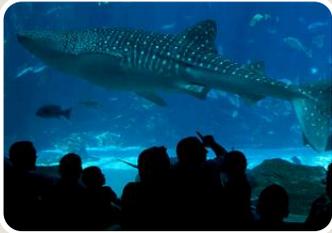




ATLANTA REGIONAL COMMISSION



ECONOMIC CLUSTER REVIEW METRO ATLANTA

Submitted by Market Street Services Inc.
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TABLE OF CONTENTS

Project Overview	1
Scope of Work.....	1
Facilitators.....	2
Economic Development Targeting 101.....	4
Economic Cluster Review.....	5
Developing a Cohesive Message.....	5
Research Methods.....	6
Metro Atlanta: A Global Commerce Hub	7
Conceptual Framework: Metro Atlanta’s Hubs and Nodes	8
Knowledge Hub	9
Information Technology.....	10
Telecommunications.....	11
Corporate and Regional Headquarters	12
Professional Services	13
Corporate and Customer Support Operations	13
Logistics Hub.....	14
Supply Chain Management	16
Transportation Services	16
Warehousing and Storage	17
Wholesale Trade.....	17
Production Hub.....	18
Paper, Plastics, and Chemicals	19
Transportation Equipment	21
Metal and Metal Products.....	22
Computer, Electronic, and Electrical Equipment	23
Entertainment Hub.....	24
Film, Music, and Television.....	25
Arts and Entertainment.....	26
Hospitality	27
Conclusion: Next Steps.....	28

PROJECT OVERVIEW

The ten-county metro Atlanta region – comprised of Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry and Rockdale Counties – is a diverse region anchored by the state capital, multiple universities and colleges, numerous Fortune 500 headquarters, and the world’s busiest airport. The region has enjoyed tremendous growth in recent decades and has positioned itself among the most competitive economic regions in the world. But no region, regardless of its competitive position, has been immune to the effects of the recent Great Recession. As metro Atlanta emerges from this recession, it must have a clear roadmap to continually strengthen its position within an increasingly competitive, global environment for jobs and workers.

The development of this roadmap, the Metro Atlanta Regional Economic Development Strategy, will be a collaborative process, designed to unify multiple stakeholders in the public, private, and non-profit sectors behind a consensus vision for the region’s economic future. The final product will support the goals and objectives of PLAN 2040, the Atlanta Regional Commission’s comprehensive blueprint to sustain metro Atlanta’s livability and prosperity through mid-century and will meet the Economic Development Administration’s requirements for a Comprehensive Economic Development Strategy (CEDS). This Economic Cluster Review represents the second phase of the strategic planning process, presenting a brief review of the region’s most competitive sectors within the context of its past, present, and future identity.

Scope of Work

The nine-month strategic planning process includes stakeholder input, quantitative research, the development of strategic recommendations, the creation of an implementation plan, and the establishment of performance metrics to measure implementation success.

STRATEGIC INITIATIVE INVENTORY

One of the first steps in ensuring that the regional strategy is a coordinated effort, and not duplicative or uninformed of ongoing efforts, is the creation of a Strategic Initiative Inventory. *Market Street Services* and ARC will assess current local and state economic development priorities, goals, and strategies, with input and assistance from the Work Group. The Strategic Initiative Inventory will inform the development of new strategic recommendations for the metro Atlanta region.

COMPETITIVE ASSESSMENT

The Competitive Assessment analyzes the key strengths, weaknesses, opportunities, and challenges facing the metro Atlanta region. The region’s performance, as measured by a variety of demographic, economic, and quality of life indicators, is benchmarked against three peer metropolitan areas that metro Atlanta competes with for jobs and workers.

ECONOMIC CLUSTER REVIEW

This Economic Cluster Review will evaluate and assess the competitiveness of various business sectors that are currently being targeted by local, regional, and state economic development partners. The most competitive clusters and targets in the metro Atlanta region will be identified, as well as specific niche opportunities for distinct communities and counties within the region.

REGIONAL ECONOMIC DEVELOPMENT STRATEGY

The five-year Regional Economic Development Strategy represents the culmination of the three previous phases and the beginning of the in-depth dialogues about the strategic goals and objectives that can best address regional challenges and capitalize on competitive advantages and assets. The Strategy answers the critical question – “What economic development goals should the metro Atlanta region pursue?” Best practices from around the country will be identified and referenced when relevant and appropriate.

IMPLEMENTATION PLAN

While the Strategy identifies **what** the metro Atlanta region should pursue, the Implementation Plan will help answer **how** the region will pursue these strategic initiatives. Specifically, it will identify lead and supportive entities in implementing individual recommendations, prioritize actions, examine funding capacity and sources, and provide a set of performance metrics to gauge implementation success.

Facilitators

MARKET STREET SERVICES

Market Street Services, a national economic, community, and workforce development consulting firm headquartered in Atlanta, was engaged to facilitate the development of the Regional Economic Development Strategy, and will lead the region through a process to identify actionable strategies that will help ensure that metro Atlanta sustains its livability and prosperity, and continually elevates its competitiveness in today's global economy. Market Street has worked in more than 140 communities nationwide, with extensive work in multiple communities throughout metro Atlanta since the company's founding in 1997.

ATLANTA REGIONAL COMMISSION

The Atlanta Regional Commission (ARC) is the regional planning and intergovernmental coordination agency for the 10-county area including Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry and Rockdale counties, as well as the City of Atlanta. For 60 years, ARC and its predecessor agencies have helped to focus the region's leadership, attention, and resources on key issues of regional consequence. ARC is dedicated to unifying the region's collective resources to prepare the metropolitan

area for a prosperous future. It does so through professional planning initiatives, the provision of objective information and the involvement of the community in collaborative partnerships.

STEERING COMMITTEE

The strategic planning process is guided by a diverse Steering Committee of leaders from the public, private, and non-profit sectors. These individuals will oversee the entire planning effort, help identify the region's strategic priorities, build consensus throughout the region, and serve as public advocates for the betterment of the region and its economic development.

WORK GROUP

In addition to the Steering Committee, the research and strategic planning phases are guided by significant input from a group of community, economic, and workforce development practitioners from individual communities and organization's throughout the ten-county metro Atlanta region. The Work Group will meet eight times throughout the process to share their in-depth knowledge of the assets, challenges, opportunities, strategic priorities facing their individual communities.

ECONOMIC DEVELOPMENT TARGETING 101

The economic development strategy of targeting certain sectors of economic activity has become increasingly common over the years as local and regional economies attempt to leverage their competitive advantages and focus investments on the areas that will generate the greatest return on investment. The emergence and successful developments of clustered economic activity in areas such as the Silicon Valley, the Research Triangle Park, and Route 128 in Massachusetts have served as case studies for other regions across the nation as they strive to develop similar agglomerations of related businesses.

These agglomerations – or “**clusters**” – represent groups of interrelated businesses that choose to co-locate for one reason or another. Clustering can occur among competing or cooperative firms, and there are a variety of different catalysts that support these agglomerations. A group of suppliers may choose to locate in proximity to a major manufacturer for research and development efficiencies and reduced transportation costs. Other firms may co-locate in a specific area in order to take advantage of a specialized labor pool, access specific infrastructure, or leverage potential relationships and research collaborations with area institutions of higher education. While clusters are primarily characterized by agglomerated activity in the private sector, the colleges, universities, and other supportive institutions in the region become integral parts of regional economic clusters. The advantages derived by firms from the aforementioned catalysts such as specialized labor or specific infrastructure assets, coupled with the network effects that often exist within clusters, often result in comparatively high potential for employment growth and wealth creation. Due to limited economic development resources, it is sensible for regions to strategically target those sectors with the greatest potential to create new jobs and raise incomes.

However, many communities and economic regions choose to strategically target sectors of economic activity that may not currently be characterized by a strong agglomeration – or “cluster” – of related businesses. A targeted sector – or simply a “**target**” – is any type of business activity that is strategically targeted by an economic development organization and its partners for growth and development. That is to say, a “target” is an area where financial and staff resources, and the programs and policies they support, are specifically focused. “Targets” are ideally those areas of an economy where existing competitive advantages exist, prospects for future growth are best, and return on investment is likely highest. A “target” can be a single business sector with high growth potential or a “cluster” of businesses in related sectors.

With limited economic development resources, and the harsh economic realities of today’s economic climate, it is imperative that communities target those sectors of economic activity that have the greatest potential to create new jobs, retain existing jobs, spur innovation, and raise incomes within their community.

ECONOMIC CLUSTER REVIEW

This Economic Cluster Review will examine the clusters of economic activity throughout metro Atlanta and the specific sectors that are being targeted by local and regional economic development practitioners within the region. Rather than redefine the appropriate “targets” for individual communities or organizations that lead economic development efforts at the local-level, this deliverable attempts to provide a framework for conceptualizing the region’s key types of economic activity, while identifying the areas within the region where such activity is most heavily concentrated and most heavily supported by specific competitive advantages. It will also seek to identify emerging, innovative activities that can leverage and grow from the region’s existing competitive advantages.

DEVELOPING A COHESIVE MESSAGE

At the onset of this process, the Atlanta Regional Commission developed an inventory of all pre-existing economic development strategic plans within the ten-county region. This inventory also examined the specific sectors of economic activity that are currently being targeted by more than 20 different communities or organizations, capturing the strategic economic development targets of individual cities, counties, and regional organizations (such as the Metro Atlanta Chamber and Technology Association of Georgia) that support economic development in metro Atlanta. Once completed, this inventory included more than 60 different business sectors identified as clusters or targets by economic development partners within the ten-county metro Atlanta region. While there was certainly some degree of overlap between certain targets, the inventory illustrated a fundamental problem among metro Atlanta’s economic development partners: the lack of cohesive, consistent language used to describe the region’s (and its individual communities’) key strengths and targeted economic activities. This can lead to confusion among internal and external audiences. With such disparate terminology for common strengths, the region, and its partners at the local and state level, struggles to present a unified message that captures defines and effectively communicates metro Atlanta’s identity. Prospective companies and investors will find discord between state (via the Georgia Department of Economic Development), regional (via the Metro Atlanta Chamber), and local (via city and county governments, chambers of commerce, and non-profit economic development organizations) economic development messaging. And while this type of discord is not unique to metro Atlanta or the state of Georgia, the development of a more cohesive message can help ensure that economic development practitioners are telling the same story about metro Atlanta’s past, present, and future while still communicating how individual communities fit into that story.

This Economic Cluster Review will present a framework for conceptualizing the region’s various clusters of economic activity, as well as the individual business sectors that are currently being targeted at the local level. While this document is intended to support regional consensus regarding economic development targeting and the associated marketing message, it is not intended to serve as a public marketing piece for the region. Rather, it is simply intended to provide a brief summary of the research findings and proposed framework for conceptualizing regional economic development targets, and should be used internally by local and regional economic development practitioners.

RESEARCH METHODS

Market Street Services and ARC began by assembling the aforementioned inventory of all sectors currently targeted by local, regional, and state economic development partners. Once this existing research was inventoried, Market Street and ARC compiled a database of recent trends in establishments, employment, and wages across more than 400 individual business sectors in each of the ten counties within the ARC service area, as well as larger, 28-county Atlanta-Sandy Springs-Marietta metropolitan statistical area, an area that closely approximates the labor shed for the smaller 10-county ARC service area. Databases examining employment and wage characteristics for nearly 700 different occupations as well as degree completions in specific programs at the region's two and four-year institutions of higher education were also compiled to provide Market Street with a better understanding of the talent pipeline and embedded skill sets within the metro region's workforce. A wide variety of other information relevant to specific sectors was also collected, such as data covering air and port cargo capacity, tax credits and incentives, research activities, and other relevant and potential assets. Combined, this information supported the development of the conceptual framework that follows.

While this Economic Cluster Review provides a very high-level overview of the research findings, all of the aforementioned data is available electronically for review by work group and steering committee members at their convenience.

Metro Atlanta: A Global Commerce Hub

Metro Atlanta has long been known as a hub for commercial air travel. The location of Delta Airlines' hub at Hartsfield-Jackson Atlanta International Airport has helped propel the airport to its status as the world's busiest since 2005. With more passengers traveling into and out of Atlanta than any other place in the world, the region is known internationally as a transportation hub. But aside from its role in the movement of people, metro Atlanta has also emerged as a hub for the movement of goods, leveraging the cargo capacity at Hartsfield-Jackson, the intersection of three major interstates, extensive rail networks, and proximity to the Atlantic's and Gulf's major ports. The region has emerged as a premier location for the storage and distribution of a wide variety of goods into and out of the United States. In short, metro Atlanta is unquestionably a logistics hub, domestically and globally.

The region's role as a logistics hub has supported the growth of manufacturing activities throughout metro Atlanta and the state of Georgia. And while the region is economically diverse and is not a historically manufacturing-dependent economy, metro Atlanta is home to healthy manufacturing activity in areas such as aerospace and defense, plastics and chemicals, and computer and electronic equipment. Engineering and production skill sets in such areas can support the growth and development of emerging technologies that could define metro Atlanta's potential future as a hub of innovation.

With world-class institutions of higher-learning, concentrated corporate management activities, and a highly-educated and relatively young labor force, metro Atlanta has also emerged as a knowledge hub. The region is increasingly known for its expertise in information technology and telecommunications, as well as professional services that support the tremendous corporate presence in metro Atlanta, the Southeast, and across the globe.

And while all of these strengths have fortified metro Atlanta's reputation as a global economic region, no single event in metro Atlanta's history has elevated its status as a hub of international activity as much as the 1996 Summer Olympics. The Olympics helped establish metro Atlanta as a place that was capable of welcoming and hosting the largest sports and entertainment spectacle in the world and commenced a new era of investment in tourism throughout the region. New tourism assets have complemented existing cultural institutions, creating an entertainment hub that rivals most major metropolitan areas. And with the Turner Broadcasting System's full spectrum of cable programming headquartered in metro Atlanta, as well as rapidly-expanding on-location film and television production, and a well-established music industry, the region exports entertainment across the world, twenty-four hours a day.

Combined, metro Atlanta is a hub for global commerce. At the intersection of metro Atlanta's knowledge, production, logistics, and entertainment hubs is that which will drive metro Atlanta's future: innovation. As it looks to the future, metro Atlanta should encourage investments that support growth and innovation in new technologies, business processes, and emerging sectors that leverage the expertise, capacity, and competitive advantages of its existing hubs and nodes.

CONCEPTUAL FRAMEWORK: METRO ATLANTA'S HUBS AND NODES



Hubs: Metro Atlanta's core identities: knowledge, logistics, production, and entertainment.

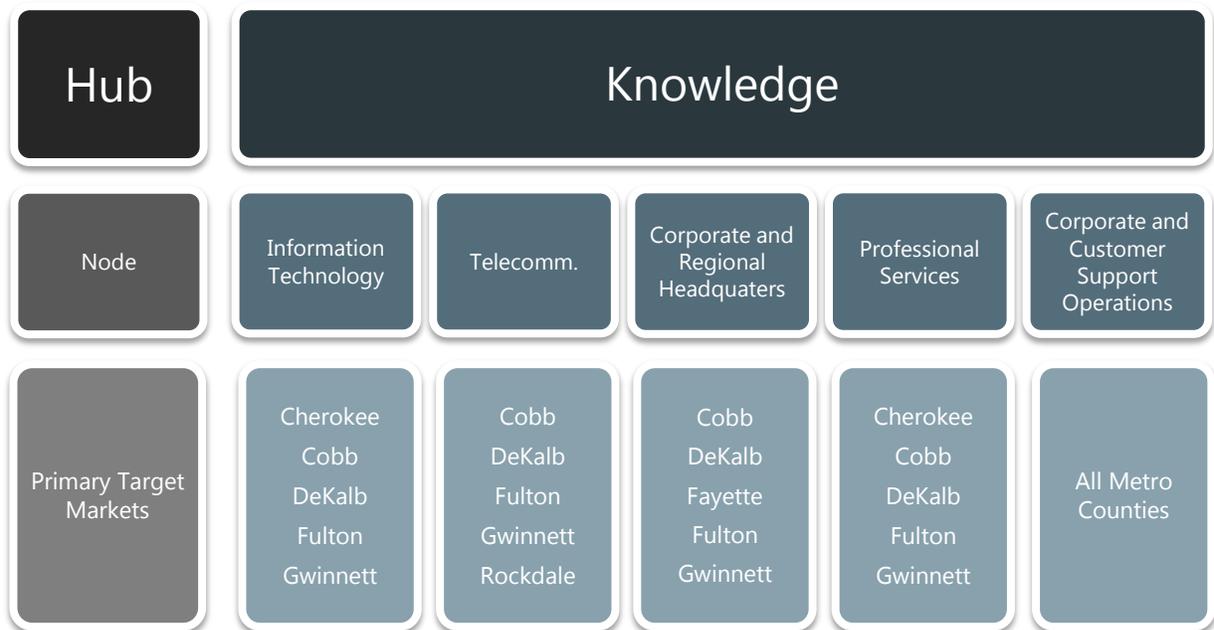
Nodes: Subsectors within each hub that reflect more specialized activities within specific parts of the metropolitan region.

Primary Target Markets: Areas where the development of specific nodes is most viable, including any areas where economic development entities are currently targeting resources towards a certain node.

Knowledge Hub

Aided by the immense network of higher education institutions, metro Atlanta retains a highly educated workforce employed in a diverse set of knowledge-based occupations. Metropolitan Atlanta claims the 13th most highly educated workforce compared to fifty-one metropolitan areas with at least one million residents – over thirty-four percent of the region’s residents hold a bachelor’s degree or higher. Local higher education institutes further reinforce the region as a hotbed for knowledge creation through cutting-edge research and development and technical training. Moreover, Atlanta’s rich entertainment and artistic offerings further support the knowledge-based economy by fostering knowledge workers’ creativity and ingenuity. These attributes, as well as superior air travel connectivity, broadband infrastructure, and the rapidly-expanding demand for corporate services in the Sunbelt region of the United States has supported metro Atlanta’s emergence as a hub for knowledge-based activities. While some of metro Atlanta’s for knowledge-based jobs and workers have nurtured a vibrant entrepreneurial culture, the business climate in metro Atlanta has supported the attraction of numerous corporate and regional headquarters, including twelve Fortune 500 headquarters in the ten-county region.

The region’s knowledge hub is composed of fives nodes: information technology, telecommunications, corporate and regional headquarters, professional services, and corporate and customer support operations.



Trends

- Ever-increasing amounts of information creates tremendous growth opportunities in data management, mining, analytics, storage, and security.
- Communications media continue to transition from wired to mobile communication platforms. Faster mobile communication speeds and availability of mobile applications exemplify the growth of wireless communications.
- Innovations in information and communications technologies are changing the physical workspace, labor, and technology requirements of knowledge-intensive businesses.
- Recession and recovery in professional services: sectors such as digital advertising are thriving; architecture and engineering services are lagging.
- Internet usage growing in scale and scope as speeds, access, and convenience improve in both developed and less-developed countries.

Advantages

- High quality programs in business administration, engineering, and many other disciplines at the region's colleges and universities produce a large and diverse homegrown talent pool.
- The region's attractiveness to young professionals has supported a relatively sustainable and well-educated workforce that can be leveraged for decades to come.
- Local information technology firms have direct access to cutting-edge research occurring at world class colleges and universities within the region.
- As the world's busiest airport, Hartsfield Jackson Atlanta International Airport provides superior capacity and networks to support convenient corporate travel.
- The region's low cost of living and relatively favorable corporate tax environment aid employers' and employees' bottom lines.

Challenges

- Traffic congestion is rapidly emerging as metro Atlanta's most recognizable attribute to prospective employers and employees.
- Greater reliance on videoconferencing and telework in knowledge-intensive sectors potentially reduces - albeit slightly - the competitive advantages that are gained by some corporate headquarters and professional services businesses.
- Potential impact on suburban office parks as corporate and regional headquarters require less space per employee and shift back to central business districts to improve access to transit, air service, and walkable urban environments that many young professionals desire.
- As broadband access improves globally, potential exists for increased outsourcing of core professional services functions such as accounting.
- Competition for management and executive-level talent will rise tremendously as the Baby Boom generations retires.

INFORMATION TECHNOLOGY

Primary Sectors: *Software Publishers (NAICS 5112); Computer and Systems Design (5415); Data Processing and Hosting (5182)*

Primary Target Markets: *Cherokee, Cobb, DeKalb, North Fulton, Gwinnett*

The digitization of almost every aspect of modern life is both a consequence and origin of expansion and innovation within the information sector. Bits of data now seem linked to every conceivable activity – from where we go, to what we buy, to what kind of mood we are in. While questions on the boundaries of privacy and how to make personal information as secure as possible are of concern for the entire population, we have not shown signs of slowing down our use of data-intensive devices and services. According to Fortune Magazine, the world currently generates 2.5 exabytes of data every day – enough data to fill more than 107 million 250 gigabyte hard drives. Ninety percent of the world’s data is estimated to have been created in the last two years alone. To cope, McKinsey Global Institute projects that the United States will need 140,000 to 190,000 additional workers with deep analytical talent and another 1.5 million data-savvy managers to process and analyze the data stockpiles.

Metro Atlanta’s information technology (IT) node is heavily engaged in the design, development, publishing, and testing of software. The share of employment engaged in software publishing sector in metro Atlanta is nearly twice as large as the national average; metro Atlanta continued to gain market share throughout the 2000s. The sector also demonstrated resilience during the recession – employment increased 9.2 percent between second quarter of 2007 and the second quarter of 2011. Metro Atlanta also possesses a healthy computer and systems design sector involved in integrating computer hardware, software, and communication technologies, an essential component of corporate and data center operations. Network and computer systems administrators, information security analysts, and computer network architects are among the many highly-concentrated occupations supporting IT in metro Atlanta. Census data indicate that the IT workforce in metro Atlanta is relatively young as compared to comparable IT workforces in competing metropolitan areas, helping support the sector’s long-term growth and sustainability. The region also stands to benefit greatly from the rapid digitization of medical records and other forms of health information; according to Healthcare Information, eight of 100 largest health IT firms are headquartered in metro Atlanta and possessed a combined revenue of more than \$4 billion in 2010.

Information technology employers throughout the region have access to a strong telecommunications backbone and a relatively young workforce with specialized degrees from the region’s world class universities. A low probability of natural disasters, affordable utility rates, high concentration of specialized labor, and strong fiber optics support the region’s increasing desirability as a data center location. IT companies large and small have access to strong supportive resources through organizations such as the Technology Association of Georgia (TAG), the Georgia Technology Authority (GTA), and the Advanced Technology Development Center (ATDC), among many others.

TELECOMMUNICATIONS

Primary Sectors: *Wired Telecommunications (NAICS 5171); Wireless Telecommunications (5172)*

Primary Target Markets: *Cobb, DeKalb, Fulton, Gwinnett, Rockdale*

The rapidly evolving realm of telecommunications has become an integral part of personal and professional communication, and has expanded its footprint to now include email, telephony, text messaging, satellite, and

video services. The lines between these previously distinct sectors have considerably blurred, with major providers in each market moving toward a diversified center with integrated services. Consumers will continue demanding greater connectivity and businesses will demand enhanced access to networks and innovative communication platforms. The telecommunications sector is projected to decline nationwide as consolidation continues, productivity rises, and infrastructure becomes more reliable thereby reducing the demand for repairs. However, demand for services will continue to rise and regions at the forefront of telecommunications innovation will thrive. Metropolitan Atlanta is a magnet for telecommunications research and development in the United States, largely due to the immense corporate presence of leading firms such as AT&T and Verizon. Out of 374 metropolitan areas, the region ranked first in telephonic communications patenting and ninth in telecommunications and multicomputer data transferring. Employment in the wired and wireless telecommunications sectors represents nearly two percent of total regional employment, more than twice the national average. The region actually added more than 1,700 jobs in wired and wireless telecommunications between the second quarters of 2007 and 2011, during a time when the telecommunications sector was shedding jobs at a rapid rate nationwide (more than double the national average for all sectors).

Atlanta was recognized for much of the last decade as “America’s Most Wired City” by *Forbes*, due in large part the number of providers and its location at the intersection of the country’s two largest fiber truck routes. While AT&T maintains a tremendous presence in Midtown Atlanta, it also joins competitor Verizon Wireless in employing thousands of workers in Alpharetta’s Windward Business Park, benefitting from the city’s strong fiber optic infrastructure. While there are many smaller telecommunications firms around the region, the sector is unquestionably dominated by a few industry leaders, underscoring the need for targeted business retention and expansion efforts. The average wired or wireless telecommunications establishment in metro Atlanta employed roughly 36 individuals, as compared to the average firm size of 15 employees across all sectors in the region.

CORPORATE AND REGIONAL HEADQUARTERS

Primary Sectors: *Management of Companies and Enterprises (NAICS 55)*

Primary Target Markets: *Cobb, DeKalb, Fulton, Gwinnett*

As the premier destination for corporate and regional headquarters in the Southeast, metro Atlanta is home to twelve Fortune 500 headquarters including The Home Depot (\$68.0 billion in revenue), United Parcel Service (\$49.5), Coca-Cola (\$35.1) and Delta Air Lines (\$31.8), among others. These operations together with metro Atlanta’s many other smaller corporate and regional headquarters have helped support the rapid growth of professional services and corporate support sectors throughout the region. As of May 2010, there were more than 146,000 management-level workers employed across all sectors in metro Atlanta. If the region possessed the same concentration of management positions as the average community nationwide, there would only be 104,000 management-level workers employed in metro Atlanta. And while there is a relatively large pool of management talent, the average wage for all management occupations (from chief executives to operations managers to marketing managers) is only 3.6 percent higher than the national average. A highly-skilled yet relatively affordable workforce is one of many competitive advantages enjoyed by employers in the region. With multiple, major headquarters located outside the City of Atlanta’s central business districts, the region has illustrated that it possesses a diverse and attractive market for large-scale corporate operations. Class A office rents are competitive with other major markets in the South while offering superior access to commercial air travel via the world’s largest airport. When coupled with a low cost of living, attractive corporate tax rates and

business climate, and access to a large pool of skilled managers and young knowledge workers, metro Atlanta is unquestionably an attractive destination for corporate management functions.

PROFESSIONAL SERVICES

Primary Sectors: *Legal Services (NAICS 5411); Accounting, Tax Preparation, and Bookkeeping (5412); Architectural, Engineering, and Related Services (5413); Management, Scientific, and Technical Consulting Services (5416); Advertising and Public Relations (5418)*

Primary Target Markets: *All Metro Counties*

The region's professional services sector supplies local firms with legal, accounting/bookkeeping, engineering, design, advertising/marketing, public relations/communications, and a wide variety of consulting services. While many of the firms providing these services support local employers in a variety of sectors, many are also large, global firms providing services far beyond the borders of the metropolitan area. Given the diversity of services throughout the region and the varied scale of operations for individual firms, the professional services target is one that is appropriate for all counties in metro Atlanta. Since 2000, the accounting, bookkeeping, and tax preparation, and advertising and public relations subsectors have grown in recent years, with market share increasing and employment actually rising during the most recent recession. Accounting, bookkeeping, and tax preparation services added nearly 3,900 jobs in the metropolitan area between the second quarters of 2007 and 2011, rising by more than 21 percent while national employment declined by nearly four percent. With residential and commercial construction in metro Atlanta hit relatively hard in recent years, the architecture and engineering services sectors have experienced considerable decline, shedding jobs at a rate that nearly doubled the national rate of decline during the Great Recession. Many of the nearly 6,000 jobs lost in this subsector should be recouped in the years ahead as construction picks up throughout the region and across the country.

CORPORATE AND CUSTOMER SUPPORT OPERATIONS

Primary Sectors: *Office and Administrative Services (NAICS 5611); Employment Services (5613); Business Support Services, including Call Centers, Collection Agencies, and Document Preparation Services (5614)*

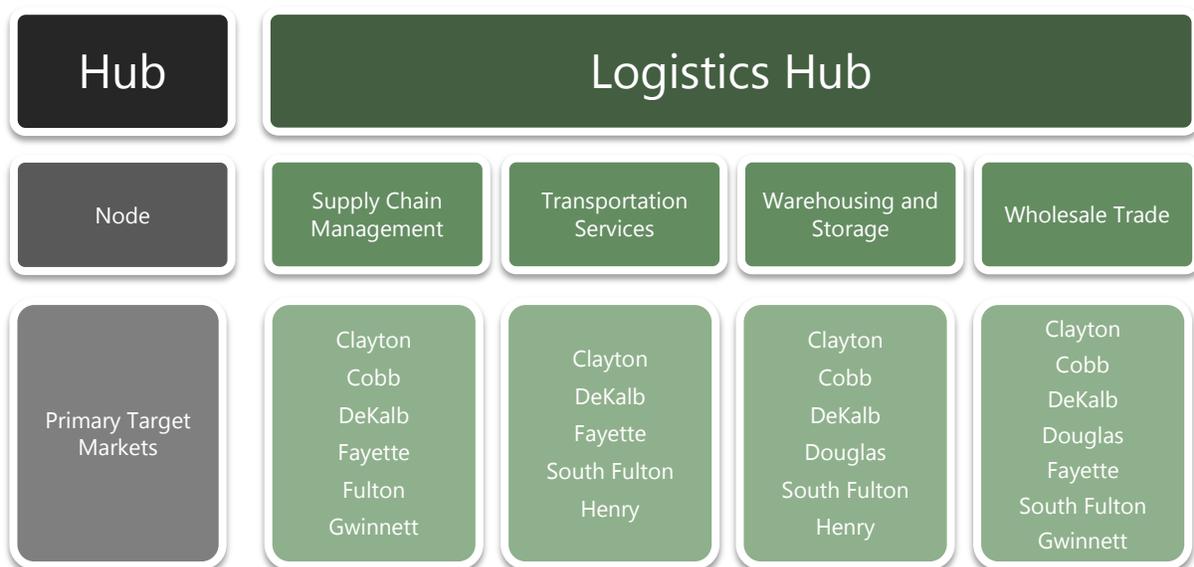
Primary Target Markets: *All Metro Counties*

Communities with a relatively large corporate presence and immense office spaces with multiple tenants are typically home to a relatively large number of corporate support operations from employment placement agencies to billing and collections. Corporate and regional headquarters are further supported by a diverse array of businesses that support the healthy operation of corporate headquarters location. Such services include employment placement agencies, administrative support services, facilities management, travel planning, and other services that are often outsourced by large employers in order to focus on their core business functions. Other business support functions are heavily focused on customer service and require a relatively flexible labor pool that is subject to greater fluctuations in employment (based on demand or seasonality) than many other subsectors. This includes services such as call centers and collection agencies. While much of the training required for such positions is often gained on-the-job, some employers leverage partnerships with local community and technical colleges, including the Georgia Quick Start program, to develop customized training. These supportive service sectors employ 7.5 percent of the region's workforce, as compared to 6.6 percent nationwide. Prior to the onset of the most recent recession, growth in these sectors was heavily concentrated in Cobb, Gwinnett, and Henry counties.

Logistics Hub

Logistics – broadly defined – encompasses a variety of sectors engaged in the supporting the efficient and effective flow of products from the point of production to the point of consumption. This includes but is not limited to the physical transportation and storage of products as well as the business processes that minimize costs and risks associated with these physical processes. The logistics hub captures a variety of activities that connect suppliers to manufacturers, manufacturers to distributors, and distributors to end-consumers. Firms in the logistics sector not only handle the physical transportation of goods, but also transmit complex, real-time information regarding the flow of goods throughout the entire value chain. The use of technology to collect real-time information on inventories, delivery status, and other aspects of the supply chain is supporting improvements in the ways in which goods are produced, packaged, stored, and shipped. In a world where manufacturers, wholesalers, and retailers are increasingly focused on flexibility and efficiency in meeting the needs of their customers (just-in-time manufacturing and delivery), the ability to track and control inputs and inventory is vital to optimizing business efficiency.

Logistics operations have played a central role in the economic growth and development of metro Atlanta. The City of Atlanta was formerly known as “Terminus,” aptly named due its location at the terminus of the Western and Atlantic Railroad. Today, the region’s logistics hub has evolved from its railroad-centric origins to a global leader in passenger air transportation. While Hartsfield-Jackson Atlanta International Airport is the busiest passenger airport in the world, the region’s capacity to store and distribute goods has led to its status as national and international logistics hub. With three interstates, outstanding air cargo capacity, industry-leading intermodal facilities, proximity to one of the largest and fastest growing ports in the United States, strong higher education programs in supply chain management, and a central location within the rapidly-expanding Sunbelt, metro Atlanta has the assets to support future competitiveness as a logistics hub. However, the region’s increasingly congested roadways threaten its ability to efficiently and effectively transport goods via truck, a critical component of multi-modal distribution.



Trends

- Adoption of product tracking technologies throughout the supply chain will continue to optimize supply chain operations and improve inventory control.
- Rising fuel costs will increase transportation costs and ultimately the costs faced by consumers. Logistics businesses will continue to search for more optimized routes and sustainable technologies to improve fuel efficiency and reduce costs.
- The earthquake and tsunami in Japan demonstrated the fragile nature of global supply chains, especially regarding single-source countries. Some firms will mitigate risk by decentralizing production operations across the globe, further challenging logistics firms to link production operations together.
- The widening of the Panama Canal will introduce new, larger "Post-Panamax" cargo ships; the landscape of global trade will change considerably as ports that are deep enough to handle these new ships will thrive, while smaller ports will search for a niche.
- Increased reliance on third-party logistics providers (3PLs) and increasing consolidation of 3PLs will create growth opportunities in some economic regions and instability in others.
- Strong pre-recession growth in intermodal shipments should resume in the years ahead.

Advantages

- The Port of Savannah (one of the fastest-growing and largest ports in the country) and the Port of Brunswick, as well as other Atlantic and Gulf port facilities, are within a few hundred miles via rail and truck.
- Hartsfield-Jackson Atlanta International Airport ranks 14th domestically in freight capacity.
- Metro Atlanta boasts Norfolk Southern's largest intermodal rail facility, CSX's 7th and 9th largest rail yards, and central interstate corridors that connect metro Atlanta to 80 percent of the national market within a two day trip.
- Metro Atlanta has ample warehousing and distribution space to meet industry's demand with many existing buildings and redevelopment opportunities as well as greenfields.
- Access to Georgia Tech's world renowned Supply Chain and Logistics Institute and the top ranked Stewart School of Industrial and Systems Engineering provides the private sector with access to new technologies and insights that can improve processes.

Challenges

- Congestion on metro Atlanta's highways and interstates is a significant cost consideration for existing and potential future transportation and distribution operations.
- Strong competition for logistics and particularly air cargo in the Southeast markets of Memphis and Louisville that are home to FedEx and UPS hubs, respectively.
- Changes in logistics technology, ranging from global positioning systems to RFID technologies, and a greater emphasis on environmental sustainability will alter the training needs of tomorrow's logistics workforce.
- Consolidation of 3PLs is improving profitability of survivors but increasing vulnerability to closures in certain economic regions.

SUPPLY CHAIN MANAGEMENT

Primary Sectors: *Freight Transportation Arrangement (NAICS 4885); Process, Physical Distribution, and Logistics Consulting Services (541614)*

Primary Target Markets: *Clayton, Cobb, DeKalb, Fayette, Fulton, Gwinnett*

Vibrant corporate headquarters, manufacturing, and trade and transportation sectors have supported the development of supply chain management (SCM) competencies in metro Atlanta. The scale of metro Atlanta's logistics workforce is perhaps best illustrated by examining occupational data; the region is home to a very high concentration of general operations managers and distribution managers. Supply chain management can refer to specialized, in-house business units that work to optimize their firm's supply chain, as well as specialized consulting firms and third-party providers that support the operations of their clients. These serve customers by providing advice on inventory management, productivity improvements, quality control, production planning, storage optimization, and technology utilization. Although SCM and logistics consulting services are only slightly more concentrated in metro Atlanta than the average American community, national growth is projected to be very strong while employment in metro Atlanta has grown at a faster pace than the national average over the last decade (89 percent vs. 59 percent between 2000 and 2010). Despite this rapid growth, the region will face competition from numerous other communities that are investing heavily in inland ports, road infrastructure, intermodal terminals, and education and training programs to support continued growth nationwide in the demand for supply chain management services. Georgia Tech's new Master's program in Supply Chain Engineering and Clayton State's new undergraduate SCM program will help support an advanced talent pipeline, complementing professional education programs at Emory, Clark Atlanta, Georgia State, Kennesaw State, and others. The region's technical and community colleges also offer multiple degree and certificate programs in logistics and operations management.

TRANSPORTATION SERVICES

Primary Sectors: *Air Transportation (NAICS 481); Rail Transportation (482); Truck Transportation (484); Support Activities for Transportation (488)*

Primary Target Markets: *Clayton, DeKalb, South Fulton, Henry*

The transportation services sector in metro Atlanta is unquestionably dominated by commercial passenger air service from Hartsfield-Jackson. While the transportation services sectors in competing regions such as Memphis and Louisville are more heavily geared towards air freight specialization, metro Atlanta's transportation services sector is more comparable in composition and competitiveness to that of Dallas-Fort Worth. Both are home to large commercial air hubs for industry-leading airlines and handle roughly the same amount of cargo annually (Hartsfield-Jackson ranks 1st in passenger traffic and 14th in cargo handled; Dallas-Fort Worth ranks 3rd in passenger traffic and 13th in cargo handled). Both are roughly equal distance from the primary ports within their state (between 250 and 300 miles from Atlanta to Savannah/Brunswick and from Dallas to Houston/Port Arthur). In addition to commercial air service, the region's nonscheduled air transportation sector – including chartered passenger and freight transportation – has nearly tripled in terms of employment in the last decade, rising from roughly 400 employees in 2000 to roughly 1,200 in 2010, during a time when nonscheduled air transportation employment declined nationwide. This reflects the growth of general aviation operations at other airports throughout the region in addition to demand for chartered services from Hartsfield-Jackson. Via truck, distributors are capable of reaching 80 percent of the U.S. population within two days. Freight trucking

operations are heavily concentrated in Clayton and DeKalb counties, two portions of the metropolitan area that offer easy access to the region's three primary interstates (I-20, I-75, and I-85) via the Beltline (I-285). Rail service is supported by CSX and Norfolk Southern, both of which operate intermodal terminals that are among the largest in their respective networks throughout the country.

WAREHOUSING AND STORAGE

Primary Sectors: *Warehousing and Storage (NAICS 493)*

Primary Target Markets: *Clayton, South Cobb, DeKalb, Douglas, South Fulton, Henry*

During a product's flow through the value chain, it is likely to require storage before it is moved up the next rung of the chain. Ample warehousing and storage space is critical to a competitive logistics sector. According to Grubb and Ellis, the metro Atlanta market possessed over 65 million square feet of vacant warehousing and distribution space during the fourth quarter of 2011. Rents average \$3.44 per square foot, nearly identical to rents in the competing Dallas-Fort Worth market. Since 2000, the metro Atlanta region has lost market share in general warehousing and storage, with growth outpaced by the average community nationwide, but has gained market share in refrigerated warehousing. The Clayton, Cobb, Douglas, and Henry markets have experienced significant gains in warehousing employment while other areas – such as Gwinnett County – that are farther from Hartsfield-Jackson and the primary intermodal terminals in the southern and western portions of the metro area, and are characterized by higher than average rents, have seen employment losses in the warehousing and storage sector since 2000. The highest growth opportunities for warehousing and storage in metro Atlanta are most likely in the aforementioned lower-cost portions of the region that currently carry a relatively large inventory of vacant or underutilized warehouse space. Growth opportunities are heavily tied to the types of goods being imported and exported from Georgia's ports and Hartsfield-Jackson Atlanta International Airport.

WHOLESALE TRADE

Primary Sectors: *Merchant Wholesalers, Durable Goods (NAICS 423); Merchant Wholesalers, Nondurable Goods (424); Wholesale Electronic Markets, Agents, and Brokers (425)*

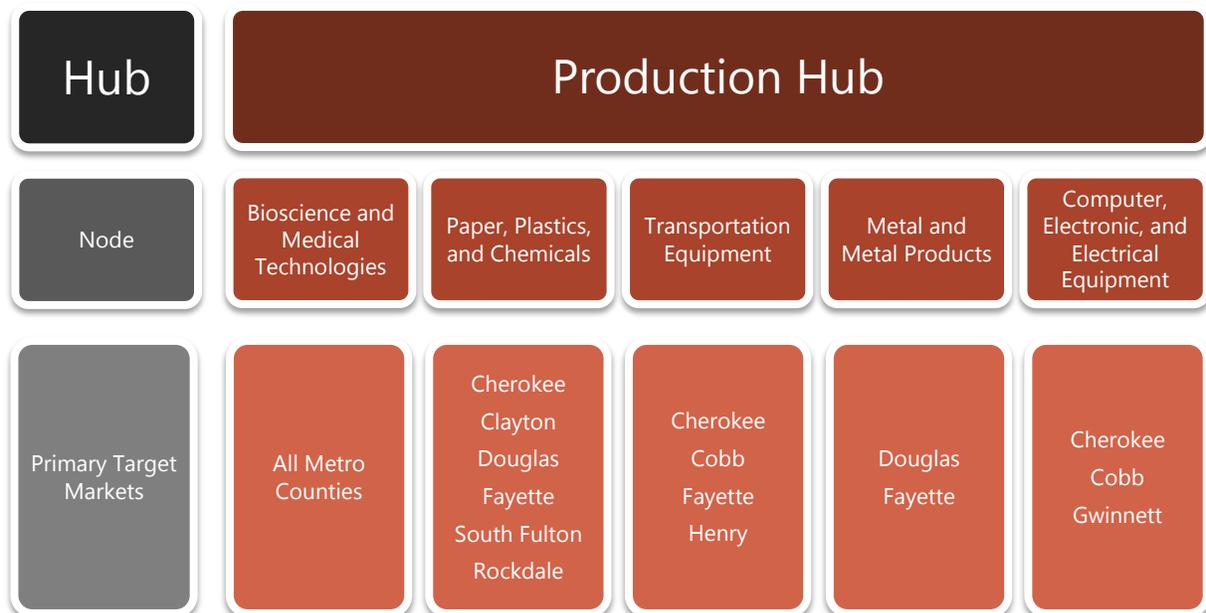
Primary Target Markets: *Clayton, Cobb, DeKalb, Douglas, Fayette, South Fulton, Gwinnett*

The wholesaling process is an intermediate step in the distribution of merchandise from producers to consumers. Wholesalers acquire and distribute everything from raw materials to intermediate inputs to finished goods. Many of these establishments are divisions of manufacturers or retailers, while others are standalone entities whose core business is wholesale trade. Within the sector there are multiple different types of wholesalers handling a variety of products, and these establishments are classified according to the types of products they distribute. However, there is another important distinction within the wholesale trade sector – the difference between merchant wholesalers and brokers/agents. Merchant wholesalers buy goods from a producer on their own account and sell those goods to a customer; in many cases they represent the sales and distribution divisions of manufacturers. In contrast, brokers, agents, and wholesale electronic markets simply coordinate and arrange the sale of goods and do not physically acquire them through purchase. While metro Atlanta was a once dominant market for electronic agents and brokers it has lost market share to competitors in California and Texas. Metro Atlanta is home to a strong concentration of durable goods wholesalers, particularly in professional, electronic, and commercial products (computers, office supplies, paper products, etc.). However, subsectors of durable goods wholesaling have shed jobs in the region while nondurables such as groceries and beverages are driving what limited growth has occurred in wholesale trade in metro Atlanta in the most recent decade.

Production Hub

Inexpensive, abundant, and increasingly-skilled foreign labor coupled with immense foreign incentives have altered the United States' manufacturing landscape in recent decades. Manufacturers in the United States have remained competitive in the global economy in part by adopting lean manufacturing techniques, automating production processes, and entering new export markets. While global competition is certainly a threat to domestic manufacturing, the development and maintenance of a skilled and sustainable workforce is certainly one of its greatest challenges. The retirement of the baby boom generation (which comprises a relatively share of manufacturing workers in the country) will challenge employers to develop collaborative solutions with training providers to create a pipeline of new, younger manufacturing workers. As manufacturing processes evolve, producers need a well-educated workforce capable of understanding computer interfaces, competent in advanced mathematics and scientific principles, and adept at complex problem solving. However, the sector still needs a steady supply of more traditional skill sets in areas such as machining, welding, fabrication, and assembly. In many subsectors, manufacturing workers must embrace a culture of life-long learning to be successful in the rapidly evolving production environment.

Manufacturers in metro Atlanta are not immune to these threats, but the sector has held up relatively well in the last decade relative to the average community. Manufacturing employment has declined by nearly 30 percent nationwide since 2000 as compared to roughly 25 percent decline in metro Atlanta. As the country moves through economic recovery, production is steadily rising but this has not rapidly translated to re-employment. Only one in every five jobs lost during the most recent recession has been recouped since the bottom of the manufacturing labor market (January 2010). The relative resiliency of metro Atlanta's manufacturing sector may in part be attributed to the relative diversity of its manufacturing base; the region is not incredibly specialized in any single manufacturing subsector.



Trends

- Manufacturers continue to integrate automation technology into their production lines, impacting the quantity and quality of labor demanded. Adoption of computer-controlled equipment across the entire manufacturing sector requires new skills sets focused on robotics programming and repair as opposed to machine operation.
- Rising commodity prices, natural resource depletion, and environmental regulations and incentives are pushing manufacturers to adopt a greater focus on sustainable production processes and invest in green energy use.
- Recovery in the manufacturing sector is slow but steady. New orders and production have risen in 2012. Inventories declined contrary to expectations in April 2012, a sign that output may increase further in the coming months.

Advantages

- With a central location in the Southeast, timely access to the Port of Savannah and other nearby ports, an extensive rail and interstate network, and high capacity intermodal facilities, manufacturers can benefit from the region's distribution assets.
- Although the manufacturing workforce is relatively old as compared to other sectors, metro Atlanta's manufacturing workforce is more demographically sustainable in the coming decades than much of its primary competition in the South.
- Georgia, like much of the South, is a right-to-work state with low union membership, an attractive feature to certain manufacturers.
- Electricity for industrial use is relatively affordable and the state recently eliminated the sales and use tax on energy used in manufacturing, joining the majority of states that currently provide this exemption.
- Manufacturers have access to strong workforce development assets from Georgia Quick Start program to partnerships with local community and technical colleges to world-class engineering talent emerging from the Georgia Institute of Technology.

Challenges

- The retirement of baby boomers will greatly impact the manufacturing sector, where the median age of existing workers is 44.1 as compared to 41.3 for all other sectors.
- Negative perceptions tied to manufacturing as a career path stands to further undermine the sector's workforce sustainability.
- Concerns regarding the region's long-term water supply could inhibit growth.
- Competition from abroad continues to limit growth opportunities in the United States. China continues to invest heavily in high-tech manufacturing capacity, offering incentives that few if any local and state governments in the United States can match.
- Encouraging site reuse and redevelopment in areas with high industrial vacancy rates.
- Continued problems with traffic congestion diminish the region's desirability from a distribution standpoint.

BIOSCIENCE AND MEDICAL TECHNOLOGIES

Primary Sectors: *Pharmaceutical and Medicine Manufacturing (NAICS 32541); Medical Equipment and Supplies Manufacturing (3391); Scientific Research and Development (5417); Medical and Diagnostic Laboratories (6215)*

Primary Target Markets: *All Metro Counties*

Immense institutional knowledge, academic research capacity, and a growing private presence characterize metro Atlanta's bioscience and medical technologies sectors. And while the region has become increasingly competitive for such activity, the competition from other metropolitan regions is strong and widespread. Bioscience and medical technology – along with alternative energy – have become economic development targets in vogue for numerous communities around the country. Although the term bioscience is often loosely-defined, it typically encompasses the full spectrum of drug discovery and pharmaceutical manufacturing, and biological research and development for a variety of medical, energy, and other applications. Although many communities target these activities, few have successfully created differentiated strategies based on their region's specific assets. In certain economic regions, these advantages are crystal clear. San Diego, San Jose, and other major metropolitan areas in California have abundant venture financing and a robust network of research institutions that attract high levels of federal funding. The Research Triangle Park in North Carolina is anchored by three world-class institutions of higher education and a highly-skilled workforce. Others, such as St. Louis, have carved out very specific niches in areas such as plant science and nutraceuticals. Metro Atlanta has a variety of assets to support the continued development of bioscience, including but not limited to the presence of Emory University, Georgia Tech, and the Centers for Disease Control and Prevention.

Despite the fact that numerous communities are investing in what is perceived to be a high-growth sector, the returns within the marketplace are often limited. In 2008, only one biotechnology company held an initial public offering. According to the Milken Institute, only one out of every ten biotechnology firms was profitable at the end of 2008. On average, it takes nearly 10 years and \$1 billion to take a new pharmaceutical from research through trials and to market. The failure rate for new pharmaceuticals is roughly equivalent to that of bioscience establishments; nine out of ten developed drugs never make it to the marketplace. The regions with strong research assets, a highly-skilled workforce, supportive climate for entrepreneurship, and effective networks between the academic and private sectors will be poised for success.

Metro Atlanta benefits from a wide range of supportive assets and institutions. Major institutions such as the Centers for Disease Control and Prevention, the American Cancer Society, and the Arthritis Foundation serve as a pull factor for researchers and health care professionals. Emory University ranks 11th in medical research and development expenditures and 27th in biological sciences. The university has partnered with Georgia Tech to establish a bioengineering program that is now recognized as one of the best programs in the country. A variety of other supportive resources, including but not limited to Georgia Bio, the Georgia Research Alliance, the Technology Association of Georgia, the Georgia Center of Innovation for Life Science, and the Innovation Crescent partnership, actively advance bioscience and medical technology innovation and employment in metro Atlanta.

These assets and other locational advantages have helped metro Atlanta and the state of Georgia successfully attract a number of new companies in bioscience and medical technology in recent years. In 2011, Osmotica Pharmaceutical Corporation established a new research and development facility in Marietta, creating more than 150 jobs. In 2012, Baxter International, a vaccine and medical device manufacturer, announced that it would create roughly 1,500 jobs just east of the ten-county metro Atlanta region.

PAPER, PLASTICS, AND CHEMICALS

Primary Sectors: *Paper Manufacturing (NAICS 322); Chemical Manufacturing (325); Plastics and Rubber Products Manufacturing (326)*

Primary Target Markets: *Cherokee, Clayton, Douglas, Fayette, South Fulton, Rockdale*

Metro Atlanta's proximity to Georgia's large natural timberland, the corporate presence of industry leaders such as Georgia-Pacific and Newell Rubbermaid, and an integrated network of petrochemical pipelines are among the many assets that support the region's paper, plastics, and chemicals manufacturing industry. Paper production is partially threatened by rapid digitization, although the greatest threat to U.S. paper and paper product manufacturing operations is likely the comparatively lax environmental regulations found in many competing countries. Chemicals employment is projected to be propped up by pharmaceuticals, while plastics is one of a few major manufacturing sectors that is projected to create significant new employment opportunities domestically in the coming decade. Paper, plastics, and chemicals represent large portions of the manufacturing base in peripheral metro Atlanta counties, particularly Cherokee, Douglas, and Rockdale. Paper product manufacturing alone represents more than three percent of all employment in Rockdale County, more than ten times the national share (0.3 percent).

The region's paper, plastics, and chemicals sector directly employed 22,111 workers in the second quarter of 2011, roughly fifteen percent of Metro Atlanta's total manufacturing employment. Although job losses were observed, plastics and rubber products held up relatively well during the most recent recession in metro Atlanta. Basic chemical manufacturing (including petrochemicals, dyes, and organic chemicals) actually added roughly 100 jobs in the region during the recession, contrary to national trends (-4.1 percent). Other chemical subsectors (pesticides, paints, and pharmaceuticals) were less resilient and experienced considerably greater declines in employment than the average community nationwide. Paper and paper products was hit relatively hard in metro Atlanta during the Great Recession and continued to shed jobs throughout 2011, similar to national trends.

TRANSPORTATION EQUIPMENT

Primary Sectors: *Aerospace Product and Parts Manufacturing (NAICS 3364); Motor Vehicle Parts Manufacturing (3363); Other Transportation Equipment Manufacturing (3369)*

Primary Target Markets: *Cherokee, Cobb, Fayette, Henry*

The transportation equipment sectors of metro Atlanta's production hub primarily includes aerospace and defense manufacturing and motor vehicle parts manufacturing. Although metro Atlanta was once home to two major automobile manufacturing facilities (Ford's Hapeville plant and General Motors' Doraville plant), both facilities closed between 2006 and 2008. Meanwhile, surrounding regions have secured some of the largest automotive manufacturing facilities in recent decades, including but not limited to BMW (Greer, SC), Mercedes-Benz (Vance, AL), Hyundai (Montgomery, AL), Volkswagen (Chattanooga, TN), Kia (West Point, GA). With substantial employment losses in the automotive sector as a result of the two plant closures, the region is home to a manufacturing workforce with specialized skills that supports the production of transportation equipment. Although many have been retrained through the state's technical and community colleges, while others have relocated for positions in newer facilities such as the Kia Motors facility in West Point, the re-employable workforce in metro Atlanta and the region's central location amidst the many aforementioned automobile manufactures makes is a desirable location for automotive components.

On the aerospace side, Lockheed Martin Aeronautics' manufacturing complex in Cobb County is the linchpin aerospace employer for the state and region, yet its ability to draw suppliers seeking reduced transportation costs and enhanced research and development collaborations is largely an untapped opportunity. The Aerospace Engineering program at the Georgia Institute of Technology is widely regarded as one of the best in the world and the school is among global leaders in aerospace-related research and development activity. This unrivaled asset is one that must be effectively leveraged and marketed in developing the transportation equipment subsector.

METAL AND METAL PRODUCTS

Primary Sector: *Fabricated Metal Product Manufacturing (NAICS 332)*

Primary Target Markets: *Douglas, Fayette*

Metal and metal product manufacturing employment has been in decline domestically, demand for metal and metal products is rising internationally at a rapid rate. Construction and automobile demand in large and rapidly-expanding economies such as China, India, and Brazil are fueling global growth. However, excess capacity exists in the United States as well as certain emerging markets, placing downward pressure on profitability, supporting further restructuring and consolidation, and limiting employment growth. Areas within the United States that possess the greatest prospects for growth are anticipated to be those which can offer manufactures superior access to access to markets (via ports and rail networks) and operational efficiencies (such as intermodal capabilities). Individual firms with flexible production processes to accommodate changing needs of major employers such as automotive and aerospace firms, and more innovative firms bringing higher-quality, especially higher-strength, metal and metal products to market, are those that will thrive in the years and decades to come.

While metal and metal products manufacturing activity occurs throughout metro Atlanta, fabricated metal product manufacturing is geographically concentrated in Douglas and Fayette County. Metal and metal products manufacturing within these counties is specifically engaged in the manufacture of architectural and structural metals as well as forging and stamping. Both Douglas and Fayette's architectural and structural metals manufacturing sectors were three times as concentrated compared to the average community nationwide. Metal and metal product manufacturing employment declined during the Great Recession across the metro area but the rate of decline was considerably lower than the rate of national decline. A few new firms have helped buoy the sector; Vestar Technologies opened a new manufacturing and headquarters facility in Newton County, just outside the ten-county metro Atlanta region. The company will create more than 100 new jobs to support its production of metal products used by LED and semiconductor manufacturers.

Such new growth has helped metro Atlanta's metal and metal product sectors perform favorably relative to competing operations in the nearby Birmingham metropolitan area (often referred to as "The Pittsburgh of the South" for its strengths in metal and steel manufacturing). Operations in the Birmingham region are more heavily geared towards primary metal manufacturing (steel mills and foundries) while operations in metro Atlanta are more heavily geared towards metal product manufacturing (such as hardware, springs and wire, and nuts and bolts) Both regions face challenges associated with EPA nonattainment status, which requires manufactures to reduce emissions through investment in environmental improvements or operational limits.

COMPUTER, ELECTRONIC, AND ELECTRICAL EQUIPMENT

Primary Sectors: *Computer and Electronic Product Manufacturing (NAICS 334); Electrical Equipment, Appliance, and Component Manufacturing (335)*

Primary Target Markets: *Cherokee, Cobb, Gwinnett, Rockdale*

Along with many other high-tech manufacturing sectors, computer, electronic, and electrical equipment manufacturing activities have been moving overseas at a relatively rapid pace as China and other increasingly-dominant non-Western economies are heavily investing the sector's growth through infrastructure development, workforce development, and aggressive incentive policies. Between January 2000 and January 2008 (just after the onset of the national recession), national employment in computer and electronic equipment sectors (capturing computers, semiconductors, navigational equipment and communications equipment) declined by roughly 28 percent. Metro Atlanta shed more than 7,000 jobs in the sector, equivalent to roughly 38 percent decline. However, metro Atlanta's electrical equipment sector (capturing household appliances, lighting, and power supply equipment) more than doubled during the same eight-year period, adding nearly 1,900 jobs while the sector declined by more than 25 percent nationwide.

A well-educated workforce, robust telecommunications infrastructure, research at local higher education institutions, and major corporate management functions of producers and consumers of computer and electronic equipment (such as AT&T, NCR, Verizon, and numerous information technology firms) have and will continue to support the viability of computer, electronic, and electrical equipment manufacturing in metro Atlanta. Growth is most likely to occur in niche subsectors such as smart grid technology, instrumentation such as navigational and remote sensing technologies, mobile devices, and others.

Entertainment Hub

Entertainment – encompassing media production, performing arts and sports, attractions, and hospitality – is a critical component to the development of attractive places to live and visit. But aside from providing amenities for residents, travelers, and tourists, the entertainment business can bring considerable new wealth to a community by exporting music, film, television, and experiences to consumers around the world. Metro Atlanta has developed an attractive entertainment hub in recent decades, one that is characterized by diverse and popular music and cable television production, business and leisure travel, and a rapidly expanding market for film production.

On the production side, digital media has spurred a seismic shift in the media production industry, undermining the value proposition of many large-scale music, film, and television production firms. Entertainment firms across the world have been forced to adapt to the changing technological landscape, finding new ways to increase revenue as consumer demand shifts from ownership to access. Many creators – be they writers, composers, designers, or other artists – have ultimately embraced digital distribution to gain greater control over their creations and obtain direct access to their customers.

On the travel and tourism side, the Great Recession has limited business and leisure travel in recent years. Traveler expenditures declined by nine percent nationwide between 2008 and 2009, but travel and tourism has rebounded considerably faster than other sectors of the economy. Hartsfield-Jackson Atlanta International Airport facilitates the movement of more passengers than any other airport in the world, serving as a gateway for travelers to the region and in many cases, the United States. While the region’s vast convention space, trade markets, headquarters presence, and air connectivity have long supported business travel, the 1996 Olympic Games placed Atlanta "on the map" for international tourism. Since that time, downtown Atlanta has grown into a tourism powerhouse, with the opening of the world’s largest aquarium (the Georgia Aquarium) and the new World of Coca-Cola, among other destinations.



Trends

- Widespread adoption of digital media and content subscription services are changing the competitive landscape and profitability of music, film, and television production.
- High unemployment levels and rising fuel prices during the most recent recession have significantly impacted travel and tourism. Many households are choosing "staycations" as a viable means of "getting away" without traveling outside of the region.
- Filming and production activity is becoming more decentralized as states compete for projects with aggressive incentives.
- Young professionals will continue to seek out diverse and amenity-rich communities.
- Uncertainty remains regarding the long-term impact of web-conferencing technologies on business travel.

Advantages

- The state's certified Camera Ready Community program has helped educate professionals regarding the types of assistance needed by film and television crews.
- The Art Institutes of Atlanta, the Savannah College of Art and Design, and numerous other institutions support the development of creative talent in the region.
- Turner Broadcasting System's headquarters is an anchor for the production sector, supporting thousands of professionals in careers from animation to broadcasting.
- Multiple award-winning musicians in every genre has created a culture and network that will support future growth in music production.
- Numerous high caliber performing arts venues give a variety of creative outlets for local and globally renowned artists.
- Multiple long-term opportunities for growth exist with regards to tourism assets, potentially including but not limited to the College Football Hall of Fame, a new football stadium for the Atlanta Falcons, a new symphony hall, and major league soccer.
- Tremendous convention and exhibit space including but not limited to AmericasMart and the Georgia World Congress Center support a vibrant hospitality environment.

Challenges

- Competition for film and television production is growing along with incentives.
- Relatively limited transit capacity and connectivity places metro Atlanta at a disadvantage for some convention and corporate meeting travel.
- High rates of in-migration to metro Atlanta has led to a population that is relatively detached from the region's professional sports teams, resulting in unpredictable attendance and the recent loss of the NHL's Atlanta Thrashers.
- Public funding for the arts and arts education is constantly at-risk.

FILM, MUSIC, AND TELEVISION

Primary Sectors: *Motion Picture and Video Industries (NAICS 5121); Sound Recording Industries (5122); Radio and Television Broadcasting (5151); Cable and Other Subscription Programming (5152)*

Primary Target Markets: *Film and Television Production: All Metro Counties; Broadcasting: Fulton*

Metro Atlanta has a rich history in the entertainment business, emerging as the capital of the South for film, television, and music production. More than 10,000 individuals are employed full-time in the radio and television (network and cable) broadcasting in the ten-county metro Atlanta region, with roughly another 4,000 employed in the motion picture and sound recording sectors. Tens of thousands of other individuals are employed part-time by these industries or are not captured by federal employment surveys that do not cover single-employee establishments (such as contract workers or independent artists).

According to the Georgia Department of Economic Development, television networks, movie studios, production companies and independent producers invested nearly \$700 million in the state of Georgia in the 2011 fiscal year. The region's film industry is emerging as a tremendous economic engine, supported by attractive incentives and the certified Camera Ready program offered by the state. The growth of Georgia's film and television production capacity over the course of the last decade has been exceptional. Around the turn of the millennium, roughly four or five feature films were produced in Georgia each year. In 2010, 18 feature films were produced in the state, followed by 21 in 2011. Six made-for-television films were produced in 2011, up from roughly one or two each year around the turn of the millennium. In 2011, 44 television series were produced in the state, up from roughly one or two each year just a decade ago. The overwhelming majority of this activity was concentrated in metro Atlanta. EUE/Screen Gems Studio, Tyler Perry Studios, and Raleigh Studios are among the major facilities supporting film and television production in the region, with individual communities proving increasingly flexible and supportive in identifying sites for "on-location" filming. But perhaps the region's most widely-recognized mainstay in entertainment production is the Turner Broadcasting System, headquartered in Atlanta and home to major cable networks such as CNN, TBS, TNT, Headline News, Cartoon Network, Boomerang, TruTV, and Turner Classic Movies, among others. The impact of Turner is clear;

Metro Atlanta has a much deeper history in music production; the region has produced countless award-winning and chart-topping artists in nearly every genre, from country to hip hop to rock and roll. According to the Georgia Music Partners, the music industry in Georgia generates an economic impact of \$3.7 billion and supports roughly 20,000 direct and indirect jobs across the state. Although the true number of aspiring, amateur, or professional artists in metro Atlanta is impossible to quantify, employment of promoters and agents representing performance artists has more than doubled since 2000, far outpacing national growth.

ARTS AND ENTERTAINMENT

Primary Sectors: *Performing Arts Companies (NAICS 7111); Spectator Sports (7112); Promoters of Performing Arts, Sports, and Similar Events (7113); Museums, Historical Sites, and Similar Institutions (712); Amusement, Gambling, and Recreation Industries (713)*

Primary Target Markets: *All Metro Counties*

Home to numerous performing arts venues, multiple professional athletic teams, numerous annual sporting and arts events, metro Atlanta's arts and entertainment offerings appeal to a wide variety of tastes.

The City of Atlanta, and particularly Downtown Atlanta, has unsurprisingly emerged as the anchor for large-scale arts and entertainment offerings in the region. However, the City also possesses many smaller establishments as evidenced by its recent first-place ranking in arts-related businesses per capita among 100 large cities in a 2012 Americans for the Arts study covering establishments engaged in performing arts; film, radio and television; visual arts and photography; museums; and arts schools. With the Georgia Dome, Philips Arena, the Georgia Aquarium, the World of Coke, and CNN Center all encircling Centennial Olympic Park, Downtown Atlanta has become a highly-regarded and incredibly concentrated destination for tourists. But the region's numerous other tourism assets, including but not limited to Six Flags over Georgia, Stone Mountain, the High Museum of Art, and Zoo Atlanta are more geographically dispersed and only partially served by transit. Despite the challenges potentially posed by limited transit access, destinations have fared well in recent years leading up to the most recent recession. Since 2000, employment in metro Atlanta's museums, historical sites, zoos, and parks has more than doubled during a time when employment in this sector grew very modestly nationwide (12 percent).

And while these facilities provide tremendous economic impact through tourism, the region is home to countless other assets that provide residents with access to world-class arts and entertainment options, from women's professional soccer (Atlanta Beat) and the Atlanta Ballet in Cobb County to improvisational theater in Inman Park, and from auto racing at Atlanta Motor Speedway in Henry County to gallery walks in Castleberry Hill.

HOSPITALITY

Primary Sectors: *Traveler Accommodation (NAICS 721); Food Services and Drinking Places (722); Passenger Car Rental (53211)*

Primary Target Markets: *All Metro Counties*

According to the Atlanta Journal Constitution, metro Atlanta's hospitality sector is an \$11 billion dollar industry. Accommodating travelers and tourists (as well as residents) – whether at hotels, restaurants, or car rental – is big business. The relative size of metro Atlanta's hospitality sector (particularly its hotels) is not only supported by tourism generated by the aforementioned arts and entertainment attractions, but is also largely due to the immense amount of business, corporate meeting, and convention travel that Metro Atlanta attracts. The Georgia World Congress Center is the fourth largest convention space in the United States, bringing more than one million visitors to Downtown Atlanta each year. AmericasMart is the world's largest, permanent wholesale trade market. Other major facilities around the region, including but not limited to the Cobb Galleria Centre, the Gwinnett Center, the Georgia International Convention Center, and millions of additional square feet of meeting space at the region's hotels combine with the immense connectivity at Hartsfield-Jackson Atlanta Internal Airport to create a vibrant conventions and corporate meetings market that keep hotels filled, cars rented, and restaurants filled.

While traveler accommodation is heavily concentrated in Fulton County, all metro counties possess serve the region's travelers and tourists as interstates weave through all ten counties in the ARC service area. As of 2012, 57 percent of all hotel employment in the 28-county metropolitan statistical area is located in Fulton County. However, prior to the onset of the most recent recession, hotels shed nearly 2,800 jobs in Fulton County between 2000 and 2007, while adding more than 5,000 in the region's other 27 counties.

CONCLUSION: NEXT STEPS

In order to maintain metro Atlanta's competitive position for jobs and workers in an increasingly knowledge-driven global economy, the region's must anticipate and capitalize upon future disruptive technologies, adapt to technological change, and develop new product, process, and service innovations that respond to changing global demand. Innovation opportunities with the greatest development potential are those that capitalize upon the region's knowledge, logistic, production, and entertainment strengths – producing innovations and fueling growth in emerging sectors that leverage the infrastructure, talent, and institutional knowledge that already existent within the regional economy.

In an economic environment where disruptive technology is always on tomorrow's cusp, it is important to ensure that every technology has an equal opportunity to develop. This is to say, successful regional innovation systems will not choose winners and losers, but foster an entrepreneurial environment that develops a diverse number of technologies – giving each technology an equal chance to succeed by letting the market ultimately decide the merits of a particular technology. Successful regional innovation systems place great emphasis on creating an environment that is supportive of new ideas and commercialization. Such innovation systems provide entrepreneurs and businesses access to capital to nurture their ideas and develop a viable business model; connections to other entrepreneurs and subject-matter experts that can improve these business models; and effective systems for bringing academic research and development to the marketplace, among many other attributes.

As metro Atlanta looks to its future, it must have a strategy to support the development a regional innovation system, capable of supporting growth in targeted areas that lie at the aforementioned intersection of pre-existing strengths. Potential areas include, but are certainly not limited to: information security; smart grid and other smart infrastructure technologies; gaming and simulation; and mobile applications.

Information security: The proliferation of digital information and the emergence of cloud computing has increased demands for data security services. Highly-publicized security breaches in recent months have only heightened public awareness and demand for services. With a strong software and IT workforce, and a large base of existing software development companies, IT service providers, and data storage facilities, metro Atlanta stands to benefit from the growing demand for information security. India-based Wipro Technologies opened a new corporate office in Buckhead in 2009, with subsequent expansions bringing employment above 700. The company is expanding its data security and cloud computing offerings.

Smart infrastructure: Smart infrastructure refers to the modernization of various infrastructure systems, from power grids to water and wastewater systems to traffic demand management systems. Smart infrastructure technologies help lower costs, improve efficiency, and increase reliability by leveraging and rapidly analyzing data regarding use. In 2010, GE Energy brought 400 jobs to Marietta to support a new smart grid technology division. In 2011, the Metro Atlanta Chamber identified smart grid technologies as the highest-priority subsector of its targeted sustainability initiatives, based largely on the growth potential and recent successes in Metro Atlanta. In addition to major developments such as

GE Energy's center, and the presence of other major players in smart infrastructure technologies such as Siemens Energy and Automation and Ventyx), many smaller firms have emerged and been successful in securing investment. This includes Verdeeco, an Atlanta-based startup that aids utilities in the analysis of data created by smart meters. Smart infrastructure technologies have the potential to help identify solutions to some of metro Atlanta's most pressing challenges including traffic congestion and water capacity.

Gaming and simulation: Metro Atlanta's IT and software expertise, and world-class engineering and technical training programs, produce a strong talent base that has supported the growth of gaming and simulation operations in metro Atlanta in recent years. The 2005 Entertainment Industry Investment Act helped reduce the tax burden facing entertainment production companies including video game developers; the number of new firm locations and startups has responded. Major developers such as TransGaming and CCP are complemented by many smaller startups, as well as thousands of students pursuing education and training in gaming and simulation technologies at the region's universities and technical colleges. Innovations extend beyond recreational video gaming as simulations for national defense applications are necessary components of Lockheed Martin Aeronautics operations in Marietta, while health care providers and medical schools increasingly rely upon simulators to teach practitioners and students how to use new technologies and apply new techniques.

Mobile technologies: Mobile applications are among the many niche sectors, along with health IT, data security, gaming and simulation, and many others, that possess strong growth potential given the region's information technology, software, and telecommunications backbone. Researchers at Georgia Tech recently developed BrailleTouch, a new application that provides the visually-impaired with the opportunity to type and send text messages without the need to look at a screen. Proximus Mobility, a provider of customized content to mobile phones, recently selected metro Atlanta as its headquarters location, generating more than 100 jobs, in part due to its desire to be near some of its largest clients including Home Depot, Delta Air Lines, CNN, and Coca-Cola.

The aforementioned niche markets are simply example of the types of highly-innovative sectors that, while they may not be as large or mature as Metro Atlanta's primary "hubs" and "nodes," represent areas with strong growth potential and the ability to contribute to metro Atlanta's emergence as a hub for innovation.

This process of creating a new Regional Economic Develop Strategy for metro Atlanta must effectively advance this objective of nurturing an "innovation hub" while also supporting further growth in the region's existing knowledge, logistics, production, and entertainment hubs. This Economic Cluster Review represents the culmination of the research phase of this strategic planning process. The findings of the Competitive Assessment, the Economic Cluster Review, and all public input gathered to date must be carefully considered by regional leadership at its works collaboratively to develop a new roadmap for metro Atlanta's preferred economic future.