. airlines and taxicabs), hospitality services (e.g. hotels and resorts), and entertainment venues (e.g. amusement parks, casinos, shopping malls, music venues, and theatres). Key anchors include destinations such as the Georgia Aquarium, the Georgia World Congress Center, Zoo Atlanta, Centennial Olympic Park, the World of Coke, the Wren's Nest, and Fernbank Museum of Natural Science, among others. Atlanta is within two hours by plane of 80 percent of the nation's population, making Atlanta not only a world-class destination for conventions and tourism, but also a convenient one.











PROGRESS IN ATLANTA CENTER FOR CIVIL AND HUMAN RIGHTS

The lessons of international icons, from Rosa Parks to Mahatma Gandhi are celebrated at the Center for Civil and Human Rights, a \$100 million, 42,000 square foot facility that opened in June 2014 adjacent to Centennial Olympic Park. The Center is a world-class cultural institution dedicated to exploring stories of civil and human rights from around the world. Permanent exhibitions include the Morehouse College Martin Luther King, Jr. Papers Collection.

Atlanta needs to capitalize on a missed opportunity to build a vibrant export economy that creates jobs by leveraging global demand for goods and services. As of 2012, the Atlanta metropolitan area had exports totaling \$25.5 billion.³² From 2005 to 2011, per capita exports increased nearly 20 percent, after adjusting for inflation. However, a 2013 report by the Brookings Institution Metropolitan Policy Program ranks Atlanta 73rd for goods traded internationally.³³

PROGRESS IN ATLANTA FORT McPHERSON

In use by the military since the 1830s, the 488-acre site of Fort McPherson is targeted for redevelopment into an Employment Center/Live, Work, Learn and Play Community on Atlanta's southern edge. With close proximity to the airport and two MARTA stations adjacent to the property, Fort McPherson is expected to draw market interest when ownership of the property is transferred from the Department of Defense in 2014. Within the first ten years of development, 5,000 jobs will be created, generating approximately \$12 million in annual state income tax revenues. Plans call for 10,600 jobs and 1,700 housing units at full build-out. Not only will this transformative economic development effort bring transit-accessible employment and housing opportunities to the historically disadvantaged south side of the city, but it will also create the facilities necessary to foster the growth of innovative, exportoriented business in Atlanta.

PILLAR THREE Recommendations

RECOMMENDATION 10

Convene public-private industry working groups.

A tool for promoting the City's attractiveness to businesses in targeted industries, as well as company headquarters, would be to convene industry-specific working groups. These working groups, one for each of the target sectors discussed above, would first identify and prioritize the industry's needs for human, physical, and financial capital, as well as the optimal regulatory framework. The working group would then suggest refinements to local economic development policy, including changes to incentives, public-private partnership structures, and mandates. For instance, a working group might identify the need for stronger linkages between components of the industry value chain and community colleges; the need for business expansion sites of a particular size, location, and configuration; the need for seed capital for entrepreneurs; or the need for relief from a particular tax or fee at a particular point in a company's life cycle. There are similar efforts already underway, like the Atlanta Committee for Progress, which assembles issue-based task forces composed of corporate executives, civic leaders, and content experts to address Atlanta's economic development goals. These efforts would be significantly enhanced by additional participation by the City of Atlanta. Such an approach will ensure that Atlanta utilizes its current resources to attract additional businesses in the targeted sectors.

EXAMPLE POTENTIAL INDUSTRY WORKING GROUP OUTCOMES

Precedents from around the country provide examples of the working group approach:

- **Digital Arts and New Media Production:** targeted marketing campaign. In New York City, the Mayor's Office of Media and Entertainment launched the "Made in NY" campaign, which has improved the profile of and supported the attraction of film and other digital media business activity to New York City.
- Bioscience/Life Science Research and Commercialization: incubator development. San Francisco's Biotechnology Payroll Expense Tax Exclusion helped incentivize a real estate partnership including the University of California's Institute for Quantitative Biomedical Research (QB3) and Dewey Land Company that will produce the city's latest incubation facility known as QB3@953. This facility will double the biotech incubation space available in San Francisco and anchor the biotech industry in the Dog Patch and Mission Bay neighborhoods.
- Applied Computational Processing and Engineering: gigabit broadband. Chattanooga is the first city in the Western Hemisphere to offer one gigabit per second fiber internet

service to all residents and businesses. At 200 times the speed of the national average, gigabit access opens the door to new ways of learning, playing and conducting business. The Federal Communications Commission's Chairman said the gigabit broadband infrastructure set up in 170,000 businesses and homes in Chattanooga was a factor for bringing large companies such as Amazon and Volkswagen to the community and created more than 3,700 new jobs over the past three years.

- High Value Professional and Management Services: incentives for the creation of new urban housing options. In 1999, the City of Los Angeles adopted the Adaptive Reuse Ordinance, which has been hailed as a major success in bringing professionals back to downtown Los Angeles by making it easier and less expensive for developers to turn dilapidated office structures into housing. Since 1999, the number of residential units downtown has more than doubled, attracting young professionals who seek an urban environment with easy access to transit, work, and entertainment options.
- Specialized Business Support Services: workforce development and employment incentives. Des Moines, Iowa provides numerous tax advantages, incentive programs tied to job creation, and funding for workforce development to the financial services industry. Between 2002 and 2011, this sector has grown 20 percent there while it has shrunk in Boston, New York, and Chicago.
- Advanced Logistics: support for infrastructure investment. In Southern California, the \$2.4 billion Alameda Corridor project improved logistics development potential significantly. The project reduced the cost of trade through the Port of Los Angeles/Long Beach by creating a high-speed, dedicated right-of-way for freight rail.
- Tourism: coordinated niche marketing. In Philadelphia, the Greater Philadelphia Tourism Marketing Corporation has established a marketing campaign in coordination with local cultural institutions and organizers that specifically address niche segments of leisure travelers such as foodies, African-Americans, and Latinos. Philadelphia tourism has increased 44 percent since 1997.

RECOMMENDATION 11

Bolster exports.

To capitalize on international trade, in 2013 the City and the Brookings Institution announced creation of a new Metropolitan Export Plan. The Plan will be completed in 2014; it is expected to include targeted strategies to better connect companies to their global customers. Implementation of the Metropolitan Export Plan will enhance Atlanta businesses' competitiveness through the use of market intelligence to develop targeted export-related services. Exports are also an important driver of job creation in Atlanta and the U.S. Every \$1 billion in exports of U.S. goods and services supports more than 5,000 U.S. jobs.

In 2010, Atlanta exported \$20 billion in goods and services abroad, ranking 13th among US metro areas.³⁴ A large percentage (53 percent compared to 33 percent nationwide) of those exports came in the form of services, attributable to the presence of the airport.³⁵ Because export services, as opposed to manufactured goods, often require little upfront capital investment, they are more likely to be provided by small business enterprises than are manufactured goods. As such, the expansion of exports in Atlanta is likely to offer greater benefit to small businesses than would be true in other regions. Further leveraging this strength and marketing Atlanta's exportable services can advance this important aspect of the economy.

EXAMPLE WASHINGTON, DC'S CHINA CENTER

In 2012, following a visit by the city's Deputy Mayor for Planning and Economic Development to China, the District of Columbia opened the DC China Center in Shanghai, the city's first foreign trade office. The purpose of this office is to market the city's export businesses (which, like Atlanta, are largely in the form of professional services) and to promote DC as a target for Chinese investment. Having a dedicated entity with a physical presence in China is expected to play a critical link for the city's smaller businesses who would otherwise be unable to gain access to this market, either as a destination for their products or services or as a source of capital.

RECOMMENDATION 12

Market Atlanta's strengths.

Leveraging the rich resources in Atlanta requires that these resources be identified, advertised, and delivered to current and potential stakeholders in the city. A non-profit partnership with Invest Atlanta would supplement traditional government marketing and outreach functions. Its purpose would be to close deals with business prospects by flexibly raising and deploying private funding and provide private-sector and confidential oversight of economic development efforts through board participation from corporate leadership dedicated to strengthening Atlanta's economic competitiveness. The relationships fostered through these partnerships could support the customer discovery process for startups, allow larger companies to create new efficiencies and innovations, and attract new employers.

EXAMPLE WORLD BUSINESS CHICAGO

World Business Chicago (WBC), the nonprofit economic development organization for that city, facilitates business retention and attraction. As one example of its success, WBC worked for a year to coordinate communications between the Cinespace development team and City and State agencies. Cinespace will bring 450,000 square feet of film studio space to Chicago as a result of WBC's efforts and a \$5 million state grant.

CONCLUSION

This strategy sets the stage for creating jobs, enhancing Atlanta's competitiveness, and sustaining growth. While Atlanta is well-positioned to compete in the global economy and provide opportunities for its citizens, it continues to face challenges that limit its ability to leverage its strong advantages. Progress is underway, as highlighted throughout this strategy, and the City is making great strides in addressing these challenges. However, further action, as outlined in the three pillars and 12 recommendations described in this strategy, is necessary to advance Atlanta's economic growth.

This strategy also calls upon the City and its public and private partners to create actionable plans with concrete initiatives and performance metrics by which their progress can be judged. A sample of such performance measurement metrics can be found in Appendix A. Through their input and collaboration in creating this strategy, the City and its partners can begin the implementation of these efforts with a shared vision for economic development.

Successful execution will require effective leadership, expanded funding, and strong governance. The City and Invest Atlanta will fulfill many of these functions. The recently convened Focus on Results Atlanta (FOR Atlanta) housed in the Mayor's Chief Operating Office provides a platform for organizing and supporting implementation, providing expertise in enabling strategic thinking, designing pilot projects, and measuring performance. A well-equipped City, in combination with the resources of other supportive entities, will ensure thoroughness and efficiency in responding to the strategy and achieving results.

METHODOLOGY



Invest Atlanta, the official economic development authority for the City of Atlanta, authored this strategy, in partnership with a steering committee comprised of economic development leaders and stakeholders and informed by research prepared by a consulting team led by Garner Economics.

The following research underpins the three pillars and 12 recommendations:

- Demographic, workforce, and economic analyses to diagnose the City's competitive position, including a comparison against benchmark cities identified by Invest Atlanta Boston, Massachusetts; Dallas, Texas; Denver, Colorado; and Seattle, Washington.
- A competitive assessment of the City's overall strengths and weaknesses in terms of the local economic development program, the relationship between government and business, and Atlanta's quality of place.
- Focus groups, stakeholder meetings, and electronic surveys that provide a rich understanding of existing and prospective business and stakeholder needs.

Invest Atlanta also considered best practices from other successful economic development strategies and adapted them to fit Atlanta's unique profile and needs.

ACKNOWLEDGEMENTS

This strategic plan was sponsored with the generous support of the following organizations:

- Atlanta BeltLine Inc.
- Atlanta Housing Authority
- Central Atlanta Progress
- Georgia Power
- Invest Atlanta
- City of Atlanta

In addition, Invest Atlanta would like to convey a special thanks to the Steering Committee for their time, participation and valuable feedback. Members of the Steering Committee include:

- Brenda Muhammad, Atlanta Public Schools
- Deborah Lum, Atlanta Workforce Development Agency
- Garth Peters, Buckhead Coalition
- Hans Utz, Mayor's Office, City of Atlanta
- Hans Gant, Metro Atlanta Chamber of Commerce
- Jennifer Ball, Central Atlanta Progress
- Kristi Rooks, Central Atlanta Progress
- City of Atlanta Council Member Joyce Sheperd, Invest Atlanta Vice-Chairperson
- Julian Bene, Invest Atlanta Board member
- Lisa Gordon, Atlanta BeltLine, Inc.
- Shannon Powell, Midtown Alliance
- Stephen Foster, Georgia Power
- Tracey Scott, Atlanta Housing Authority





ENDNOTES

- ¹ US Census Bureau, Annual Estimates of the Population of Metropolitan and Micropolitan Statistical Areas.
- ² US Bureau of Labor Statistics, Quarterly Census of Employment and Wages.
- ³ US Bureau of Economic Analysis, Gross Domestic Product by State and Metro Area.
- ⁴ Hartsfield-Jackson Atlanta International Airport. "Hartsfield-Jackson Remains Busiest Airport in the World for 16th Consecutive Year", April 2, 2014.
- ⁵ Susan Adams, "Best Cities for New College Grads," Forbes, http://www.forbes.com/sites/susanadams/2013/03/19/the-best-cities-for-new-college-grads-in-2013
- ⁶ US Bureau of Economic Analysis, Gross Domestic Product by State and Metro Area.
- ⁷ S&P Dow Jones Indices, S&P/Case-Shiller Atlanta Home Price Index.
- ⁸ US Bureau of Economic Analysis, Gross Domestic Product by State and Metro Area.
- ⁹ Federal Bureau of Investigation. Uniform Crime Reporting Program (Part 1) with population adjustments by the City of Atlanta.
- ¹⁰ Myfoxatlanta. "APD: All 2,000 Officer Positions Filled." Oct. 25, 2013.
- ¹¹ Moody's Investors Services. "Moody's affirms Aa2 rating on the City of Atlanta's (GA) outstanding general obligation debt; Outlook revised to stable from negative," June 29, 2012.
- ¹² Atlanta Downtown Improvement District. "City Council Passes Pension Reform," June 30, 2011.
- ¹³ Americans for the Arts. "Arts and Economic Prosperity IV," 2012.
- ¹⁴ Atlanta Housing Authority. "Comprehensive Annual Financial Report and Independent Auditors Report, FY2011-2012."
- ¹⁵ National Science Foundation. "Higher Education Research and Development: Fiscal Year 2011."
- ¹⁶ US Patent and Trademark Office. General Patents Statistics Report.
- ¹⁷ Fairlie, Robert. "The Kauffman Index of Entrepreneurial Activity, 1996-2011." The Kauffman Foundation, 2012.
- ¹⁸ Ibid.
- ¹⁹ Casserly, Meghan. "The Best Cities for Female Entrepreneurs." Forbes, Oct. 18, 2012.
- ²⁰ Neslon, Brett. "Best Cities for Minority Entrepreneurs." Forbes, March 23, 2011.
- ²¹ Fairlie, Robert. "The Kauffman Index of Entrepreneurial Activity, 1996-2012." The Kauffman Foundation, 2013.
- ²² PricewaterhouseCoopers Money Tree Report, 2014.
- ²³ US Census Bureau.
- ²⁴ City of Atlanta, Office of International Affairs.
- ²⁵ KPMG. "Competitive Alternatives Special Report: Focus on Tax, 2012 Edition."
- ²⁶ Georgia Department of Economic Development. "Georgia-Filmed Productions Generate \$3.3 Billion in FY2013," Nov. 22, 2013.
- ²⁷ US Bureau of Labor Statistics.
- ²⁸ Ibid.
- ²⁹ Ibid.
- ³⁰ US Bureau of Transportation Statistics.
- ³¹ US Bureau of Labor Statistics.
- ³² McDearman, Donahue, and Marchio. "Export Nation 2013: U.S. Growth Post-Recession." The Brookings Institution, 2013.
- ³³ Tomer, Puentes, and Kane. "Metro-to-Metro: Global and Domestic Goods Trade in Metropolitan America." The Brookings Institution, 2013.
- ³⁴ Global Cities Initiative. "Atlanta Leaders Convene to Boost Region's Overseas Business Opportunities at Global Cities Initiative Forum Atlanta Mayor Kasim Reed Announces a New Metropolitan Export Plan," March 20, 2013.

35 Ibid.

APPENDIX A Sample Performance Metrics

Performance Metric How to measure the metric New direct jobs created New indirect jobs created **Job Creation** Retained jobs (as it relates to a potential employer moving and jobs being reduced/ eliminated) Total number employed per year vs. State average **Net Employment** and compared to the previous year Number of services used per year **Business Incubation Services** Number of exits from incubators **New Private Investment** Total amount of new investment per year Amount of private investment leveraged to Redevelopment metric supplement public dollars used for redevelopment Dollar value of tax incentives per year Number of transactions Incentives Economic impact analysis of the investment related to the incentive/inducement Percent of city average wage Average Wage **Gross Regional Product** Annual dollars Number of funds Dollar amount of funds Venture/Angel Capital Number of users Startup capital raised Tax Revenue Generated Annual revenue stream Revenues generated Invest Atlanta Partnership Investor Mix Number of investors Percent vacancy rate by asset type Absorption rate **Real Estate Metrics** Acreage used

Units filled (related to housing)

Cost per square foot by asset type

Real Estate Cost

Performance Metric

How to measure the metric

Available Developable Land Available Buildings for Development Number of Qualified Prospects	Acres of shovel ready sites Acres of developed sites Acres of greenfield sites Number and square footage of move in buildings Number of visits to qualified businesses, or businesses visiting Atlanta for possible investment
Conversion Rate of Prospects	Percent of conversion from prospect to project
Target Cluster Maturity	Number of new direct companiesNumber of new indirect companies
High School and Tech School Graduates	Number of grads per skill-set – tied to target industry requirements
College and University Graduates	 STEM completions Number of grads per skill-set – tied to target industry requirements
Utilization of Development Programs	Percent of programs used for talent and workforce development
Talent Retention	Number of in-bound migrationNumber of out-bound migrations
Educational Attainment	 Percentage Ph.D. Percentage graduate Percentage undergraduate Percentage associates
Industry & Educational Alignment	Identify whether key skill sets are being fulfilled by the education system
Competitiveness Ranking	The Milken Institute Annual Rankings* (*The Milken Institute ranking is an objective, third party ranking using valid metrics to measure each MSA. The metric variables include measures of job, wage, and technology performance to rank the nation's 200 large metropolitan areas and 179 smaller metros. Unlike other "best places" rankings, it does not use quality-of-life metrics, such as commute times or housing costs. In the Institute's index, employment growth is weighted most heavily due to its critical importance to community vitality. Wage and salary growth measures the quality of jobs created and sustained.)

APPENDIX B Focus Group and Electronic Survey Report

APPENDIX B: FOCUS GROUP & ELECTRONIC SURVEY

The following pages summarize the responses to the questions posed in the focus groups.

1. What do you think are some of the biggest obstacles that inhibit Atlanta in its ability to attract, expand or retain businesses and investment?

The majority of the groups listed transportation/traffic, weak public schools and a perception of crime (especially in downtown, but throughout the City) as major obstacles to attracting businesses. Others noted a lack of regionalism, lack of a skilled workforce, manifestations of poverty, little access to capital, permitting and zoning issues, and a lack of effectiveness in economic development programs as inhibitors. Specifically, focus group respondents noted the following as obstacles to Atlanta's ability to attract companies:

- Transportation/Traffic (7)
- Public schools (k-12) (6)
- Public safety/crime (downtown) (6)
- Lack of regionalism (5)
- Qualified workforce/Skilled workforce (3)
- Manifestations of poverty (panhandling) (3)
- Access to capital (3)
- Bureaucracy involved in permitting and zoning (3)
- Execution of EDO activities (3)

- Property Taxes (2)
- Lack of coordinated economic development strategy and approach (2)
- Infrastructure (2)
- State government that at times works against City of Atlanta's interest (2)
- Lack of land use planning (e.g. sprawl and not taking advantage of transit oriented development) (2)
- Too much government (2)
- City (and downtown) not aesthetically pleasing/dirty (2)

Other obstacles mentioned within single, separate focus groups:

- Meaningful economic incentives
- True urban neighborhoods serving various economic levels
- Little alignment of core foundations for the entrepreneur ecosystem
- Little alignment of entrepreneur community with established vertical industries
- Lack of awareness of tools/resources that exist
- Not looking at/focusing on core competencies
- No regional/collective brand
- Slow to adopt sustainability practices

- Lack of activity in downtown area (or effort to do so)
- No structure in place to support adult education and re-education
- Lack of methods/sources of revenue generation; too reliant on growth
- Lack of a waterfront/beach amenity
- Availability of quality and affordable housing

2. On a scale of 1 to 5 with five being best, how would you rate the business climate of the City of Atlanta? Fulton County?

As the next stage in the process, participants were given the opportunity to comment on why they scored the City/Fulton County as they did. Most groups noted the permit and zoning process, as well as the lack of consistency in carrying out policies and the lack of political coordination and communication within the City and region. Specifically, focus group respondents noted:

- Permit and zoning processes takes a long time and costs lots of money for the companies (same for Fulton county) (5)
- Lack of consistency; processes/criteria often not standardly applied; processes should be codified somewhere (both) (4)
- Lack of political coordination for both (4)
- Lack of communication about resources and programs (4)
- Hard to do business with the City /not customer focused/difficult to determine who decision makers are (3)
- Not enough attention to attracting or retaining small business; focus is on large companies (3)
- Lack of incentives that other counties and cities in region offer (e.g. renewable energy credits, entrepreneurs) (2)
- There's a shadow government that exists in the cities neighborhood planning units become another layer of government; they deter people from investing in certain parts of the City (2)
- City lacks feedback from businesses; can't improve if they don't know what's wrong (2)
- There is a perception that everything is political; leaders point fingers, but haven't found a solution (2)
- "The laws that we have are progressive; it's the implementation that is failing"
- Other areas of the region are more aggressive/passionate about trying to implement substantive programs for entrepreneurs
- Atlanta has lots of resources but no way to let people know how to get to them and/or how they can/should be used
- Because of its tax base, the City doesn't really have the funds/resources or policies in place to improve the infrastructure on a macro scale; "The business model for the City is broken"
- "The City of Atlanta taxes are higher than any other place in the region" property and sales taxes
- Atlanta doesn't support things like public schools well key issue

- Atlanta is very balkanized and not conducive for business. The City doesn't have that much power; other groups are taking on city functions since the City isn't doing it; this is not the most efficient for results
- The City has not dealt with its old infrastructure or brownfields; these need to be dealt with for development to occur
- The City seems to be focused on promoting business; culture and arts feels like the second child

3. What do businesses need that they can't find in the City of Atlanta?

Responses were varied. Needs mentioned most are qualified employees/skilled workforce and the availability of capital and hard infrastructure. Specifically, focus group respondents noted:

- Qualified employees/Skilled workforce (2)
- Capital (2)
- Infrastructure (especially access to good power, transit, fiber, and internet) (2)
- Safe environment downtown perception at least
- Transportation not just traffic; lack of a plan; synchronized traffic signals
- Ease of permitting
- Control over panhandling (retail business suffers)
- Lack of access to city government; few very strong people; hard to know who to get to when you need something; need an ombudsman
- Incentives
- Natural amenities (mountains or body of water)
- Less developed cultural infrastructure
- Industrial space

4. What do you see as the City's assets?

Focus group respondents unanimously pointed to Hartsfield-Jackson Atlanta International Airport as one of the City's strongest assets to attract business. Groups also frequently mentioned higher education in the region, the cost of living, diverse entertainment options, and the influx of young and talented workers. Specifically, focus group respondents noted:

- Great airport wealth of international connections (8)
- Higher education (7)
- Cost of living (e.g., housing) (6)
- Diverse entertainment—Arts/Culture and pro sports (6)
- Good depth and breadth of workforce in certain slices; immigration of talented younger workers (e.g., tech/software/logistics) (6)
- Climate (5)

- Very accepting, welcoming community; good melting pot attitude, "Southern Hospitality" (5)
- Diverse cosmopolitan attitude (4)
- Technologically wired/broadband; presence of data centers (4)
- Brand; reputation as a global city, lead city in southeast (4)
- Diverse neighborhoods and business corridors (e.g. Midtown) in the City; variety of choices (4)
- Engaged business community; collaborative (3)
- MARTA "Could be stronger, but better than most" (3)
- Number of Fortune 500 companies and engagement in business climate improvements (2)
- Perception of being the civil rights center/start (2)
- Available real estate/space (2)
- Quality of place (2)
- Mayor and strong political leaders (2)
- Transportation nexus with the exception of transit (airport, highways and rail are good) (2)
- Aspirational; seeds for positive change have been planted
- Recreation
- Healthcare
- Manufacturing
- Deployment of capital
- Atmosphere that encourages entrepreneurship; great networking
- Lower cost of operating business
- All of the Chambers/EDOs have metrics on recruiting
- Thick job pool for "highly" qualified individuals; lots of top notch opportunities
- Family friendly
- Well-functioning Metro Atlanta Chamber
- Access to GA QuickStart
- Green city city in a forest
- Public safety "superior"
- Good infrastructure needs improvement (water/sewer)
- Collaboration between business and government are phenomenal and tie into business success (e.g., community improvement districts)
- Established African American business class they know/think they can come here and be successful
- Open and progressive City political leadership, "best City Council in the world"
- Proximity to other regions/parts of the country
- In-town traffic is measurably better than in and between the region's outer ring (outside I-285)

5. What assets and attributes of the City do you believe are underutilized in investment attraction?

Participants had several examples of assets/attributes they believed are not being used to their full potential. These included:

- Not utilizing coordination among government entities (e.g. regional effort to attract the Olympics) (2)
- Presence of historically black universities and colleges (2)
- Technical College system (2)
- Higher Education many things going on but not leveraging them all well (2)
- Not marketing the quality of life issues (2)
- Diverse arts community in what they offer but not promoted as a vital part of Atlanta (2)
- Parks (not well distributed) and greenery (2)
- Logistics infrastructure
- All of the region's assets/infrastructure is not being used in an optimal way
- Underground Atlanta
- Transit oriented development/rail system
- Airport is undersold
- Sources of capital (e.g., angel investors, micro-lenders)
- Resources for entrepreneurs (e.g., women in technology, SBA, Small Business and Technology Development Center)
- Retiree base that could be mentors
- Retaining graduates of local universities
- Diversity (and African American business class)
- Tech incubator (e.g., GA Tech)
- In town living; housing stock (e.g., on the South side)

6. What is the City doing well in growing entrepreneurship?

Participants gave the City mixed reviews on its attempts for spurring entrepreneurship. In addition to the specific comments below, many noted that support – and/or the announcement of programs from the Mayor's office—has increased recently. Specifically, focus group respondents noted:

- Start-Up Atlanta and efforts to attract more capital(3)
- Nothing, but the universities have good support (2)
- University efforts, e.g. ATDC Atlanta Technology Development Center (Tech's incubator) or Flashpoint (2)
- Cultivated a strong entrepreneurial community software, logistics, telecommunications
- Minority/disadvantaged community programs (e.g. local public contracting/procurement policies)

- Silos among groups that support entrepreneurs are breaking down
- More commitment and increased staffing by Mayor's office
- Opportunity zones (space for entrepreneurship)
- Lots of organizations to support growth (e.g., Start-up Chicks)
- Leveraging relationships on the Federal level to bring resources
- Curricula at technical colleges to encourage/support entrepreneurship

7. What could the City be doing better or differently to grow entrepreneurship?

When asked what the City could do better to grow entrepreneurship, respondents noted the need for better communications/awareness of what is available and a role in connecting newer companies with established ones. A few groups also suggested that existing policies should be re-examined with an eye toward their impact on smaller companies. Specifically, focus group respondents noted:

- Set programs and communicate resources that make it easy to form a small business; link them to the university programs (3)
- Connect smaller companies to larger ones; develop B2B network (2)
- Audit policies governing small business, make sure they aren't redundant or have unintended consequences "We need a Department of Deregulation" (2)
- Attract more venture capital (2)
- Create a mentor program (2)
- Develop incentives for small companies to come into the City (e.g., use TADs, enterprise zones)
- Improve customer service of government agencies
- Ensure local procurement and vendor policies are inclusive and transparent
- More focus on the 5-50 employees category (rather than just large companies)
- Better market university research to entrepreneurs to come to Atlanta
- Follow-through on promised programs
- Recruit a large technology company that will attract entrepreneurs to come
- Create more incubators—both for technology companies but also others
- Benchmark and learn from others
- Develop a comprehensive strategy to help (efforts so far have been piecemeal; tasks are duplicative; not effective)
- Define and publish a common set of metrics that everyone looks at on an ongoing basis
- Not recognizing the difference between entrepreneurs regular old ones and techies if you treat them all the same, you get stuck because the needs and opportunities are different

8. What challenges and opportunities exist as they relate to growing the City's/region's export capacity?

"Export" capacity was defined as the ability to attract companies that drive wealth creation in a region primarily through the export of goods and services. This is different than attracting companies/activities that serve only the local population. An example would be a financial services company whose analysts are based in Atlanta but whose clients are global versus a restaurant or service provider whose customer base is in Atlanta. Specifically, focus group respondents noted:

- The airport and Port (of Savannah) are huge advantages to attracting export industries
- Connect large and small companies; it is difficult for small companies doing business with large companies hard to get in the door (2)
- Improve transportation, logistics and distribution network to help them get their product out of the region
- Lack of coordination or a regional plan means there are competing priorities, no focus and few resources to strengthen the business climate that would attract export companies
- No convenient/comfortable transit options; erodes quality of place for potential workers
- Decision where to locate is usually based on the region; the City has to do better to set itself
 apart from other places in the region
- Lack of skilled labor in some areas makes it difficult to attract companies
- Lack of parking in downtown discourages people/companies to be there
- Help businesses understand potential markets and help make connections to them and/or a strategy to penetrate them
- Lack of capital for smaller companies
- Leverage strength of large companies and their market channels
- Use consulates to identify potential markets

9. Which locations (domestically and globally) do you believe are the primary competitors to Atlanta for investment and job creation?

Competitor areas/cities noted by more than one focus group

Charlotte (8) Miami (3) Dallas (7) Houston (2) Raleigh/RTP (5) Denver (2) Nashville (2) Orlando (4) Chicago (4) Los Angeles (2) Seattle (3) Metro Atlanta (2) NYC (3) Boston (2) Austin (3) Brazil (2)

Competitor areas mentioned within single, separate focus groups

Tampa Portland

China Washington, DC

Baltimore Houston
Phoenix North Fulton

Las Vegas (convention Depends on industry

business)

Salt Lake City

New Mexico

Massachusetts

Jacksonville

Singapore

London

Dusseldorf

10. What infrastructure is missing or unsatisfactory in the City (soft and hard infrastructure)?

For this question, participants were reminded that "infrastructure" includes both hard/fixed assets as well as those other amenities and foundations that enhance the City's business climate. Specifically, focus group respondents noted:

- Strategies/comprehensive plans and political collaboration to implement them (3)
- Transit and transit connectivity to other cities in the region (3)
- Hard infrastructure all (2)
- Sidewalks (2)
- Brand Atlanta effort to comprehensively brand the City and region (2)
- Urban nodes/areas of density (2)
- Support for homeless
- Consistency in street names
- Lack of City draw (something that makes people want to come into the City)
- Tourist infrastructure
- Marketing plan for Downtown
- Lack of parking
- Roads
- Water/Sewer
- Education K-12
- Open space/Green space
- Air quality
- Healthy housing choices (can walk to it)
- Progressive governance
- Shared vision that drives action and strategic approach to tackling any infrastructure need
- Gathering spaces
- Funding for the Arts

11. Without regard to money or politics, what would you work to change about the City?

The responses below are summaries of answers provided. Responses in quotation marks are verbatim or near verbatim recordings of the response.

- Every child will read at grade level and be a "math whiz"; make public K-12 system worldclass and aligned with workforce needs of business (8)
- Complete regional transportation system; "MARTA has to be more of a regional solution";
 "Save TSPLOST" (8)
- Solve homelessness/panhandling give them opportunities so they aren't homeless (4)
- Coordination among government entities; consolidated regional government (4)
- Improve hardscape and clean up the City/urban beautification projects (4)
- Build sidewalks and bike paths; make the City less auto dependent (4)
- Create a signature retail/business development downtown: "Put Chicago's Michigan Ave on Peachtree St. downtown"; Miracle Mile; "Move Atlantic Station downtown" (3)
- Solve/address public safety problem/perception (3)
- Create a huge body of water in the City-reflow Chattahoochee—as an amenity and economic development asset (3)
- Figure out how to increase economic opportunity for the very poor; everyone should be able to get a meaningful living wage; address adult education (3)
- Make Atlanta the Center for the Arts of the South properly fund arts and culture institutions; dedicated funding stream for the arts (3)
- Encourage development throughout Atlanta, especially in areas where there is little traction or attention; address blight (3)
- Promote green space/gathering places and distribute them evenly; "Finish the BeltLine" (3)
- Create honesty in government/fiscal responsibility (2)
- Shared vision of where we want to be in; buy in; drive to it with specific timetables (2)
- Recruit businesses back to downtown and embrace the idea of people being there; make it a hotspot (2)
- Zoning or other types of approaches to increase green space/parks; protect open space; create gathering places (2)
- Real workforce housing wider range of housing from top to bottom (2)
- Increase residential living to raise the tax base or institute an occupation tax to broaden tax base (2)
- Alternatives for youth to address crime issues (skate parks)/employment for youth (2)
- Bold investments in areas with the most potential (clusters) (2)
- Fix the water issue (2)
- The City needs a more developed middle class lots of rich and lots of poor
- Invest in "mojo" feel better about self as a city and be more unified chase another
 Olympics; Atlanta lost its mojo after the Olympics
- Implement Peachtree Corridor Task force plan

- Promote tourism in the city
- Repository of resources—did it for Health IT—all educational initiatives (came from Governor's
 office); so a company will know where it can get support/help
- Create structure where entrepreneurs can grow 21st century businesses like Austin
- Improve air quality
- Complete Ft. McPherson redevelopment
- Marketing plans for south and west side neighborhoods
- Internationalize Atlanta
- Work to bring Latino community back into the City. Currently not incorporated into mainstream events/activities

12. What types of companies do you think would be a good fit for the City?

- Healthcare/medicine e.g., Healthcare IT (3)
- International businesses because of the airport (2)
- High-tech build on GA Tech strength (2)
- Entertainment production companies (2)
- Manufacturing
- Agriculture (given research occurring within the region, build a center of excellence)
- State/government jobs
- Video gaming (animation)
- Distribution facilities/logistics
- Casinos
- Life-sciences
- Non-technical jobs (for those who don't have the educational attainment)
- Information security
- Hospitality (with living wage)

13. Are there any suppliers/businesses/operations that would complement yours?

This question was posed to the large employer interview respondents and entrepreneurs.

- Bring together groups of people around function in a specific area/location
- Corporate development entities UPS, COX or companies that could invest locally

14. What are your past experiences with and current perceptions of various economic development efforts by the Chamber of Commerce, Invest Atlanta, the County Commission, the City and any other group(s) involved in investment attraction and retention? How could these efforts or groups be improved?

The focus group respondents were unanimous in their assessment of the economic development activities in the region being uncoordinated and seemingly competitive. Where specific groups were referenced, the reference is included below.

Themes/concerns noted in multiple focus groups:

- They are all disjointed and seem to compete; need a strategy to coordinate all of the activities; no connectivity; no shared strategy; City has not been at the table "balkanized region" (8)
- Too much energy spent on recruiting companies and not enough on retaining the ones that are here or supporting entrepreneurs (4)
- Multiple entities working on economic development but not clear on who is taking the lead (3)
- Unevenly effective. Some chambers better than others (2)
- Invest Atlanta doesn't have much visibility (2)
- Need more communications about what each entity is doing (2)
- Seems like they are spread too thin; lack of resources; without focus, activities hard to resource, not effective (2)
- Sometimes it appears that the State Legislature is working against the metro ED groups (2)

Individual responses:

- Economic development in the region tends to invest in private space instead of public space;
 hence development driven by developers, not necessarily cohesive
- Mayor needs to be the chief salesperson of the City shouldn't be chief fixer of problems –
 do we have a clear message that Atlanta is open for business?
- City/region doesn't do a good job of telling the public of the benefit of attracting companies to Atlanta
- Need to have a true regional chamber that gives equal attention to all of the municipalities
- Core of the competition is RACE and CLASS drives a lot of the patterns in the City and region

15. What programs should Invest Atlanta be engaged in, including current and potential new ones? Currently, their mission directs them to serve as the lead in housing development, affordable housing initiatives, tax allocation districts, entrepreneurship, business recruitment and expansion within the City of Atlanta and New Markets Tax Credits.

Participants were read the elements of Invest Atlanta's mission as listed on the website.

Themes/concerns noted in multiple focus groups:

- Simplify mission; shouldn't do something others are already handling; need to figure out priorities and what they can best do (3)
- Invest Atlanta should work to build/enhance product available in the City; do something with the Underground; create an entertainment district (3)
- Focus on building businesses in clusters or defined industries rather than entrepreneurship (2)
- Land use planning to more effectively develop infill projects and better focus on blight areas (2)

Individual responses:

- They need to reach out and let people know what they are doing
- Housing development doesn't seem to fit; unless it's for the purpose of bringing people to live downtown
- Invest Atlanta has looked at some programs as a profit center rather than how they tie to the mission; programs designed for bottom line second and mission first
- Might be better for Invest Atlanta to be a connector rather than trying to do it all
- Access to capital is something they should deal with; work to attract more firms to the region or connect ones who are here
- Focus on attracting jobs—start-ups, big companies and existing
- Workforce development
- Seems like the economy has shifted so much that some of the focus areas should be adjusted
- Competition is global, Invest Atlanta should work more in that space rather than against domestic peers
- Should become independent from the City
- Focus on start-ups and existing businesses
- Work to integrate zoning needs and planner suggestions to create more impactful development
- Fund public art (would help beautification needs)
- Make sure proposed development leverages transportation nodes; Invest Atlanta doesn't appear to be doing that currently
- Stay out of the (negative) headlines
- Recognize parking and its role in economic development
- Figure out resource/revenue stream to pay for needed improvements
- Create a cultural district using a TADs method
- Invest Atlanta lost their outreach person they need to rehire that position so everyone knows who to call

16. Are there any other issues of concern to you we did not ask?

To close the session, participants were asked if they had any final thoughts or if there were issues that were not addressed earlier. Below is a summary of the responses given within all eight groups.

- Many public infrastructure projects are in the works; look at it broadly and see where all the public monies are being directed so they can show impact
- Be issues focused instead of "siloed" in terms of function
- Invest Atlanta should collaborate more with City departments used to have a working group a "subcabinet" that met each other monthly or quarterly. The Competitiveness and Jobs Task Force is supposed to serve this role
- Atlanta is the "biggest small town in America" good and bad. It makes it hard for Atlanta to get their head around who the competition is here. There is a disconnect between what the City is like and what the leadership (business and political) is allowing Atlanta to be
- The big vision needs to be communicated so people can buy-into it
- The City has ignored public space. There is a \$900 million backlog of City needs. Without addressing this, people can't be attracted back to the City
- There is a risk that Charlotte will emerge as "The City" of the South. Atlanta lost the banking sector to it
- The City is all about looking for "the silver bullet"
- Complete opposite example is Chicago had more problems than Atlanta, but is turning it around. The Mayor has a plan and a vision. There is leadership and an understanding of the importance of transportation. Los Angeles is another example
- It seems Atlanta aspires to be a sprawling city of the 21st century
- Government isn't proactive/leading
- There needs to be a better job of marketing Atlanta people know Atlanta's a great place; they just don't know why
- In the late 1980s into the 1990s, there was a vibe that something great was going on. After the mid-1990s, it dissipated; after the Olympics, we became boring
- There is a central theme around the downtown area. We have a lot of assets that we don't talk about it; we have to make downtown more inviting on the weekends. There is no central marketing to wrap all the activities around. Atlanta needs central leadership
- When Los Angles died, it was because transportation died everyone left. This is not what Atlanta should do (or allow)
- It's all about transportation and being able to get from point A to point B with ease (e.g., Chicago). Along those commutes, the amenities were there and it was easy
- Atlanta needs to be safe and easy to get to
- The City needs to figure out how to leverage the failure of TSPLOST. Someone needs to educate people what the transportation bill would have done

- Race and class are still issues; we've made great strides, but there is so much more to do. These two issues affect everything that goes on
- If you start at Lennox at 10:00 PM and head downtown from the Ritz, you will see lots of people out; Buckhead is lively and packed. If you go from Peachtree to Midtown, there are still lots of people. Once you get to the Ritz at Five Points and head south, you begin to wonder what happened. This area needs to improve. Five Points should be bustling with activity...but it doesn't
- The BeltLine project meets all the challenges that were mentioned. We need to keep trying to get it implemented. Use TAD dollars, which is a political issue
- Deploy TAD in Westside locations
- An area of focus should be coordination among the higher-ed institutions; we are underutilizing the technical college system and their services

Focus Group Participants

Below are the participants of the eight focus groups.

Larger Employer Group

Renee Lewis Glover, Atlanta Housing Authority

David Kimmel, Georgia Aquarium

Steven J. Labovitz, McKenna Long & Aldridge LLP

Richard J. McKay, Atlanta Falcons

Eddie Meyers, PNC Financial Services Group

Dane C. Peterson, Emory University Hospital Midtown

Trey Ragsdale, Kaiser Permanente (Georgia)

Tracey Scott, Atlanta Housing Authority

Min Whorley, Emory University Hospital Midtown

Mike Dunlap, Fifth Third Bank

Charlie DiGialomo, PNC Bank

Tracy Barlow, URS Corporation

• Small and Medium-sized Employer group

Mary Jo Peed, AT&T

Dennis Boyden, AT&T

Marti J. Blackstock, Parkway Realty Services

Chad Durham, DLB Associates

Scot Gladstone, Courtyard Atlanta Downtown

David D. Marvin, Legacy Property Group

Kent Matlock, Matlock Advertising & PR

John O'Callaghan, Atlanta Neighborhood Development Partnership Inc.

Barbara Peters, First Step Staffing

Alicia Philipp, The Community Foundation for Greater Atlanta

Arnie Silverman, Silverman Construction Program Management

Tim Smith, Breensmith

Alan M. Wise, The Boston Consulting Group Inc.

Bob Begle, Urban Courage

Ellen Macht, Wealth Builder Initiative

Kevin Cantley, Cooper Carry

Carlton Harden, ACP

Scott Taylor, Carter

Chad Durham, DLB Associates

• Entrepreneurs and Start-ups

Bernie Burgener, Green Chamber of the South

Michael J. Eckert, Atlanta Technology Angels

Stephanie Hill, Women in Technology

Adam Wilson, Huge City

Tino J. Mantella, Technology Association of Georgia

Alan W. Urech, 200 Peachtree

Patricia C. Williams CEcD, Georgia Micro Enterprise Network

Michael J. Zeto III, Proximus

Ric Geyer, 4731 Solutions

Eloisa Klementich, Invest Atlanta

Julian Bene, Invest Atlanta Steering Committee

Jen Bonnett, ATDC

Education

Frederick Assaf, Pace Academy

Dr. Beverly Daniel Tatum, Spelman College

Merrick Furst, Flashpoint

Joel Konzen, Marist School

Alvetta Thomas, Atlanta Technical College

Carlton Bran, Clark Atlanta University

Mark Becker, Georgia State University

Phillip Howard, Morehouse College

Entertainment and Digital Media

Gregory Burbidge, Metro Atlanta Arts

Tricia Ekholm, Atlanta Ballet

Jody Saka, The Snow Hill Farm Corporation

Allan Vella, The Fox Theatre

Kevin Wasson, Celebrity Management

Mandell Wells, Wells Entertainment

Raymond King, Zoo Atlanta

Craig Dominey, Georgia Film, Music & Digital Entertainment Office

Alphonso Harvey, Walls Entertainment

Tamie Pettaway, Core Concierge

Ric Ross, Capitol Records

Elected and Government Officials

Cary Aiken, Historical Preservation

George Dusenbury, City of Atlanta Commissioner

of Parks, Recreation and Cultural Affairs

Anna Foote, Invest Atlanta Board

Joan Garner, Fulton Country Commissioner

Jack Gruendler

Camille Love, Cultural Affairs, Director, Office of the Mayor

Richard Mendoza, Public Works Commissioner

Karen Rogers, City of Atlanta

James Shelby, Atlanta Planning and Community Development Commission

Violet Travis Ricks, Atlanta-Fulton County Recreation Authority

Paul Taylor, DPRCA – Office of Park Design

CJ Davis, City of Atlanta Police

Ellen Wickersham, Invest Atlanta

Candace Byrd, Mayor's Office

Transportation and Logistics

Glenn Kurtz, Lanier Parking Solutions

John Mason, HDR Engineering

Russell Miller, Central Parking System

Scott Sherin, Alston Transportation

Don Cavarell, Atkins North America

Nate Conable, Atlanta BeltLine

Atlanta City Council Members

Ceasar Mitchell, President

Kristina Garcia-Bunvel, Representing Michael Julian Bond

Keisha Bottoms, District 11

C.T. Martin, District 10

Felicia Moore, District 9

Joyce Sheperd, District 12

Howard Shook, District 7

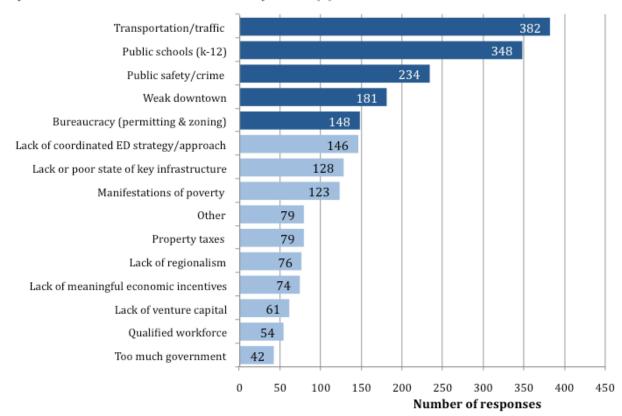
H. Lamar Willis, Post 3, at large

Electronic Survey

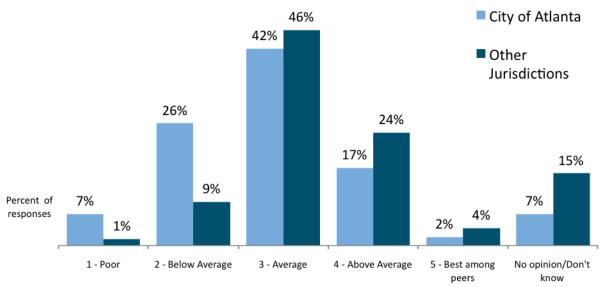
The detailed results of the electronic survey are described in the charts below:

1. What do you think are some of the biggest obstacles that inhibit the City of Atlanta in its ability to attract, expand or retain businesses and investment?

Respondents were asked to choose as many as five (5) attributes.

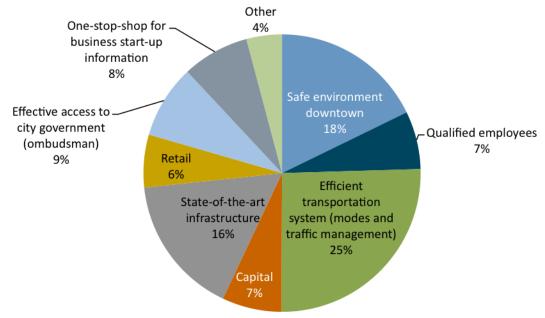


2. On a scale of 1 to 5, with 5 being best, how would you rate the business climate of the City of Atlanta? Other jurisdictions in the metro region?

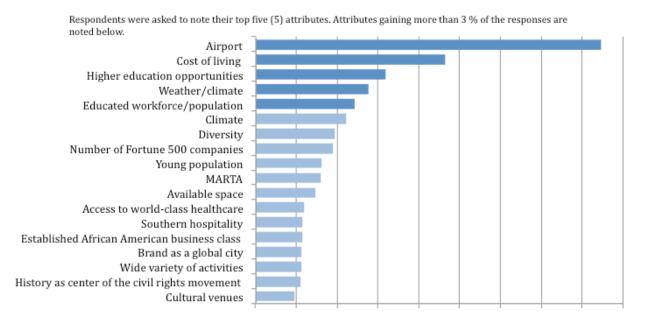


Business climate is defined by those laws and policies that are enacted by local government along with its execution of them and how they impact local businesses, e.g. taxes, permits, customer service, etc. Respondents were also given the opportunity to provide comments on why they scored the business climate as they did.

3. What do businesses need that they can't find in the City of Atlanta?

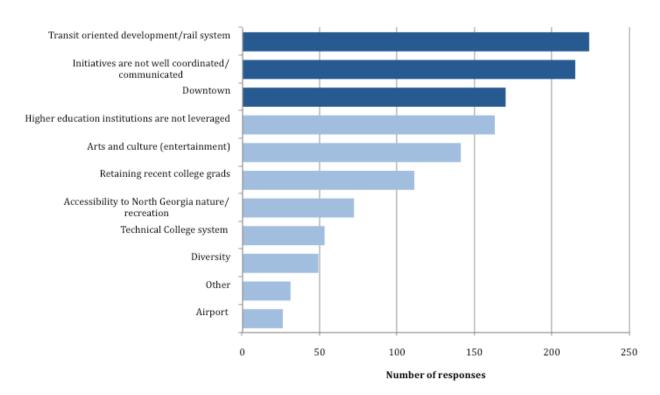


4. What do you see as the City's strengths/assets?

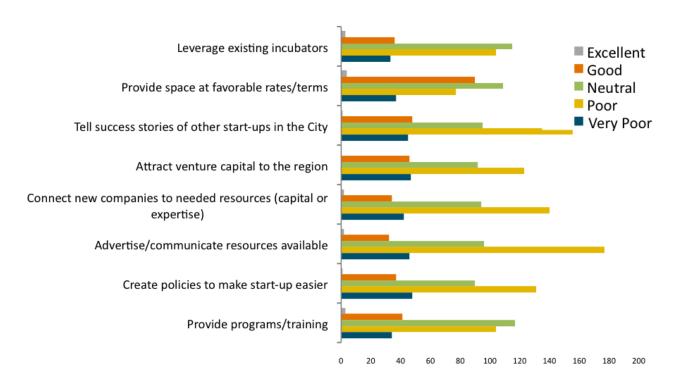


5. What assets/attributes of the City of Atlanta do you believe are underutilized in investment attraction?

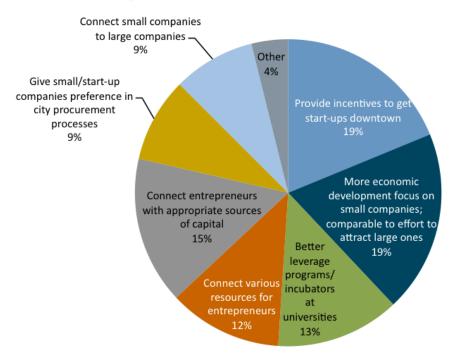
Number of responses



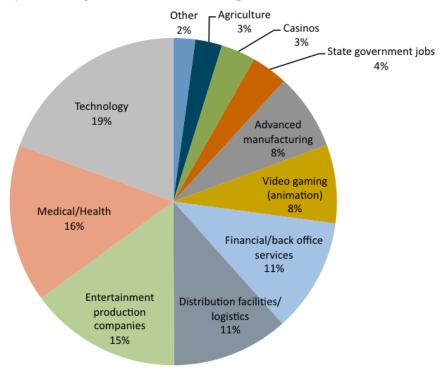
6. How would you rate the City's actions to spark and nurture entrepreneurship and home-grown companies?



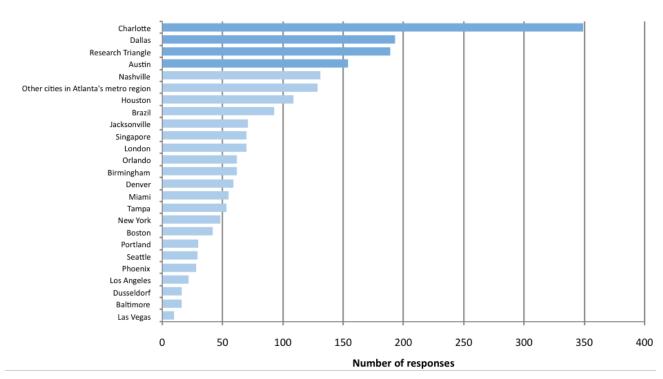
7. What could the City of Atlanta be doing better or differently to grow entrepreneurship?

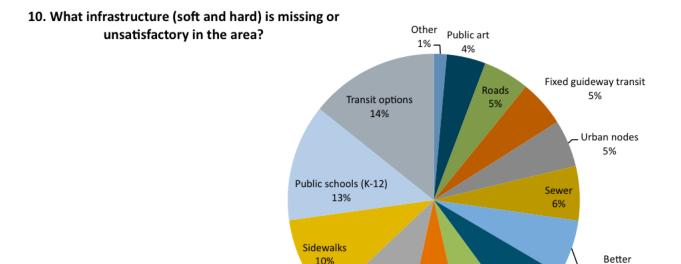


8. What types of companies do you think would be a good fit for the area?



9. Which locations (domestic and global) do you believe are the primary competitors to Atlanta for investment and job creation? (select up to four (4))





10%

Bike paths 10%

Air quality

11. If money or politics was not an issue, what would you work to change about the City of Atlanta?

Create world-class public schools where every child reads at grade level	22.2%
Efficient and effective, consolidated regional transportation system	20.2%
Solve homelessness/panhandling	13.9%
Full implementation of the Beltline	11.2%
Place Chicago's Michigan Ave on Peachtree Street downtown	6.1%
Coordination among government entities around a regional vision and economic development strategy	6.0%
Create and execute an economic development and marketing strategy for south- and west-side neighborhoods	5.7%
Consolidate jurisdictions throughout the region and create a regional governing body	4.5%
Provide alternatives for at-risk youth	4.1%
Other	3.4%
Dedicated funding source for the arts	2.8%
0	

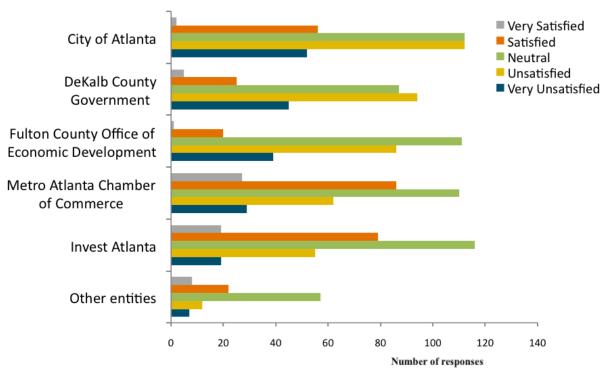
hardscapes/

citiscapes 6%

Water

∟ Gathering spaces/parks and greenspace 7%

12. What are your past experiences with and current perceptions of various economic development efforts involved in investment attraction and retention?

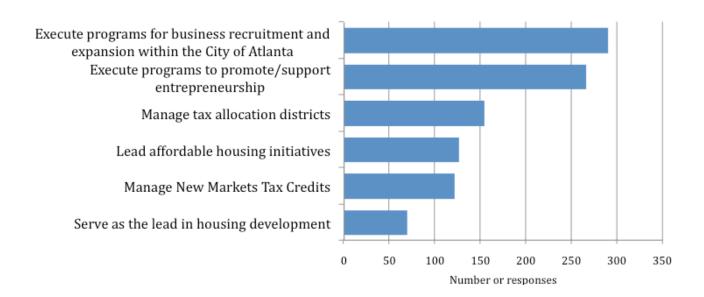


13. How could the above economic development efforts be improved?

Respondents were asked to provide open-ended text responses to the above question. Responses reflected those issues raised by the focus groups, including:

- Improve or better leverage transit-oriented development policies
- Encourage growth by providing incentives; reducing cost of doing business
- Support business retention and expansion as well as attracting new companies
- Develop a coordinated city-wide and regional strategy and designate a lead economic development organization for the region
- Advocate for the cities/region to streamline processes for establishing and running businesses
- Address business climate issues/obstacles (e.g. poor public education, manifestations of crime, and transportation/congestion)
- Work to encourage/attract more venture capital in the region
- Place stronger emphasis on making Atlanta a more livable, walkable, bike friendly and cleaner city.

14. Invest Atlanta is the official economic development authority for the City of Atlanta. Given its mandate defined below, which areas should Invest Atlanta continue to focus?



A final question (question #15) allowed respondents to comment on issues they felt were not addressed above. The following describes electronic survey respondents who were willing to share the requested information:

(1) Are you a resident of the City of Atlanta?	
Yes	68%
No	32%
(2) Is your job located in the City of Atlanta?	
Yes	75%
No	
(3) What is your gender?	'
Male	58%
Female	
Prefer not to answer	2 %

(4) What is your age?	
Younger than 18	0%
18 - 24	2%
25 - 34	18%
35 - 44	25%
45 - 54	23%
55 - 64	22%
65 or older	7%
Prefer not to answer	3%

(5) What best describes your industry?	
Non-profit	11%
Economic development organization	5%
City government	3%
State/regional government	1%
Large company	11%
Small company	24%
Start-up	4%
Education	5%
Retail	3%
Services	13%
Manufacturing	1%
Other	19%

APPENDIX C Local Specialization Analysis

APPENDIX C: LOCAL SPECIALIZATION, COMPETITIVENESS & GROWTH

Economic development targeting is driven primarily by the assets of community: What makes the City of Atlanta different. This uniqueness is the primary foundation that is used by companies to select business areas that match their needs and will inform their relocation, expansion or new business location decisions.

As such, the following provides a more detailed and in-depth assessment of the Atlanta economy and, coupled with the other data and analysis captured in Phase I, forms the basis for the identification of the target industries. To best capture current industry and occupational employment in the City, an overlay of ZIP Code areas closely matching the City's boundary was utilized. The analysis examines the local economy from several different perspectives, each adding a supporting layer of information. The assessment's main goals are to provide historical context, reveal areas of unique specialization, gauge competitiveness, and help uncover emerging trends and opportunities.

The three main areas of analysis are: major industries, occupations and industry clusters. For each area, there are relative measures of specialization, growth, local competitiveness, and earnings.

Major Industry Sector Change

Over the last five years the largest absolute gains came from Health Care & Social Assistance, up 8,648 jobs or 17.2 percent (Figure 1 and Table 1). Other significant gains were made in Private Educational Services (up 4,297 jobs or 33.7 percent) and Finance & Insurance (up 2,881 jobs or 8.6 percent).

The greatest job losses have come from the Government sector, down 9,869 jobs or 10.6 percent. Also experiencing significant losses were Information (down 4,981 jobs or 16.6 percent) and Manufacturing (down 4,537 or 24.4 percent).

Figure 1
Employment Change by Major Industry
Atlanta City ZIP Codes 2007-2012 1Q

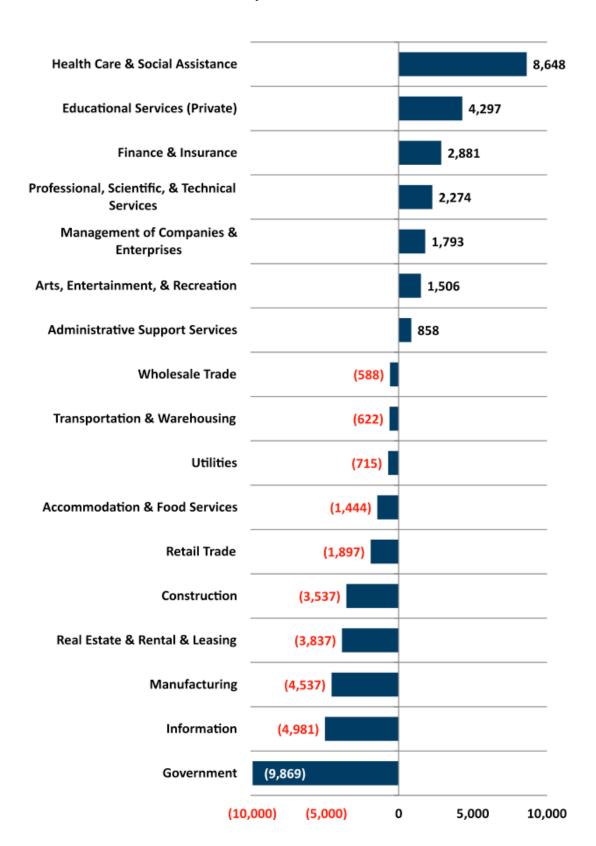


Table 1 Employment Change by Major Industry Atlanta City ZIP Codes 2007-2012 1Q Ranked by Absolute Change

Major Industry Sector	2011 Jobs		yment nge
		#	%
Health Care & Social Assistance	58,980	8,648	17.2%
Educational Services (Private)	17,054	4,297	33.7%
Finance & Insurance	36,408	2,881	8.6%
Professional, Scientific, & Technical Services	59,113	2,274	4.0%
Management of Companies & Enterprises	7,413	1,793	31.9%
Arts, Entertainment, & Recreation	17,006	1,506	9.7%
Administrative Support Services	33,118	858	2.7%
Wholesale Trade	11,816	(588)	-4.7%
Transportation & Warehousing	12,051	(622)	-4.9%
Utilities	2,802	(715)	-20.3%
Accommodation & Food Services	42,115	(1,444)	-3.3%
Retail Trade	33,690	(1,897)	-5.3%
Construction	9,534	(3,537)	-27.1%
Real Estate & Rental & Leasing	33,175	(3,837)	-10.4%
Manufacturing	14,087	(4,537)	-24.4%
Information	24,990	(4,981)	-16.6%
Government	82,823	(9,869)	-10.6%

Industry Earnings

A comparison of Atlanta's average industry earnings to national averages may offer insights into areas of unique expertise or cost saving opportunities. Atlanta's industrial average earnings exceed the national same-industry average in all major industries; at this level, it is more likely a reflection of urban core specialization than overall cost competitiveness (Figure 2 and Table 2).

Figure 2
Average Annual Industry Earnings Comparison
Atlanta City ZIP Codes 2012 1Q

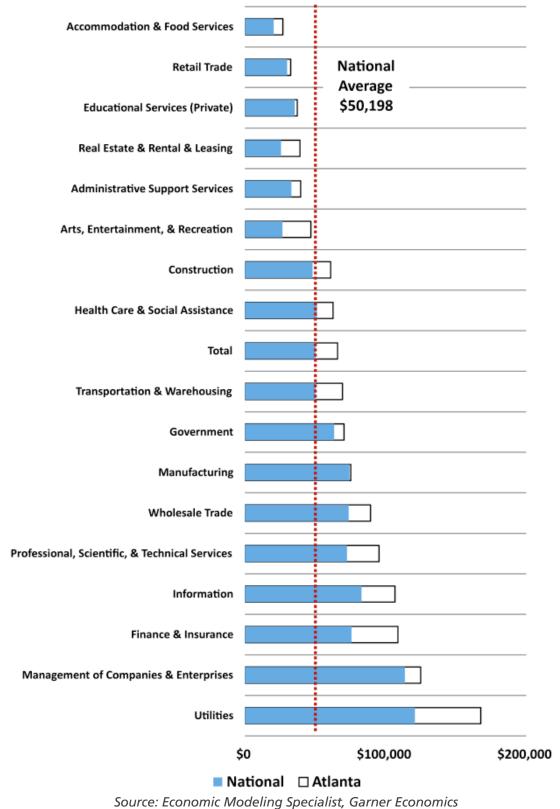


Table 2
Average Annual Industry Earnings Comparison
2012 1Q

	Atlanta Zip Codes	US
Utilities	\$167,788	\$120,918
Management of Companies & Enterprises	\$124,987	\$113,766
Finance & Insurance	\$108,828	\$75,826
Information	\$106,757	\$82,979
Professional, Scientific, & Technical Services	\$95,418	\$72,582
Wholesale Trade	\$89,316	\$73,818
Manufacturing	\$75,275	\$74,417
Government	\$70,482	\$63,457
Transportation & Warehousing	\$69,347	\$50,258
Total	\$65,836	\$50,198
Health Care & Social Assistance	\$62,629	\$51,237
Construction	\$60,973	\$48,088
Arts, Entertainment, & Recreation	\$46,855	\$26,657
Administrative Support Services	\$39,608	\$32,991
Real Estate & Rental & Leasing	\$39,171	\$25,631
Educational Services (Private)	\$37,239	\$35,368
Retail Trade	\$32,499	\$30,007
Accommodation & Food Services	\$26,920	\$20,413

Major Occupational Change

Over the last five years the largest absolute occupational gains came from Personal Care & Service, up 5,654 jobs or 31 percent (Figure 3 and Table 3). Other significant gains were made in Business & Financial Operations (up 2,469 jobs or 6 percent) and Building & Grounds Cleaning & Maintenance (up 1,692 jobs or 8 percent).

The greatest job losses have come from the Office & Administrative Support group, down 4,946 jobs or 5 percent. Other major remaining losses came from Production (down 3,027 or 18 percent) and Transportation & Material Moving (down 2,809 jobs or 10 percent).

Figure 3
Employment Change by Major Occupational Groups
Atlanta City ZIP Codes 2007-2012 1Q

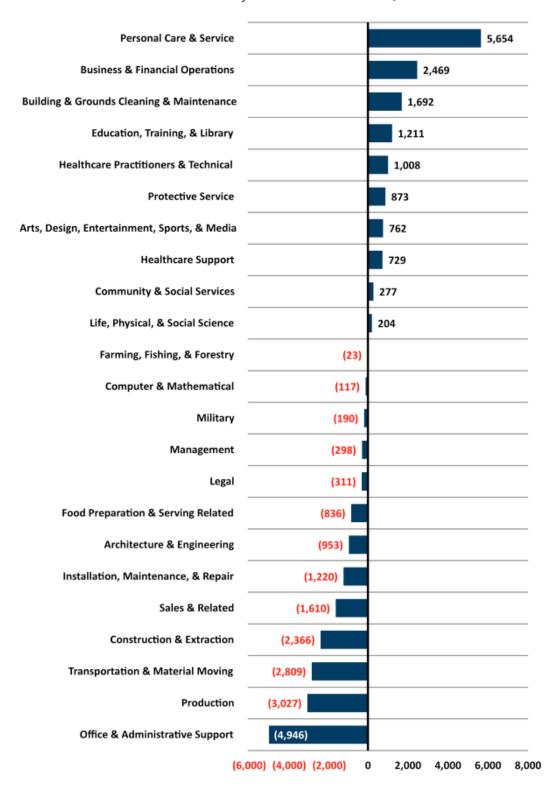


Table 3
Employment Change by Major Occupational Groups
Atlanta City ZIP Codes 2007-2012 1Q
Ranked by Absolute Change

Major Occupational Groups	2012 1Q Jobs	Employment Change	
	Jona	#	%
Personal Care & Service	23,967	5,654	31%
Business & Financial Operations	41,574	2,469	6%
Building & Grounds Cleaning & Maintenance	23,620	1,692	8%
Education, Training, & Library	30,069	1,211	4%
Healthcare Practitioners & Technical	26,827	1,008	4%
Protective Service	14,458	873	6%
Arts, Design, Entertainment, Sports, & Media	22,743	762	3%
Healthcare Support	9,801	729	8%
Community & Social Services	8,039	277	4%
Life, Physical, & Social Science	5,380	204	4%
Farming, Fishing, & Forestry	289	(23)	(7%)
Computer & Mathematical	14,914	(117)	(1%)
Military	2,098	(190)	(8%)
Management	38,826	(298)	(1%)
Legal	11,111	(311)	(3%)
Food Preparation & Serving Related	35,576	(836)	(2%)
Architecture & Engineering	6,524	(953)	(13%)
Installation, Maintenance, & Repair	14,888	(1,220)	(8%)
Sales & Related	62,002	(1,610)	(3%)
Construction & Extraction	9,469	(2,366)	(20%)
Transportation & Material Moving	24,281	(2,809)	(10%)
Production	13,770	(3,027)	(18%)
Office & Administrative Support	89,798	(4,946)	(5%)

Occupational Earnings

A comparison of Atlanta's average same-occupational average hourly earnings to national averages may offer insights into areas of unique expertise or cost saving opportunities. Similar to Atlanta's average industry earnings, same-occupation earnings exceed the national averages (except for Protective Service group where national earnings are slightly higher) (Figure 4 and Table 4).

Figure 4

Average Hourly Occupational

Earnings Comparison 2012 1Q

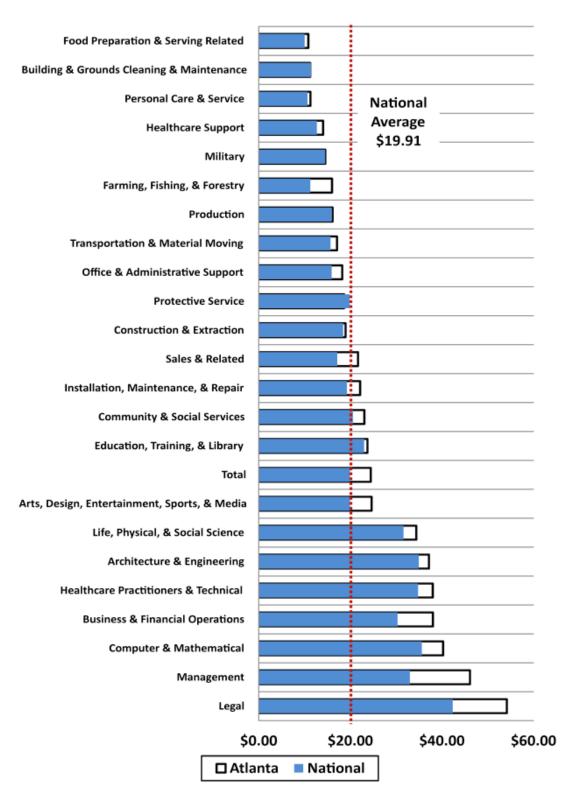


Table 4
Average Hourly Occupational
Earnings Comparison
2012 1Q

Major Occupational Groups	Atlanta ZIP Codes	US
Legal	\$54.16	\$42.35
Management	\$46.12	\$33.02
Computer & Mathematical	\$40.27	\$35.63
Business & Financial Operations	\$38.01	\$30.31
Healthcare Practitioners & Technical	\$37.99	\$34.79
Architecture & Engineering	\$37.16	\$34.95
Life, Physical, & Social Science	\$34.39	\$31.63
Arts, Design, Entertainment, Sports, & Media	\$24.65	\$19.93
Total	\$24.46	\$19.91
Education, Training, & Library	\$23.73	\$23.00
Community & Social Services	\$23.07	\$20.56
Installation, Maintenance, & Repair	\$22.13	\$19.26
Sales & Related	\$21.67	\$17.14
Construction & Extraction	\$18.97	\$18.42
Protective Service	\$18.63	\$19.84
Office & Administrative Support	\$18.25	\$15.93
Transportation & Material Moving	\$17.09	\$15.67
Production	\$16.14	\$15.91
Farming, Fishing, & Forestry	\$16.01	\$11.26
Military	\$14.53	\$14.52
Healthcare Support	\$14.05	\$12.70
Personal Care & Service	\$11.29	\$10.65
Building & Grounds Cleaning & Maintenance	\$11.24	\$11.41

The following assessment tools include a series of bubble/scatter charts and tables. Axis and quadrant labels should be read as only general guides resulting from purely quantitative analysis, not definitive conclusions. Each chart and table is meant as only one piece of a multiple part analysis. To assist the reader in interpreting the bubble charts, each axis and quadrant is labeled with broad descriptors.

Chart axis definitions:

- **Specialization:** Measured using location quotient (LQ). Reflects the level of relative concentration of a particular occupation/industry/cluster in Atlanta compared to the nation. In simple terms, high LQ's (above 1.2) indicate what a local economy is good at doing and infers there are unique skills, institutions, raw materials, etc. that support this position.
- **Industry Effect:** The portion of growth/decline attributed to a particular industry or cluster nationwide. For example, if hospital employment grew by 5 percent nationwide in 2009, we would expect to see the same percentage increase locally, assuming that the forces driving nationwide growth would have a similar local impact.
- Local Effect: The proportion of growth/decline not captured by the industry effect, indicating
 local unique performance. The local effect measures local activity outside the expected
 nationwide trend. A consistent positive local competitive effect signals superior local
 performance.

Chart quadrant label definitions:

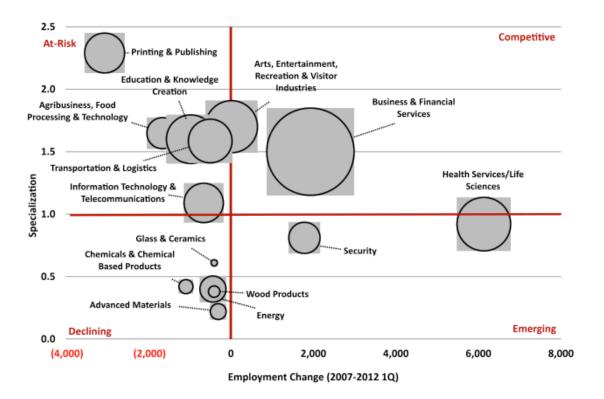
- At-Risk: Locally specialized and recent local job losses.
- **Competitive:** Locally specialized and recent local job gains.
- **Declining:** Not locally specialized and recent local job losses.
- Emerging: Not locally specialized and recent local job gains.
- Local Decline/National Growth: Industry or occupation gains nationwide and local losses or gains below nationwide trend.
- Local Growth/National Growth: Industry or occupation gains nationwide and positive local gains or losses less than nationwide trend.
- Local Growth/National Decline: Industry or occupation losses nationwide and positive local gains or losses less than nationwide trend.
- Local Decline/National Decline: Industry or occupation losses nationwide and local losses or gains below nationwide trend.

Industry Cluster Specialization & Growth

Industry clusters are geographic concentrations of interconnected businesses, suppliers, and associated institutions in a particular field. Clusters are considered to increase the productivity with which companies can compete, nationally and globally. For the analysis, we start with cluster definitions developed by the Purdue Center for Regional Development and the Indiana Business Research Center at Indiana University's Kelley School of Business through work funded by the US Commerce Department's Economic Development Administration. Garner Economics adjusts cluster components to better match the location and particular economic situation.

Observations: The Business & Financial Services cluster is the largest single cluster in Atlanta. It has experienced positive growth over the last five years, and exhibits a high relative degree of local specialization at 1.5 (Figure 5 and Table 5). Another cluster experiencing growth and local specialization is Arts, Entertainment, Recreation & Visitor Industries. The strongest growing cluster is Health Services/Life Sciences, up 6,130 jobs, and identified as an emerging cluster due to a location quotient (0.9) that does not presently indicate strong local specialization. The Printing & Publishing cluster has the highest degree of local specialization at 2.3.

Figure 5
Cluster Specialization & Growth
Atlanta City ZIP Codes 2007-2012 1Q



Size of the bubble represents total employment.

Clusters are not exclusive; industries may be in more than one cluster.

Source: Economic Modeling Specialist, Garner Economics

Table 5
Cluster Specialization & Growth
Atlanta City ZIP Codes 2007-2012 1Q

Cluster	Five-Year Job Change	LQ	2012 1Q Jobs
Competitive			
Business & Financial Services	1,929	1.5	99,767
Arts, Entertainment, Recreation & Visitor Industries	14	1.7	35,534
Emerging			
Health Services/Life Sciences	6,130	0.9	37,545
Security	1,783	0.8	12,825
At-Risk			
Printing & Publishing	(3,059)	2.3	20,859
Agribusiness, Food Processing & Technology	(1,656)	1.6	12,744
Education & Knowledge Creation	(970)	1.6	30,967
Transportation & Logistics	(500)	1.6	24,976
Information Technology & Telecommunications	(657)	1.1	20,267
Declining			
Advanced Materials	(306)	0.2	3,275
Glass & Ceramics	(403)	0.6	515
Wood Products	(404)	0.4	1,721
Energy	(433)	0.4	8,907
Chemicals & Chemical Based Products	(1,087)	0.4	2,608

Clusters are not exclusive; industries may be in more than one cluster.

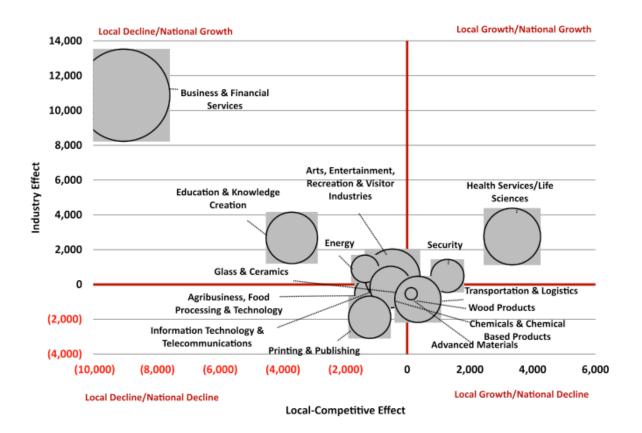
Source: Economic Modeling Specialist, Garner Economics

Industry Cluster Competitiveness

The Competitiveness screen seeks to reveal local competitive advantages (i.e. unique growth beyond what industry trends would achieve).

Observations: A strong local competitive effect is exhibited by the Health Services/Life Sciences cluster, meaning the cluster's local growth is greater than what industry-wide trends would predict. To a lesser amount, the Security, Transportation & Logistics, and Wood Products clusters each had growth indicating a local competitive advantage in Atlanta (Figure 6 and Table 6).

Figure 6
Cluster Relative Components of Growth
Atlanta City ZIP Codes 2007-2012 1Q



Size of the bubble represents total employment.

Clusters are not exclusive; industries may be in more than one cluster.

Source: Economic Modeling Specialist, Garner Economics

Table 6
Cluster Relative Components of Growth
Atlanta City ZIP Codes 2007-2012 1Q

Cluster	Local Effect	Industry Effect	2012 1Q Jobs
Local Growth/National Growth			
Health Services/Life Sciences	3,349	2,754	37,545
Security	1,281	493	12,825
Local Growth/National Decline			
Transportation & Logistics	341	(858)	24,976
Wood Products	129	(535)	1,721
Local Decline/National Growth			
Business & Financial Services	(9,031)	10,877	99,767
Education & Knowledge Creation	(3,674)	2,675	30,967
Energy	(1,341)	899	8,907
Arts, Entertainment, Recreation & Visitor Industries	(469)	452	35,534
Local Decline/National Decline			
Glass & Ceramics	(258)	(146)	515
Information Technology & Telecommunications	(523)	(152)	20,267
Advanced Materials	(48)	(261)	3,275
Chemicals & Chemical Based Products	(593)	(497)	2,608
Agribusiness, Food Processing & Technology	(1,147)	(521)	12,744
Printing & Publishing	(1,194)	(1,885)	20,859

Clusters are not exclusive; industries may be in more than one cluster.

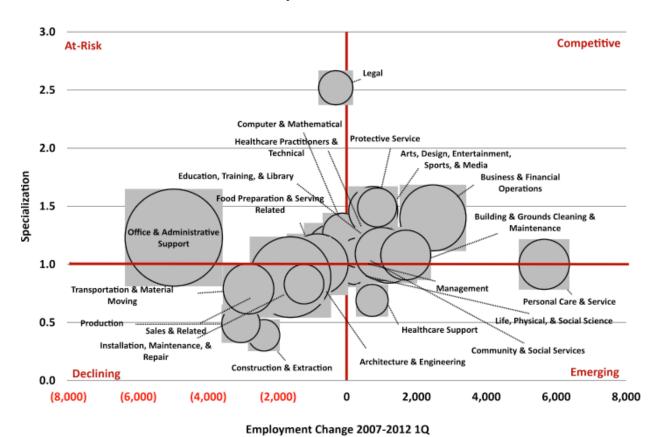
Source: Economic Modeling Specialist, Garner Economics

Occupational Specialization & Growth

Occupational groupings represent similar skills and educational qualifications. The groupings do not necessarily reflect any specific industrial sectors or clusters.

Observations: Over the last five years, seven occupational groups have experienced growth and had high relative local specialization in Atlanta (Figure 7 and Table 7). The largest occupational group, also with the largest absolute five year growth is Business & Financial Operations, up 2,469 jobs to a total of 41,574. The Protective Service occupational group has the highest relative degree of specialization at 1.49 followed closely by Arts, Design, Entertainment, Sports, & Media.

Figure 7
Occupational Specialization & Growth
Atlanta City ZIP Codes 2007-2012 1Q



Size of the bubble represents total employment.

Source: Economic Modeling Specialist, Garner Economics

Table 7
Occupational Specialization & Growth
Atlanta City ZIP Codes 2007-2012 1Q

Occupational Group	Five Year Change	LQ	2012 1Q Jobs
Competitive			
Business & Financial Operations	2,469	1.40	41,574
Building & Grounds Cleaning & Maintenance	1,692	1.08	23,620
Education, Training, & Library	1,211	1.08	30,069
Healthcare Practitioners & Technical	1,008	1.09	26,827
Protective Service	873	1.49	14,458
Arts, Design, Entertainment, Sports, & Media	762	1.46	22,743
Community & Social Services	277	1.10	8,039
Emerging			
Personal Care & Service	5,654	1.00	23,967
Healthcare Support	729	0.69	9,801
Life, Physical, & Social Science	204	0.93	5,380
At-Risk			
Computer & Mathematical	(117)	1.27	14,914
Management	(298)	1.08	38,826
Legal	(311)	2.52	11,111
Office & Administrative Support	(4,946)	1.23	89,798
Declining			
Food Preparation & Serving Related	(836)	1.00	35,576
Architecture & Engineering	(953)	0.82	6,524
Installation, Maintenance, & Repair	(1,220)	0.83	14,888
Sales & Related	(1,610)	0.89	62,002
Construction & Extraction	(2,366)	0.39	9,469
Transportation & Material Moving	(2,809)	0.79	24,281
Production	(3,027)	0.49	13,770

APPENDIX D Understanding Geographies and Data Availability

APPENDIX D: UNDERSTANDING GEOGRAPHIES & DATA AVAILABILITY

Measuring the unique characteristics and local trends of the City of Atlanta's economy requires the use of several different data sources, methodologies, and at times proxies to best capture its underlying dynamics. This is true whenever measuring a municipal geography, whose boundaries are more fluid, and reflect political rather than strict historic boundaries. As such, measuring the City of Atlanta involves some tradeoffs in precision and timeliness that would not be present with standard geographic units such as counties or metropolitan areas.

In general most demographic data, which represents residents, is collected by the US Census Bureau and available at the City level. However, the data is collected primarily from the ten-year decennial census or a smaller ongoing annual survey that offers more details, but which must be viewed across multiple years to obtain acceptable accuracy.

Economic data, representing workers and businesses, is collected primarily by the US Bureau of Labor Statistics. City-level economic data is rare, with counties being the smallest geographic unit usually reported. Most county economic data is consistently collected and reported annually. County-level data is used as the smallest geographic unit to capture the City's economic position and trend. Fortunately Fulton County holds 93 percent of the City's population within its borders and can act as a proxy for some economic information. For each benchmark economy examined there is also a proxy county which holds the majority of the respective city's population (Table 8). It should be noted however, that economic data is mostly silent to the residence of workers.

Table 8
Proxy Counties

	Proxy County	Percent City Population Within Proxy County	Percent City Population of Total Proxy County
Atlanta City	Fulton GA	93.3%	42.6%
Boston City	Suffolk MA	100%	85.5%
Dallas City	Dallas TX	93.9%	47.5%
Denver City	Denver CO	100%	100%
Seattle City	King WA	100%	31.5%

Source: US Census Bureau, Garner Economics

Certain economic data is available only at the metropolitan level. Metropolitan areas comprise distinct multi-county regional economies, based primarily on a dense urban core with adjoining areas serving as the source of the urban area's workforce by means of commuting.

Most media and business reporting use the term Atlanta broadly, most often reporting on the multi-county Atlanta metropolitan area in lieu of the actual City. This is simply because the amount of information available at the metro level is significantly greater than at the city-level. It is not surprising then that for the general public and even more sophisticated business readers, information pertaining to the Atlanta metro is often confused with the City.

Throughout this report four benchmark economies were compared to Atlanta in order to provide a broader context of understanding as to where the city is competitively positioned and how it might look to outside interests. The benchmark economies, like Atlanta, are each municipal cities and urban cores of larger metropolitan areas. However, because municipalities and metropolitan areas are not identical geographic units it is important to understand basic differences between Atlanta and the benchmark economies (See Maps 1-5).

The City of Atlanta is the smallest among benchmarks for total population and total employment, while the Atlanta metropolitan area's total population and employment is second largest, with only Dallas larger (Table 9, Figure 8 and Figure 9). Unsurprisingly then, the City of Atlanta's population and employment make up a smaller share of the total metro than do the cities in the benchmark economies.

The City of Atlanta absorbs the greatest proportion of non-city resident workers into the City compared to the benchmark economies. Totaling 290,333, non-city residents account for 81.9 percent of the City's workforce. In other terms, City residents make a smaller proportion of the City of Atlanta's total workforce than in the benchmark economies.

So compared to the benchmark economies, the City of Atlanta has the greatest deviation between its size and the greater metropolitan area; representing a smaller relative share of total population and employment, while also absorbing a greater proportion of non-city resident employment.

Table 9
Benchmark Economies & Metro Areas

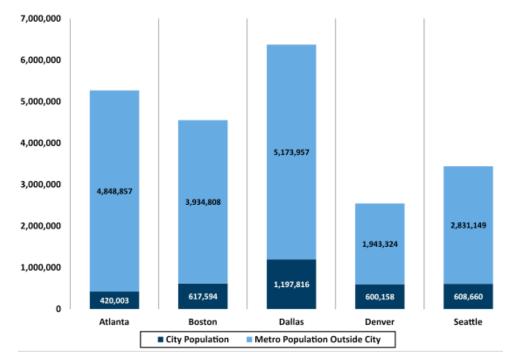
	Atlanta GA	Boston MA	Dallas TX	Denver CO	Seattle WA
Residents (2010)					
Metro Population	5,268,860	4,552,402	6,371,773	2,543,482	3,439,809
City Population	420,003	617,594	1,197,816	600,158	608,660
Percent City Population of Total Metro	8.0%	13.6%	18.8%	23.6%	17.7%
Workforce (2010) ²					
Metro Employment	2,080,064	na³	2,684,800	1,139,281	1,479,752
City Employment	354,651	na	737,319	404,333	450,433
Percent City Employment of Total Metro	17.1%	na	27.5%	35.5%	30.4%
City Residents Employed in City	64,318	na	200,378	117,900	167,601
Percent Total Employment City Residents	18.1%	na	27.2%	29.2%	37.2%
Non-City Residents Employed in City	290,333	na	536,941	286,433	282,832
Percent Total Employment Non-City Residents	81.9%	na	72.8%	70.8%	62.8%

Source: US Census Bureau, Garner Economics

² Primary jobs, one job per worker, representing the single highest paying job per worker.

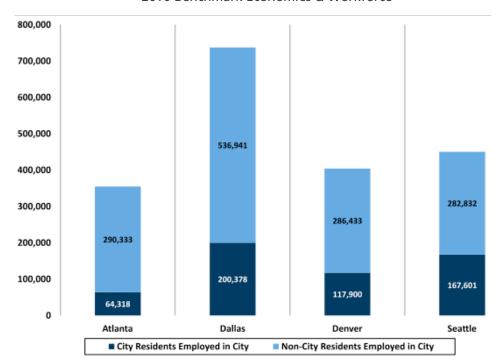
 $[\]ensuremath{^{3}}$ Data for the state of Massachusetts is not yet available for this dataset.

Figure 8
2010 Benchmark Economies & Population



Source: US Census Bureau, Garner Economics

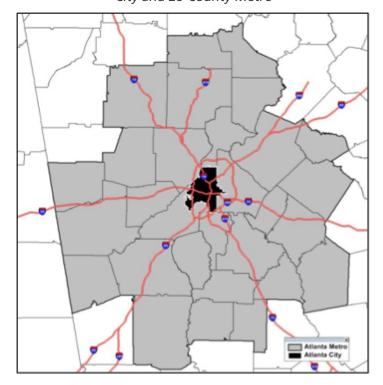
Figure 9
2010 Benchmark Economies & Workforce*



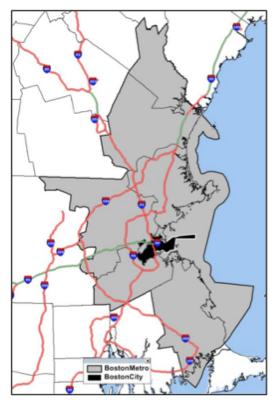
*Data for Boston unavailable.

Source: US Census Bureau, Garner Economics

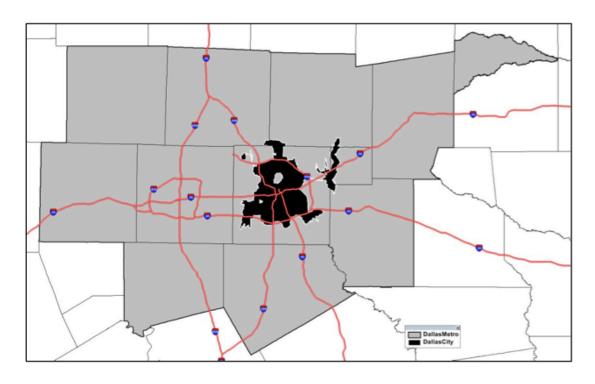
Map 1 Atlanta City and 28-County Metro



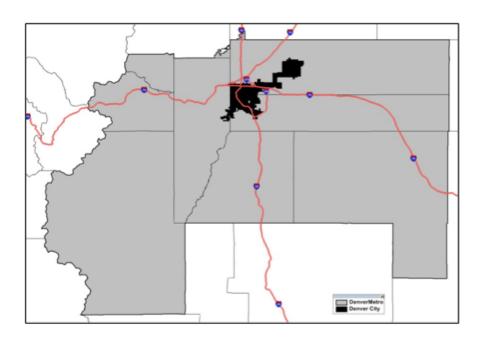
Map 2 Boston City and 7-County Metro



Map 3 Dallas City and 12-County Metro



Map 4 Denver City and 10-County Metro

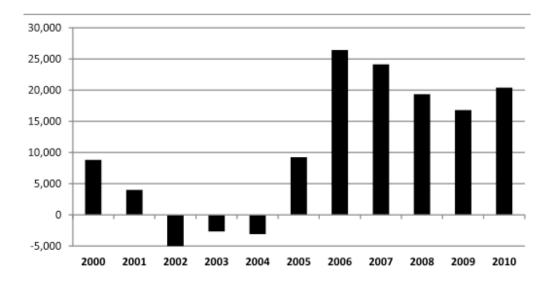


Map 5 SEATTLE City and 3-County Metro



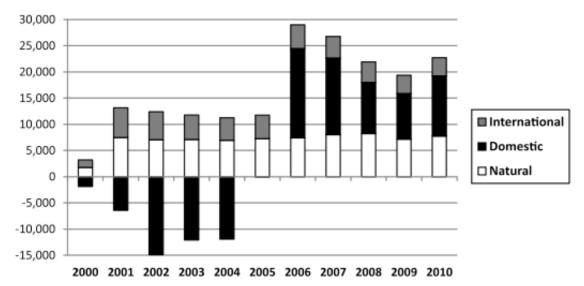
1. Fulton County Annual Population Change

Figure 10
2010 Benchmark Economies & Population



Source: US Census Bureau, Garner Economics

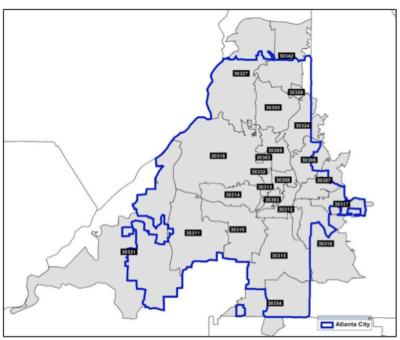
Figure 11
2010 Benchmark Economies & Population



Source: US Census Bureau, Garner Economics

2. Atlanta ZIP Code Overlay

Map 6 ZIP Code Overlay



3. Atlanta ZIP Codes Industry Sector Details – 2012 1Q

Highly specialized industries (LQ greater than 1.20), and high relative earnings (above \$50,198, the National average earnings per worker) are highlighted in green.

Industry	2012 1Q Jobs	5Y Change	LQ	Avg. Annual Earnings
Timber Tract Operations	14	(14)	0.70	\$177,676
Fishing	14	(3)	0.06	\$7,151
Support Activities for Crop Production	27	13	0.02	\$73,053
Oil and Gas Extraction	110	79	0.05	\$41,694
Support Activities for Mining	25	(14)	0.02	\$9,935
Electric Power Generation, Transmission and Distribution	1,626	(793)	1.32	\$180,430
Natural Gas Distribution	1,121	125	3.25	\$153,461
Water, Sewage and Other Systems	55	(47)	0.30	\$86,297
Residential Building Construction	1,111	(634)	0.32	\$60,063
Nonresidential Building Construction	1,930	(1,005)	0.84	\$91,435
Utility System Construction	180	(200)	0.13	\$61,387
Land Subdivision	411	(282)	1.53	\$80,973
Highway, Street, and Bridge Construction	555	(442)	0.59	\$81,521
Other Heavy and Civil Engineering Construction	48	(75)	0.10	\$54,180
Foundation, Structure, and Building Exterior Contractors	483	(181)	0.15	\$34,569
Building Equipment Contractors	2,583	(280)	0.41	\$58,303
Building Finishing Contractors	1,787	(328)	0.38	\$35,206
Other Specialty Trade Contractors	446	(110)	0.11	\$35,277
Grain and Oilseed Milling	49	24	0.28	\$54,281
Sugar and Confectionery Product Manufacturing	30	17	0.13	\$29,553
Fruit and Vegetable Preserving and Specialty Food Manufacturing	109	(7)	0.21	\$78,606
Dairy Product Manufacturing	25	(282)	0.06	\$48,028
Animal Slaughtering and Processing	10	(4)	0.01	\$29,205
Bakeries and Tortilla Manufacturing	1,368	(114)	1.53	\$53,272
Other Food Manufacturing	4,363	(481)	8.10	\$323,948
Beverage Manufacturing	6,231	(12)	5.90	\$99,031
Fiber, Yarn, and Thread Mills	14	(19)	0.16	\$106,341
Fabric Mills	49	(3)	0.28	\$172,356
Textile Furnishings Mills	81	(54)	0.49	\$24,374
Cut and Sew Apparel Manufacturing	142	(101)	0.31	\$31,839
Apparel Accessories and Other Apparel Manufacturing	45	19	0.77	\$32,962
Veneer, Plywood, and Engineered Wood Product Manufacturing	103	(120)	0.55	\$92,867
Other Wood Product Manufacturing	471	53	0.72	\$46,253
Pulp, Paper, and Paperboard Mills	28	1	0.09	\$188,969
Converted Paper Product Manufacturing	282	(285)	0.33	\$151,566
Printing and Related Support Activities	1,139	(908)	0.72	\$61,047
Petroleum and Coal Products Manufacturing	42	26	0.12	\$118,653
Basic Chemical Manufacturing	72	11	0.17	\$93,450
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments	75	(68)	0.27	\$107,865

Industry	2012 1Q Jobs	5Y Change	LQ	Avg. Annual Earnings
Manufacturing				
Pharmaceutical and Medicine Manufacturing	252	199	0.30	\$139,794
Paint, Coating, and Adhesive Manufacturing	114	(13)	0.63	\$63,543
Soap, Cleaning Compound, and Tollet Preparation Manufacturing	727	(180)	2.22	\$84,729
Other Chemical Product and Preparation Manufacturing	67	(47)	0.24	\$82,089
Plastics Product Manufacturing	155	(102)	0.10	\$71,673
Rubber Product Manufacturing	31	(32)	0.08	\$62,537
Clay Product and Refractory Manufacturing	151	(6)	1.07	\$53,716
Glass and Glass Product Manufacturing	129	(225)	0.50	\$79,618
Cement and Concrete Product Manufacturing	195	(358)	0.39	\$77,097
Lime and Gypsum Product Manufacturing	12	(122)	0.29	\$65,986
Other Nonmetallic Mineral Product Manufacturing	271	(35)	1.24	\$69,686
Foundries	18	3	0.05	\$34,135
Forging and Stamping	102	15	0.34	\$98,020
Architectural and Structural Metals Manufacturing	152	(102)	0.15	\$55,734
Hardware Manufacturing	94	(27)	1.25	\$62,585
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	35	11	0.03	\$57,721
Coating, Engraving, Heat Treating, and Allied Activities	159	29	0.39	\$53,886
Other Fabricated Metal Product Manufacturing	30	1	0.04	\$54,579
Industrial Machinery Manufacturing	24	(106)	0.07	\$85,691
Commercial and Service Industry Machinery Manufacturing	13	(8)	0.05	\$100,909
Other General Purpose Machinery Manufacturing	26	(7)	0.03	\$80,119
Semiconductor and Other Electronic Component Manufacturing	26	7	0.02	\$57,083
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	106	(38)	0.09	\$46,828
Manufacturing and Reproducing Magnetic and Optical Media	95	41	1.24	\$103,434
Electrical Equipment Manufacturing	139	(217)	0.32	\$156,120
Other Electrical Equipment and Component Manufacturing	52	(17)	0.14	\$166,111
Motor Vehicle Manufacturing	32	(285)	0.06	\$86,834
Motor Vehicle Parts Manufacturing	177	(146)	0.13	\$54,906
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	71	(47)	0.10	\$44,933
Office Furniture (including Fixtures) Manufacturing	177	16	0.57	\$64,065
Medical Equipment and Supplies Manufacturing	1,150	(91)	1.19	\$104,977
Other Miscellaneous Manufacturing	382	(226)	0.34	\$62,273
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	867	(122)	0.86	\$54,994
Furniture and Home Furnishing Merchant Wholesalers	884	110	2.81	\$108,387
Lumber and Other Construction Materials Merchant Wholesalers	397	0	0.67	\$105,000
Professional and Commercial Equipment and Supplies Merchant Wholesalers	766	(239)	0.41	\$131,000
Metal and Mineral (except Petroleum) Merchant Wholesalers	260	(29)	0.72	\$74,850
Electrical and Electronic Goods Merchant Wholesalers	375	(84)	0.39	\$121,113
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	221	(20)	0.33	\$86,672
Machinery, Equipment, and Supplies Merchant Wholesalers	415	(175)	0.21	\$79,865
Miscellaneous Durable Goods Merchant Wholesalers	1,169	278	0.88	\$62,831

Industry	2012 1Q Jobs	5Y Change	LQ	Avg. Annual Earnings
Paper and Paper Product Merchant Wholesalers	847	(101)	2.21	\$114,605
Drugs and Druggists' Sundries Merchant Wholesalers	71	(62)	0.13	\$133,978
Apparel, Piece Goods, and Notions Merchant Wholesalers	504	(102)	0.97	\$75,024
Grocery and Related Product Merchant Wholesalers	1,462	184	0.65	\$66,722
Chemical and Allied Products Merchant Wholesalers	292	(81)	0.75	\$86,554
Petroleum and Petroleum Products Merchant Wholesalers	52	(39)	0.18	\$72,678
Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	787	(14)	1.54	\$85,934
Miscellaneous Nondurable Goods Merchant Wholesalers	557	(36)	0.44	\$63,008
Wholesale Electronic Markets and Agents and Brokers	1,890	(55)	0.68	\$108,764
Automobile Dealers	511	(48)	0.14	\$58,890
Other Motor Vehicle Dealers	107	49	0.21	\$39,046
Automotive Parts, Accessories, and Tire Stores	640	45	0.39	\$41,475
Furniture Stores	907	146	1.29	\$44,470
Home Furnishings Stores	1,274	(468)	1.62	\$29,785
Electronics and Appliance Stores	885	(304)	0.57	\$60,764
Building Material and Supplies Dealers	1,243	(348)	0.39	\$46,207
Lawn and Garden Equipment and Supplies Stores	111	(88)	0.25	\$22,397
Grocery Stores	5,693	144	0.75	\$30,122
Specialty Food Stores	419	118	0.47	\$35,139
Beer, Wine, and Liquor Stores	406	(115)	0.85	\$29,786
Health and Personal Care Stores	2,156	150	0.63	\$40,086
Gasoline Stations	991	(33)	0.38	\$26,046
Clothing Stores	4,922	(544)	1.41	\$24,203
Shoe Stores	852	(218)	1.53	\$25,618
Jewelry, Luggage, and Leather Goods Stores	637	(252)	1.10	\$45,961
Sporting Goods, Hobby, and Musical Instrument Stores	769	160	0.43	\$29,145
Book, Periodical, and Music Stores	480	(459)	1.09	\$26,735
Department Stores	3,550	202	0.78	\$29,651
Other General Merchandise Stores	1,087	230	0.23	\$26,085
Florists	304	(23)	0.76	\$22,544
Office Supplies, Stationery, and Gift Stores	1,283	(548)	0.96	\$33,377
Used Merchandise Stores	701	(83)	0.80	\$24,991
Other Miscellaneous Store Retailers	1,427	(56)	0.72	\$30,252
Electronic Shopping and Mail-Order Houses	812	297	0.68	\$60,258
Vending Machine Operators	102	(51)	0.47	\$26,774
Direct Selling Establishments	1,421	198	0.43	\$21,419
Scheduled Air Transportation	3,98	647	1.83	\$103,961
Nonscheduled Air Transportation	31	11	0.19	\$81,425
Rail Transportation	315	25	0.47	\$82,275
Deep Sea, Coastal, and Great Lakes Water Transportation	14	0	0.11	\$75,624
General Freight Trucking	2,523	(372)	0.56	\$49,164
Specialized Freight Trucking	630	(321)	0.45	\$45,945
Urban Transit Systems	33	0	0.26	\$70,351

Industry	2012 1Q Jobs	5Y Change	LQ	Avg. Annual Earnings
Interurban and Rural Bus Transportation	79	(220)	1.37	\$31,685
Taxi and Limousine Service	699	(49)	0.90	\$32,766
School and Employee Bus Transportation	103	50	0.19	\$32,973
Charter Bus Industry	117	(135)	1.18	\$43,944
Other Transit and Ground Passenger Transportation	163	43	0.47	\$25,928
Scenic and Sightseeing Transportation, Land	39	5	0.70	\$33,650
Support Activities for Air Transportation	8,460	448	4.32	\$82,955
Support Activities for Road Transportation	101	(47)	0.29	\$42,029
Freight Transportation Arrangement	788	(14)	1.76	\$66,430
Couriers and Express Delivery Services	2,435	(227)	1.34	\$98,706
Local Messengers and Local Delivery	199	1	0.48	\$20,668
Warehousing and Storage	1,572	(23)	0.70	\$51,620
Newspaper, Periodical, Book, and Directory Publishers	3,905	(4,382)	2.29	\$87,066
Software Publishers	1,390	315	1.52	\$151,870
Motion Picture and Video Industries	1,166	(36)	0.94	\$61,112
Sound Recording Industries	309	(24)	2.77	\$44,774
Radio and Television Broadcasting	4,157	(95)	5.48	\$124,996
Cable and Other Subscription Programming	3,184	17	13.4	\$118,889
Wired Telecommunications Carriers	5,531	570	2.79	\$112,332
Wireless Telecommunications Carriers (except Satellite)	1,347	(78)	2.71	\$112,641
Other Telecommunications	1,418	(441)	3.45	\$103,117
Data Processing, Hosting, and Related Services	1,142	(1,482)	1.19	\$89,706
Other Information Services	1,439	653	2.12	\$77,527
Monetary Authorities-Central Bank	752	(534)	13.4	\$101,600
Depository Credit Intermediation	8,549	332	1.61	\$106,098
Nondepository Credit Intermediation	1,707	(937)	0.81	\$120,531
Activities Related to Credit Intermediation	970	(424)	0.75	\$98,025
Securities and Commodity Contracts Intermediation and Brokerage	4,265	105	1.79	\$219,234
Securities and Commodity Exchanges	119	48	1.41	\$85,306
Other Financial Investment Activities	9,614	3,824	1.11	\$82,052
Insurance Carriers	3,817	396	1.05	\$105,150
Agencies, Brokerages, and Other Insurance Related Activities	4,344	(295)	0.86	\$100,421
Insurance and Employee Benefit Funds	1,751	357	1.77	\$49,792
Other Investment Pools and Funds	520	9	0.64	\$36,849
Lessors of Real Estate	9,252	(1,232)	1.20	\$50,793
Offices of Real Estate Agents and Brokers	8,952	(810)	1.29	\$26,217
Activities Related to Real Estate	12,309	(967)	1.73	\$34,651
Automotive Equipment Rental and Leasing	1,612	(469)	2.48	\$63,126
Consumer Goods Rental	382	(13)	0.60	\$74,593
General Rental Centers	62	(448)	0.42	\$56,159
Commercial and Industrial Machinery and Equipment Rental and Leasing	590	114	0.96	\$55,666
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	14	(15)	0.17	\$118,316
Legal Services	14,082	(545)	3.17	\$112,633

Accounting, Tax Preparation, Boekkeeping, and Payroll Services 7,692 900 178 \$100,000 Architectural, Engineering, and Related Services 4,349 (915) 0.90 XF, 528,378 Computer Systems Design and Related Services 6,108 152 1.01 \$105,861 Management, Scientific, and Technical Consulting Services 7,07 (70) 0.34 \$15,258 Advertising, Public Relations, and Related Services 7,204 1,346 3.62 \$83,641 Other Professional, Scientific, and Technical Services 7,204 1,346 3.62 \$83,641 Other Professional, Scientific, and Technical Services 7,204 1,346 3.62 \$83,641 Other Professional, Scientific, and Technical Services 4,237 601 0.75 \$44,262 Other Professional, Scientific, and Technical Services 4,237 601 0.75 \$44,262 Other Professional, Scientific, and Technical Services 2,669 (118) 1.19 \$65,222 Office Administrative Services 4,71 43 0.07 \$48,278 Facilities Support Services	Industry	2012 1Q Jobs	5Y Change	LQ	Avg. Annual Earnings
Specialized Design Services	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	7,692	900	1.78	\$100,030
Computer Systems Design and Related Services 6,108 152 1.01 \$105,861 Management, Scientific, and Technical Consulting Services 11,823 1,044 191 \$110,082 Scientific Research and Development Services 707 (70) 0.34 \$79,259 Advertising, Public Relations, and Related Services 7,204 1,346 3.62 \$83,641 Office Administrative Services 4,237 601 0.75 \$41,426 Management of Companies and Enterprises 7,413 1,793 1.16 \$521,897 Facilities Support Services 2,669 (118) 1.19 \$66,522 Facilities Support Services 10,341 (828) 1.0 \$44,691 Suliness Support Services 10,341 (828) 1.0 \$44,691 Suliness Support Services 838 (394) 1.0 \$44,691 Suliness Support Services 8,274 9 0.74 \$48,091 Suliness Support Services 8,384 9 0.74 \$48,179 Travel Arrangement and Reservation Services <t< td=""><td>Architectural, Engineering, and Related Services</td><td>4,349</td><td>(915)</td><td>0.90</td><td>\$86,079</td></t<>	Architectural, Engineering, and Related Services	4,349	(915)	0.90	\$86,079
Management, Scientific, and Technical Consulting Services 11,823 1,014 191 \$110,082 Scientific Research and Development Services 707 709 0.34 \$79,359 Advertising, Public Relations, and Related Services 7,204 1,346 \$62 \$83,641 Other Professional, Scientific, and Technical Services 4,237 601 0.75 \$43,426 Management of Companies and Enterprises 7,413 1,793 1.16 \$124,887 Office Administrative Services 2,669 (118) 1.19 \$43,695 Employment Services 471 43 0.97 \$48,058 Employment Services 10,341 (828) 1.10 \$44,691 Business Support Services 2,534 9 0.74 \$48,279 Tavel Arrangement and Reservation Services 838 (384) 1.10 \$63,209 Investigation and Security Services 5,071 1,676 1.75 \$28,876 Services to Buildings and Dwellings 9,387 973 0.84 \$22,912 Other Support Services	Specialized Design Services	3,111	(207)	2.47	\$48,328
Scientific Research and Development Services 707 707 304 579,259 Advertising, Public Relations, and Related Services 7,204 1,346 3.62 583,641 Other Professional, Scientific, and Technical Services 7,204 1,346 3.62 583,641 Management of Companies and Enterprise 7,413 1,793 1.16 5124,987 Office Administrative Services 2,669 (118) 1.19 569,522 Facilities Support Services 471 43 0,97 548,058 Employment Services 10,341 (828) 1.10 546,691 Employment Services 10,341 (828) 1.10 546,691 Employment Services 10,341 (828) 1.10 546,691 Employment Services 2,534 9 0,74 548,279 Travel Arrangement and Reservation Services 838 (394) 1.10 563,300 Investigation and Security Services 5,071 1,676 1,75 529,376 Services to Buildings and Dwellings 9,387 973 0,84 522,912 Other Support Services 1,578 (455) 1,27 551,447 Waste Collection 58 18 0,12 561,323 Waste Treatment and Disposal 58 18 0,12 561,323 Remediation and Other Waste Management Services 97 (66) 0,23 593,587 Elementary and Secondary Schools (Private) 5,164 1,057 1,70 542,710 Juniar Colleges (Private) 7,533 2,006 1,40 537,906 Business Schools and Computer and Management Training (Private) 452 43 0,84 551,225 Technical and Trade Schools (Private) 350 110 0,54 523,133 Offices of Physicians 10,163 285 1,27 5107,314 Offices of Dentists 1,694 38 0,65 563,005 Home Health Care Services 1,694 38 0,68 569,001 Home Health Care Services 1,694 38 0,69 533,600 Home Health Care Services 1,694 38	Computer Systems Design and Related Services	6,108	152	1.01	\$105,861
Advertising, Public Relations, and Related Services 7,204 1,346 3.62 \$83,641 Other Professional, Scientific, and Technical Services 4,237 601 0.75 \$41,262 Management of Companies and Enterprises 7,413 1,793 1,16 \$124,987 Office Administrative Services 2,669 (118) 1,19 \$69,522 Facilities Support Services 471 43 0,97 \$48,058 Employment Services 10,341 (828) 1,10 \$46,591 Business Support Services 838 (394) 1,10 \$63,900 Investigation and Security Services 838 (394) 1,10 \$63,900 Investigation and Security Services 5,071 1,676 1,75 \$32,876 Services to Buildings and Dwellings 9,387 973 0,8 \$22,912 Other Support Services 1,578 (455) 1,27 \$51,44 Waste Collection 58 18 0,12 \$66,323 Waste Collection 58 18 0,12 <t< td=""><td>Management, Scientific, and Technical Consulting Services</td><td>11,823</td><td>1,014</td><td>1.91</td><td>\$110,082</td></t<>	Management, Scientific, and Technical Consulting Services	11,823	1,014	1.91	\$110,082
Other Professional, Scientific, and Technical Services 4,237 601 0.75 \$41,426 Management of Companies and Interprises 7,413 1,793 1,16 \$124,887 Office Administrative Services 2,669 (118) 1,19 \$69,522 Employment Services 471 43 0.97 \$48,058 Employment Services 10,341 (828) 1,10 \$44,691 Business Support Services 2,534 9 0,74 \$48,279 Investigation and Security Services 5,071 1,676 1,75 \$29,876 Services to Buildings and Dwellings 9,387 973 0.84 \$22,912 Other Support Services 1,578 (455) 1,27 \$51,447 Waste Circuttered and Disposal 73 0 0.25 \$69,434 Remediation and Other Waste Management Services 97 (66) 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1,70 \$42,70 Junior Colleges (Private) 49 (11) 0.9<	Scientific Research and Development Services	707	(70)	0.34	\$79,259
Management of Companies and Enterprises 7,413 1,793 1.16 \$122,987 Office Administrative Services 2,669 (118) 1.19 \$69,522 Facilities Support Services 471 43 0.97 \$48,058 Employment Services 10,341 (828) 1.10 \$44,691 Business Support Services 2,534 9 0.74 \$48,279 Travel Arrangement and Reservation Services 838 (384) 1.10 \$62,500 Investigation and Security Services 5,071 1,676 1.75 \$29,876 Services to Buildings and Dwellings 9,337 973 0.84 \$2,912 Other Support Services 1,578 (455) 1.27 \$51,447 Waste Collection 58 18 0.12 \$61,323 Waste Treatment and Disposal 73 0 0.25 \$69,434 Remediation and Other Waste Management Services 97 (66) 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1,07 <t< td=""><td>Advertising, Public Relations, and Related Services</td><td>7,204</td><td>1,346</td><td>3.62</td><td>\$83,641</td></t<>	Advertising, Public Relations, and Related Services	7,204	1,346	3.62	\$83,641
Office Administrative Services 2,669 (118) 1.19 \$69,522 Facilities Support Services 471 43 0.97 \$48,088 Employment Services 10,341 (828) 1.10 \$44,691 Business Support Services 2,534 9 0.74 \$48,279 Travel Arrangement and Reservation Services 838 (394) 1.10 \$63,900 Investigation and Security Services 5,071 1,676 1.75 \$229,876 Services to Buildings and Dwellings 9,387 973 64 \$22,912 Other Support Services 1,578 (455) 127 \$51,442 Waste Collection 58 18 0.12 \$61,323 Waste Treatment and Disposal 73 0 0.25 \$69,434 Remediation and Other Waste Management Services 97 (66) 0.23 \$33,535 Elementary and Secondary Schools (Private) 5,164 1,057 1,07 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$32,333 <	Other Professional, Scientific, and Technical Services	4,237	601	0.75	\$41,426
Facilities Support Services	Management of Companies and Enterprises	7,413	1,793	1.16	\$124,987
Employment Services 10,341 (828) 1.10 \$44,691 Business Support Services 2,534 9 0.74 \$48,279 Travel Arrangement and Reservation Services 838 (394) 1.10 \$63,900 Investigation and Security Services 5,071 1,676 1.75 \$29,876 Services to Buildings and Dwellings 9,387 973 0.84 \$22,912 Other Support Services 1,578 (455) 1.27 \$51,47 Waste Collection 58 18 0.12 \$61,323 Waste Treatment and Disposal 73 0 0.25 \$69,434 Remediation and Other Waste Management Services 97 (66) 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1,70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452	Office Administrative Services	2,669	(118)	1.19	\$69,522
Business Support Services 2,534 9 0.74 \$48,279 Travel Arrangement and Reservation Services 838 (394) 1.10 \$63,900 Investigation and Security Services 5,071 1,676 1.75 \$19,876 Services to Buildings and Dwellings 9,387 973 0.84 \$22,912 Other Support Services 1,578 (455) 1.27 \$51,447 Waste Collection 58 18 0.12 \$61,323 Waste Treatment and Disposal 73 0 0.25 \$69,834 Remediation and Other Waste Management Services 97 (66) 0.23 \$93,877 Elementary and Secondary Schools (Private) 5,164 1,057 1,70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Home Health Care Services 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 170 86 0.53 \$86,217 Specialty (except Psychiatric and Substance Abuse Hospitals (Private) 1,181 102 1.84 \$63,826 Community Care Facilities 79 (34) 0.15 \$37,994 Individual and Family Services 3,44,881 0.73 \$41,804	Facilities Support Services	471	43	0.97	\$48,058
Travel Arrangement and Reservation Services 838 (394) 1.10 \$63,900 Investigation and Security Services 5,071 1,676 1.75 \$29,876 Services to Buildings and Dwellings 9,387 973 0.84 \$22,912 Other Support Services 1,578 (455) 1.27 \$51,427 Waste Collection 58 18 10.1 \$51,423 Waste Collection 73 0 0.25 \$69,434 Remediation and Other Waste Management Services 97 (66) 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1,70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,066 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Computer and Management Training (Private	Employment Services	10,341	(828)	1.10	\$44,691
Investigation and Security Services	Business Support Services	2,534	9	0.74	\$48,279
Services to Buildings and Dwellings 9,387 973 0.84 \$22,912 Other Support Services 1,578 (455) 1.27 \$51,447 Waste Collection 58 18 0.12 \$61,323 Waste Treatment and Disposal 73 0 0.25 \$69,434 Remediation and Other Waste Management Services 97 (66 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1.70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offlices of Dentists 10,163	Travel Arrangement and Reservation Services	838	(394)	1.10	\$63,900
Other Support Services 1,578 (455) 1.27 \$51,447 Waste Collection 58 18 0.12 \$61,323 Waste Treatment and Disposal 73 0 0.25 \$69,434 Remediation and Other Waste Management Services 97 (66) 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1.70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Other Health Practitioners 3,132 </td <td>Investigation and Security Services</td> <td>5,071</td> <td>1,676</td> <td>1.75</td> <td>\$29,876</td>	Investigation and Security Services	5,071	1,676	1.75	\$29,876
Waste Collection 58 18 0.12 561,323 Waste Treatment and Disposal 73 0 0.25 569,434 Remediation and Other Waste Management Services 97 (66) 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1.70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 884 58 1.49 \$44,075 Other Schools and instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132	Services to Buildings and Dwellings	9.387	973	0.84	
Waste Treatment and Disposal 73 0 0.25 569,434 Remediation and Other Waste Management Services 97 (66) 0.23 593,887 Elementary and Secondary Schools (Private) 5,164 1,057 1.70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers <		1.578	(455)	1.27	\$51,447
Waste Treatment and Disposal 73 0 0.25 \$69,434 Remediation and Other Waste Management Services 97 (66) 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1.70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers <	Waste Collection				
Remediation and Other Waste Management Services 97 (66) 0.23 \$93,587 Elementary and Secondary Schools (Private) 5,164 1,057 1.70 \$42,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$22,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,	Waste Treatment and Disposal	73	0	0.25	
Elementary and Secondary Schools (Private) 5,164 1,057 1,70 542,710 Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1,40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1,49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1,27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,429 Psychiatric and Substance Abuse Hospitals (Private) 1,70 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse Hospitals (Private) 1,181 102 1,84 \$65,618 Nursing Care Facilities 7,9 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804 Other Residential Care Facilities 7,9 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804 Indi			-		
Junior Colleges (Private) 49 (11) 0.19 \$30,233 Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1,40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1,49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1,01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>					
Colleges, Universities, and Professional Schools (Private) 7,533 2,006 1.40 \$37,906 Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private)					
Business Schools and Computer and Management Training (Private) 452 43 0.84 \$51,225 Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychiatric and Substance Abuse Hospitals (Private)			4		
Technical and Trade Schools (Private) 894 58 1.49 \$44,075 Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychiatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private)		.,	-,		
Other Schools and Instruction (Private) 2,612 1,034 1.01 \$21,762 Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychiatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Ment		894	58	1.49	
Educational Support Services (Private) 350 110 0.54 \$23,153 Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychilatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychilatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance A		2.612	1.034	1.01	\$21,762
Offices of Physicians 10,163 285 1.27 \$107,314 Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychiatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities					
Offices of Dentists 1,694 38 0.63 \$66,001 Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (504) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychilatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychilatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Res					
Offices of Other Health Practitioners 3,132 349 0.81 \$49,805 Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychilatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychilatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Residential Care Facilities 79 (34) 0.15 \$37,094					
Outpatient Care Centers 1,284 118 0.64 \$71,823 Medical and Diagnostic Laboratories 514 153 0.66 \$61,605 Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychiatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Residential Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804		3.132			
Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychlatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804			118		
Home Health Care Services 2,228 804 0.47 \$33,610 Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychlatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804	Medical and Diagnostic Laboratories	514	153	0.66	\$61,605
Other Ambulatory Health Care Services 105 (604) 0.11 \$56,149 General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychiatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Residential Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804		2 228	804	0.47	
General Medical and Surgical Hospitals (Private) 24,221 5,043 1.84 \$63,826 Psychiatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Residential Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804					
Psychiatric and Substance Abuse Hospitals (Private) 170 86 0.53 \$86,517 Specialty (except Psychiatric and Substance Abuse) Hospitals (Private) 1,181 102 1.84 \$65,618 Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Residential Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804			• •		
Specialty (except Psychiatric and Substance Abuse) Hospitals (Private)1,1811021.84\$65,618Nursing Care Facilities2,1891110.44\$37,471Residential Mental Retardation, Mental Health and Substance Abuse Facilities575820.31\$34,448Community Care Facilities for the Elderly430590.18\$29,688Other Residential Care Facilities79(34)0.15\$37,094Individual and Family Services3,4548110.73\$41,804					
Nursing Care Facilities 2,189 111 0.44 \$37,471 Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Residential Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804	.,				
Residential Mental Retardation, Mental Health and Substance Abuse Facilities 575 82 0.31 \$34,448 Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Residential Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804		-,			
Community Care Facilities for the Elderly 430 59 0.18 \$29,688 Other Residential Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804					
Other Residential Care Facilities 79 (34) 0.15 \$37,094 Individual and Family Services 3,454 811 0.73 \$41,804					
Individual and Family Services 3,454 811 0.73 \$41,804					
	Community Food and Housing, and Emergency and Other Relief Services	1,132	38	2.33	\$68,015

Industry	2012 1Q Jobs	5Y Change	LQ	Avg. Annual Earnings
Vocational Rehabilitation Services	1,142	179	1.02	\$36,482
Child Day Care Services	5,285	1,027	1.00	\$21,180
Performing Arts Companies	1,427	165	2.26	\$25,997
Spectator Sports	1,464	214	1.31	\$123,146
Promoters of Performing Arts, Sports, and Similar Events	2,759	325	5.49	\$95,606
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	712	200	3.29	\$38,263
Independent Artists, Writers, and Performers	5,342	373	1.59	\$27,415
Museums, Historical Sites, and Similar Institutions	1,260	194	3.05	\$41,083
Amusement Parks and Arcades	90	2	0.17	\$23,024
Gambling Industries	63	39	0.13	\$87,351
Other Amusement and Recreation Industries	3,888	(8)	0.90	\$21,247
Traveler Accommodation	8,711	(997)	1.61	\$35,622
RV (Recreational Vehicle) Parks and Recreational Camps	95	38	0.38	\$41,594
Rooming and Boarding Houses	131	20	0.88	\$22,819
Full-Service Restaurants	18,114	(1,074)	1.28	\$22,658
Limited-Service Eating Places	8,277	380	0.64	\$31,975
Special Food Services	5,166	18	1.88	\$20,561
Drinking Places (Alcoholic Beverages)	1,620	170	1.28	\$21,709
Automotive Repair and Maintenance	1,562	(4)	0.44	\$33,443
Electronic and Precision Equipment Repair and Maintenance	115	(193)	0.26	\$35,914
Commercial and Industrial Machinery and Equipment	99	13	0.13	\$56,465
Personal and Household Goods Repair and Maintenance	444	(22)	0.34	\$26,368
Personal Care Services	6,819	2,327	1.28	\$20,186
Death Care Services	240	2	0.56	\$46,297
Drycleaning and Laundry Services	978	(171)	1.01	\$29,903
Other Personal Services	6,292	1,256	1.48	\$26,788
Religious Organizations	4,661	(8)	0.83	\$21,806
Grantmaking and Giving Services	1,364	646	3.14	\$79,991
Social Advocacy Organizations	799	(136)	1.26	\$51,457
Civic and Social Organizations	1,203	(578)	0.98	\$32,623
Business, Professional, Labor, Political, and Similar Organizations	1,671	70	1.15	\$68,492
Private Households	8,907	2,875	1.63	\$5,507
Federal Government, Civillan	11,823	(325)	1.36	\$121,921
Federal Government, Military	2,098	(190)	0.33	\$58,990
Education and Hospitals (State Government)	13,986	(486)	1.65	\$71,152
State Government, Excluding Education and Hospitals	15,053	(1,675)	2.23	\$60,087
Education and Hospitals (Local Government)	19,989	(5,703)	0.80	\$58,063
Local Government, Excluding Education and Hospitals	19,873	(1,491)	1.22	\$60,987

4. Atlanta ZIP Codes Occupational Details – 2012 1Q

Highly specialized occupations (LQ greater than 1.20), and high relative earnings (above \$19.91, the National average hourly wage) are highlighted in green.

Occupation	2012 1Q Jobs	5Y Change	LQ	Avg. Hourly Wage
Management Occupations	38,826	(298)	1.08	\$46.12
Top Executives	11,038	(1,076)	1.57	\$59.64
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	3,733	213	1.59	\$54.36
Operations Specialties Managers	7,604	195	1.37	\$52.64
Other Management Occupations	16,452	370	0.78	\$32.17
Business and Financial Operations Occupations	41,574	2,469	1.40	\$38.01
Business Operations Specialists	20,965	400	1.48	\$39.37
Financial Specialists	20,609	2,069	1.32	\$36.63
Computer and Mathematical Occupations	14,914	(117)	1.27	\$40.27
Computer Specialists	14,279	(130)	1.26	\$40.35
Mathematical Science Occupations	635	12	1.65	\$38.54
Architecture and Engineering Occupations	6,524	(953)	0.82	\$37.16
Architects, Surveyors, and Cartographers	1,379	(414)	1.76	\$37.40
Engineers	3,482	(193)	0.72	\$42.41
Drafters, Engineering, and Mapping Technicians	1,663	(345)	0.71	\$25.98
Life, Physical, and Social Science Occupations	5,380	204	0.93	\$34.39
Life Scientists	635	4	0.67	\$37.35
Physical Scientists	862	10	0.87	\$39.71
Social Scientists and Related Workers	3,016	214	1.11	\$35.40
Life, Physical, and Social Science Technicians	867	(25)	0.78	\$23.39
Community and Social Services Occupations	8,039	277	1.10	\$23.07
Counselors, Social Workers, and Other Community and Social Service Specialists	7,073	268	1.15	\$22.95
Religious Workers	966	8	0.82	\$23.93
Legal Occupations	11,111	(311)	2.52	\$54.16
Lawyers, Judges, and Related Workers	7,021	(277)	2.50	\$70.56
Legal Support Workers	4,090	(34)	2.56	\$26.01
Education, Training, and Library Occupations	30,069	1,211	1.08	\$23.73
Postsecondary Teachers	5,774	(21)	1.35	\$32.61
Primary, Secondary, and Special Education School Teachers	13,203	213	1.01	\$26.26
Other Teachers and Instructors	5,700	879	1.21	\$15.65
Librarians, Curators, and Archivists	1,007	26	1.20	\$25.08
Other Education, Training, and Library Occupations	4,385	115	0.92	\$14.61
Arts, Design, Entertainment, Sports, and Media	22,743	762	1.46	\$24.65
Art and Design Workers	6,469	(25)	1.56	\$21.93
Entertainers and Performers, Sports and Related Workers	5,914	450	1.52	\$27.73
Media and Communication Workers	6,402	223	1.43	\$26.67
Media and Communication Equipment Workers	3,958	114	1.31	\$21.23

Occupation	2012 1Q Jobs	5Y Change	LQ	Avg. Hourly Wage
Healthcare Practitioners and Technical Occupations	26,827	1,008	1.09	\$37.99
Health Diagnosing and Treating Practitioners	17,744	862	1.13	\$45.95
Health Technologists and Technicians	8,675	142	1.02	\$22.14
Other Healthcare Practitioners and Technical Occupations	409	5	0.97	\$29.10
Healthcare Support Occupations	9,801	729	0.69	\$14.05
Nursing, Psychiatric, and Home Health Aides	5,273	505	0.60	\$11.50
Occupational and Physical Therapist Assistants and Aides	378	20	0.80	\$21.73
Other Healthcare Support Occupations	4,150	204	0.84	\$16.59
Protective Service Occupations	14,458	873	1.49	\$18.63
First-Line Supervisors/Managers, Protective Service Workers	1,374	(50)	1.86	\$28.12
Fire Fighting and Prevention Workers	1,405	(43)	1.49	\$20.36
Law Enforcement Workers	5,450	(382)	1.52	\$21.93
Other Protective Service Workers	6,230	1,350	1.40	\$13.27
Food Preparation and Serving Related Occupations	35,576	(836)	1.00	\$10.82
Supervisors, Food Preparation and Serving Workers	3,137	(81)	1.04	\$17.18
Cooks and Food Preparation Workers	9.149	(231)	1.00	\$11.00
Food and Beverage Serving Workers	18,734	(338)	0.98	\$9.97
Other Food Preparation and Serving Related Workers	4,556	(186)	1.12	\$9.57
Building and Grounds Cleaning and Maintenance	23,620	1.692	1.08	\$11.24
Supervisors, Building and Grounds Cleaning and Maintenance				
Workers	1,552	(240)	1.11	\$18.56
Building Cleaning and Pest Control Workers	19,827	1,819	1.22	\$10.54
Grounds Maintenance Workers	2,241	114	0.52	\$12.35
Personal Care and Service Occupations	23,967	5,654	1.00	\$11.29
Supervisors, Personal Care and Service Workers	915	187	0.83	\$15.27
Animal Care and Service Workers	2,615	519	0.96	\$13.47
Entertainment Attendants and Related Workers	2,084	55	1.16	\$10.15
Funeral Service Workers	140	0	1.11	\$15.83
Personal Appearance Workers	5,622	2,145	1.34	\$11.45
Transportation, Tourism, and Lodging Attendants	976	165	1.17	\$17.45
Other Personal Care and Service Workers	11,613	2,581	0.89	\$10.03
Sales and Related Occupations	62,002	(1,610)	0.89	\$21.67
Supervisors, Sales Workers	6,442	75	0.75	\$20.01
Retail Sales Workers	19,181	(1,796)	0.73	\$12.00
Sales Representatives, Services	10,800	1,243	1.07	\$32.80
Sales Representatives, Wholesale and Manufacturing	5,073	(342)	0.81	\$34.68
Other Sales and Related Workers	20,506	(790)	1.12	\$22.16
Office and Administrative Support Occupations	89,798	(4,946)	1.23	\$18.25
Supervisors, Office and Administrative Support Workers	6,577	(349)	1.50	\$27.49
Communications Equipment Operators	1,008	(39)	1.99	\$13.61
Financial Clerks	13,543	(581)	1.17	\$18.26
Information and Record Clerks	23,221	(927)	1.36	\$17.21
Material Recording, Scheduling, Dispatching, and Distributing Workers	11,062	(1,267)	0.90	\$16.55

Occupation	2012 1Q Jobs	5Y Change	LQ	Avg. Hourly Wage
Secretaries and Administrative Assistants	18,662	(557)	1.40	\$20.27
Other Office and Administrative Support Workers	15,725	(1,226)	1.12	\$15.03
Farming, Fishing, and Forestry Occupations	289	(23)	80.0	\$16.01
Supervisors, Farming, Fishing, and Forestry Workers	33	(4)	0.16	\$23.95
Agricultural Workers	181	(6)	0.06	\$14.75
Fishing and Hunting Workers	27	(6)	0.10	\$15.99
Forest, Conservation, and Logging Workers	48	(7)	0.16	\$15.24
Construction and Extraction Occupations	9,469	(2,366)	0.39	\$18.97
Supervisors, Construction and Extraction Workers	1,109	(367)	0.46	\$27.00
Construction Trades Workers	6,913	(1,725)	0.38	\$17.50
Helpers, Construction Trades	362	(116)	0.42	\$13.73
Other Construction and Related Workers	1,020	(107)	0.73	\$22.06
Extraction Workers	64	(51)	0.07	\$19.35
Installation, Maintenance, and Repair Occupations	14,888	(1,220)	0.83	\$22.13
Supervisors of Installation, Maintenance, and Repair Workers	1,438	(160)	1.12	\$31.56
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	2,313	(109)	1.17	\$26.10
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	2,417	(181)	0.46	\$20.56
Other Installation, Maintenance, and Repair Occupations	8,720	(769)	0.92	\$19.96
Production Occupations	13,770	(3,027)	0.49	\$16.14
Supervisors, Production Workers	1,081	(273)	0.59	\$27.27
Assemblers and Fabricators	2,137	(558)	0.41	\$14.16
Food Processing Workers	1,246	(36)	0.59	\$12.97
Metal Workers and Plastic Workers	1,036	(294)	0.18	\$16.41
Printing Workers	891	(579)	0.97	\$18.18
Textile, Apparel, and Furnishings Workers	1,726	(234)	0.66	\$11.56
Woodworkers	271	(41)	0.34	\$15.49
Plant and System Operators	672	(78)	0.71	\$24.36
Other Production Occupations	4,710	(934)	0.60	\$15.42
Transportation and Material Moving Occupations	25,281	(2,809)	0.79	\$17.09
Supervisors, Transportation and Material Moving Workers	1,170	(194)	1.03	\$25.44
Air Transportation Workers	1,815	132	2.71	\$57.30
Motor Vehicle Operators	10,097	(1,364)	0.73	\$17.03
Rail Transportation Workers	205	13	0.53	\$24.17
Water Transportation Workers	48	1	0.15	\$29.29
Other Transportation Workers	1,441	94	1.56	\$12.63
Material Moving Workers	10,505	(1,492)	0.78	\$13.53
Military Occupations	2,098	(190)	0.33	\$14.53

APPENDIX E Operational Targeting Analysis

APPENDIX E: OPERATIONAL TARGETING ANALYSIS

Following the Assets and Challenges Assessment, the City of Atlanta was evaluated on its business-attraction potential utilizing Deloitte Consulting's proprietary model, the Operational Targeting Matrix (OTM). The OTM is a tool developed by Deloitte Consulting to evaluate a community's potential ability to support/attract a diverse spectrum of operation types. It employs over 40 operating parameters to assess the 'fit' between a community and a particular type of operation, based on the unique combination of operating costs and conditions each operation type requires to compete successfully.

Representative factors and operation types considered in the OTM include:

Representative OTM Factors (inputs)

- Production skills presence
- Professional skills presence
- Labor availability
- Labor costs
- Labor relations
- Utility infrastructure
- Real estate assets
- Environmental quality
- Transportation infrastructure
- Quality of life; amenities
- Industry cluster potential
- Incentives
- Education
- Local leadership

Representative Operations Types (outputs)

- Food manufacturing
- Technology manufacturing
- Life sciences manufacturing
- Light manufacturing/assembly
- Next-generation manufacturing
- Heavy manufacturing
- National distribution
- Regional/local distribution
- Moderate-skill customer contact center
- Low-skill customer contact center
- Higher-skill customer contact center
- Global headquarters
- Regional headquarters
- Life sciences research & development (R&D)
- Technology research & development (R&D)

Based upon the information collected during the Community Assessment, the City of Atlanta was given a score on each OTM factor. The factor scores were then weighted by the critical location needs of each facility type to calculate the Operational Fit Score. Operational types with the top Fit Scores would be most likely to find the City of Atlanta appealing. Fit Scores reflect the attractiveness of a location for new or expanding operations and range from 1,000 to (-)1,000. Scores above 400 are generally strong candidates.

Based on the OTM Ratings, the City of Atlanta's strengths are most likely to appeal to research and development, headquarters/front office, customer contact/back office, and light manufacturing /assembly operations.

Functional Type	Functional Area	Total Score	Rank
Research & Development	Medical and Life Science	910	1
Research & Development	Technology and Related	770	2
Headquarters	Regional	665	3
Headquarters	Global	650	4
Customer Contact/Back Office	Moderate Skill	625	5
Customer Contact/Back Office	High Skill	625	6
Manufacturing	Light / Assembly	490	7
Customer Contact/Back Office	Low Skill	485	8
Manufacturing	Food	300	9
Manufacturing	Life Science	295	10
Manufacturing	Technology	265	11
Distribution	Local / Regional	265	12
Distribution	Big Box	225	13
Manufacturing	Advanced	120	14
Manufacturing	Heavy	95	15

¹ To measure local specialization, location quotients (LQs) for each occupation, industry or cluster is derived. LQs are ratios of an area's distribution of employment for a specific occupation/industry/cluster compared to a reference or base area's distribution. In this analysis the reference area is the US If an LQ is equal to 1, then the industry has the same share of its area employment as it does in the reference area. An LQ greater than 1 indicates an industry with a greater share of the local area employment than is the case in the reference area and implies local specialization. LQs are calculated by first, dividing local industry employment by the all industry total of local employment. Second, reference area industry employment is divided by the all industry total for the reference area. Finally, the local ratio is divided by the reference area ratio.





Reproduction, display or distribution of this document is prohibited without the prior written consent of Invest Atlanta.