



# Commission for a New Georgia

**Strategic Industries Task Force Final Report**

**August 10, 2004**

**David C. Garrett III, Chairman**



## **Introduction (Message from The Chairman)**

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To: The Honorable Governor Sonny Perdue and The Commission for a New Georgia

Atlanta, GA, August 2004

Speaking for the members of the Strategic Industries Task Force, I would like to express our appreciation for the opportunity to participate in this historic and visionary project. Over the past several months, we have surveyed countless reports, both Georgia-based as well as many from other states, in an effort to identify those industries that are currently impacting the State's economy as well as those that should form the basis for economic growth in the coming years. In our deliberations, we also endeavored to identify those best practices that could enhance the state's efforts to nurture economic development and further focus on tactics that could be implemented in the near term that would bring meaning to the strategic industries designation.

When all of our findings and recommendations are crystallized to their essence, we are calling for a seamless, pro-active economic development strategy conducted by people with the power to address the concerns and needs of prospects and existing industry. We are suggesting that this strategy be continually updated and evaluated as the state, its technology base and the market place change. We are also calling for a major independent effort to aid Georgia companies in their efforts to identify and exploit business opportunities in the form of commercially licensable technologies. In this effort, we are not proposing that existing University or Georgia Research Alliance-based technology transfer efforts be replaced. On the contrary, our recommendation is industry-focused and should be viewed as supportive of and additive to existing programs.

We believe there is tremendous untapped potential for economic growth that can be achieved through the formation of university-affiliated research parks as a strategy to support retention and the growth of technology industries in Georgia. Such development, when properly deployed, can be a catalyst for partnership between universities, communities and private companies; further building upon Georgia's significant investment in its research base.

The Task Force wishes to thank the numerous State Agencies that supported our effort, especially the GDED who provided supporting materials, attended meetings and set up over 20 Task Force Listening Sessions around Georgia. We hope that the tools and techniques utilized in this can be enhanced as the state moves forward on these issues so critical to the economic vitality of the State. As the economic situation of the United States evolves, so must Georgia seek to position its development assets so as to ensure that the State remains competitive? If there is anything further that we can do to further support this effort or provide additional information, please do not hesitate to let us know.

Sincerely,

David C. Garrett III, Chairman  
Mallory and Evans Development  
Chairman, Strategic Industries Task Force

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## Introduction

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In March 2004, the Governor of Georgia, through the Commission for a New Georgia, created the Strategic Industries Task Force (SITF). The purpose was specifically to review the State's future potential for strategically targeting growth industries of the future for economic development purposes. The Task Force was given a three-month time period in which to complete its work. During that time period, the Task Force gathered significant input from agencies, attended outreach sessions with private industry groups, and conducted independent assessments.

The Task Force was comprised of the following members.

Dave Garrett, Task Force Chair Mallory & Evans Development LLC Scottsdale	Arnold Tenenbaum Chatham Steel Savannah
James Chavez Tift County Chamber of Commerce Tifton	Joanne Walter WalterPan Blue Ridge
George Israel Georgia Chamber of Commerce Atlanta	Hariette Watkins AGL Resources Atlanta
Melvin Kruger L.E. Schwartz & Son, Inc. Macon	_____
Francis Lott Lott Properties, Inc. Douglas	Barbara L. Stafford, Consultant GT Interests Atlanta
Jimmy Tallent United Community Bank Blairsville	Will Hearn, Consultant UGA Atlanta

## Mission and Methodology

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Objectives of the Strategic Industries Task Force:

1. With an emphasis on statewide benefit, the Strategic Industries Task Force will identify Strategic Industries that are critical to growing and securing the economic well being of the State. The Task Force will identify a methodology for this activity that can be enhanced and refined by enabling agencies.
2. In addition, the Task Force will make recommendations for supporting and enhancing existing industries and overall economic growth.

In developing the recommendations, the Task Force utilized the following four tasks:

**Task 1: Review Existing Studies:** In this phase of work the Task Force reviewed over 2,000 pages of material pertaining to strategic industries in Georgia over the time period 2000-2003 (provided by the newly-named Georgia Department of Economic Development, GDED). The initial list of industries to be reviewed was gleaned from this exercise and presented to the Task Force in March. Subsequent research consolidated the original list down to 10 industry clusters (**See Appendix A**).

**Task 2: Strategic Assessment of Georgia Regions and Assets:** The Task Force prepared detailed profiles on eight regions of the state. This analysis looked at 2- and 3-digit NAICS industry detail to determine employment levels and concentrations across the state as well as their potential for further development. As part of this exercise the Task Force attended numerous industries listening sessions throughout Georgia and consulted with lead economic development agencies. The Task Force also considered an analysis of corporate functions in order to identify potential high job creation areas within each cluster (**see Appendix B-D**).

**Task 3: Cluster Evaluation:** The Task Force developed a methodology for ranking and scoring industry clusters in order to prioritize based on established criteria. The Task Force evaluated input from a variety of third party data sources regarding clusters and gathered outside opinions from industry experts. The results of this phase are contained in this report (**See Appendix E**).

**Task 4: Strategy Recommendations:** The Task Force developed preliminary strategy recommendations that attempt to support a strategic industry initiative overall and specific actions in particular. Further implementation, planning, business development and other actions will need to be the primary scope of work for Georgia's lead economic development agency and its communities and regions.

## Observations

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Throughout the many interview and discussions sessions we attended, the Task Force uncovered several recurrent themes that resounded that will impact the success of future strategies. Many of these relate to how well we currently deploy economic development resources in Georgia. It is clear that the external environment is changing and Georgia needs to do more to remain competitive.

- **How We Organize Ourselves:** Effective and accountable business practices within economic development organizations are required in order to bring the full force and value of State Programs to bear in a focused and highly organized fashion. This requires clear lines of accountability, planning, and annual measurement and review. Currently, Georgia does not have a *comprehensive* statewide Economic Development Plan that recognizes the need for community preparedness, support for existing industry and corporate attraction. Practically speaking, the tactical economic development tools for Georgia reside in different budget areas. A plan is urgently needed that clearly articulates the strengths and weaknesses of the current organizational structure and implementation.

The Governor is best positioned to direct the formulation of this plan given that implementation requires the management of assets that reside across agencies. The Competitiveness Task Force has specifically recommended re-instituting A Governor's Development Council, further pointing out the need for change in current processes. All too often anecdotal evidence suggests that the State's efforts are largely reactive and not well coordinated, despite the fact that "communication" does occur. Those who are held accountable for economic development are almost completely dependent on the goodwill of others to make things happen. This is less than an ideal situation when negotiating with prospects and it is time that Georgia, as many other states have done, take a critical look at the process – while we take pride in the fact that economic development is a team sport, the downside might be that since it is "everybody's business, it is nobody's business."

- **Local and Regional Efforts:** State Government alone will not be able to bring growth across Georgia's 159 Counties. The State needs to do more to encourage regional efforts with such efforts becoming a driving force with State support brought to bear at key moments. This will ensure that there is local "skin in the game" for the long term. Regional partnerships and initiatives where local leadership has evaluated the risks and benefits of planning for economic development should be rewarded and encouraged to the extent possible. Georgia's Joint Development Authority (JDA) law creates a good platform for regional cooperative efforts that are more meaningful and far-reaching. Georgia might consider enhanced incentives for this type of cooperative local activity.
- **Incentives for Strategic Industries:** Georgia's incentive policies must ensure that all of Georgia (and its MSAs) is competitive internationally for corporate investment. State policies must focus primarily on competitiveness with the external environment for attracting companies, when incentives produce a favorable return on investment. Georgia does not have statutory incentive policies that are meaningful to business, and we may be falling further behind in this area as other states move to monetize payroll taxes instead of basic tax credit programs. Too often it appears that Georgia is forced to play last-minute catch-up using non-statutory programs and grants. This Task Force submitted an illustrative Regulatory Framework to the Competitiveness Task Force. (See Appendix F).

## Observations (continued)

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- ***Innovation:*** Innovation is the driving force in the US economy, leading the way to new products and new markets. It leads the way to high-wage job creation and growth in important technology industries of the present and future. Georgia has long recognized that innovation is an important driving force in creating new and important economic development opportunities. The State has invested over \$350 Million in the Georgia Research Alliance, a consortium of research universities in Georgia, and has also worked to create other programs that support this type of economic development in Georgia (ICAPP at The Board of Regents, and Innovation Centers and The Economic Development Institute at Georgia Tech, among others).

As Georgia seeks to advance and reward this type of economic development, more must be done to encourage these types of companies and industries to take root and grow in Georgia. In general, it might be possible to adopt incentive programs, as has been done in other states, that reward innovative companies and their actions in such a way that is favorable to the growth of the State. The specific types of behaviors might include: companies that pay relatively higher wages (than regional average or mean), companies or industries that have relatively higher R&D expenditures, companies/industries that engage in joint research collaborations with the University System of Georgia, companies that make investments in plant, equipment and machinery such that productivity is increased leading to higher real wages, companies that engage in workforce training/education upgrades. Georgia needs to consider incentives that reward innovation in these specific areas as an investment in the future.

- ***Economic Development Building Blocks (Education and Healthcare):*** Georgia must ensure that the building blocks of economic development are in place and supported across Georgia. Corporate investment decisions are made based on a number of specific criteria, but without adequate healthcare and with poor performing education systems, economic development will remain elusive for many Georgia communities and we may find ourselves competing for industries with no future.

Case-in-point: Georgia has a relatively high percentage of population with “just high school” education – and approximately 40% of entering 9<sup>th</sup> graders will not finish High School. At the same time, Georgia will face a significant shortfall of college-educated workers over the next decade. Georgia must have a workforce that can compete internationally for investment activity and in today’s environment, no citizen has the right to stop learning.

Similarly, the availability of healthcare is becoming a more pressing issue. Not only are healthcare costs rising as a percentage of business operating costs, but community hospitals are operating with narrower and narrower margins with few resources to invest in critical improvements. While it may be possible for communities to have some measure of success without quality healthcare infrastructure, the resulting economic development will certainly not be optimal.

## Strategic Industry Criteria

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- The Task Force devised a preliminary set of criteria to evaluate Strategic Industry clusters, subject to the limitations of time, resources and data availability. In utilizing these criteria, the Task Force recognizes that this is just one approach and there may be additional criteria that are used to evaluate clusters on importance to the State. Likewise, Georgia may want to measure additional industry clusters against these criteria or further refine the modeling scoring technique.
- The purpose of this methodology is to prioritize strategic clusters based on established measures so that the state can better focus efforts. There will naturally be a wide range of opportunities that fall outside of these industries that may have strategic value to the State's development efforts.
- The criteria used in this evaluation are:
  - Cluster with Growth Potential – a Strategic Industry cluster demonstrates favorable growth rates nationally indicating a “market of opportunity” and a future.
  - Cluster with Relatively High Wages – a cluster that supports higher income for Georgians. Higher paying industries will typically form the “economic base” of a region.
  - Cluster with Georgia Resources to Build Upon – a cluster that has the potential to succeed based on an existing employment concentration. This measure indirectly measures supporting resources in Georgia.
  - Market Opportunities – are there known or suggested market opportunities upon which to base a strategy going forward?
  - Research Base / Innovation Driven – given that many industries are driven by innovation and technology advancement and Georgia's recognition of research as a critical element supporting economic development, are there strategic research resources available that can be a differentiating factor in the cluster that speak to Georgia's advantages?
- One of our guiding principles is that this process needs to be revisited on an annual basis to measure where we are, what progress we are making and how the state's efforts can become more responsive. One example of a criterion not considered here would be a measure of the cost of an initiative, or the potential economic impact of an industry.

## Summary Recommendations

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### Strategic Industries Task Force Summary of Recommendations:

- |   |         |
|---|---------|
| <u>Recommendation One: Strategic Industries</u> <ul style="list-style-type: none"><li>▪ Strategic and Supporting Industries</li><li>▪ The Potential ROI</li></ul>                 | Page 7  |
| <u>Recommendation Two: Bring Innovation to Georgia's Industries:</u> <ul style="list-style-type: none"><li>▪ Drive Innovation</li><li>▪ Support Existing Industries</li></ul>     | Page 9  |
| <u>Recommendation Three: Best Practices in Economic Development Programs</u> <ul style="list-style-type: none"><li>▪ Accountability</li><li>▪ Relevance</li><li>▪ Focus</li></ul> | Page 10 |
| <u>Recommendation Four: University-Affiliated Research Parks:</u> <ul style="list-style-type: none"><li>▪ Leverage University Resources</li><li>▪ Filling a Gap</li></ul>         | Page 11 |

## Recommendation Number One:

*The Strategic Industries Task Force recommends that the State focus on the following Strategic and Supporting Industry Clusters...*

- **Strategic Industry Clusters**
  - Aerospace
  - Agribusiness
  - Energy & Environmental
  - Healthcare & Eldercare
  - Life Sciences
  - Logistics & Transportation
  
- **Supporting Industry Clusters** that enrich the overall business climate:
  - Advanced Telecommunications
  - Business & Financial Services
  - Multimedia
  - Software Development
  
- Georgia is currently investing in a number of enhancing and enabling initiatives that are important to securing growth across a wide spectrum of industries.

### Strategic Industry Cluster Formation and Growth

**Enhanced and Enabled Through Supporting Initiatives:**

<p><b>Nanotechnology</b> Emerging science based technology that may have wide ranging implications across industries.</p>	<p><b>Software</b> A core resource in Georgia that serves and supports all industries.</p>	<p><b>Entrepreneurship</b> Policies and programs that support and encourages small business formation.</p>	<p><b>Homeland Security</b> Federal research initiative that will have market implications in technology, logistics and other industries.</p>
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**Built Upon a Solid and Diverse Foundation:**

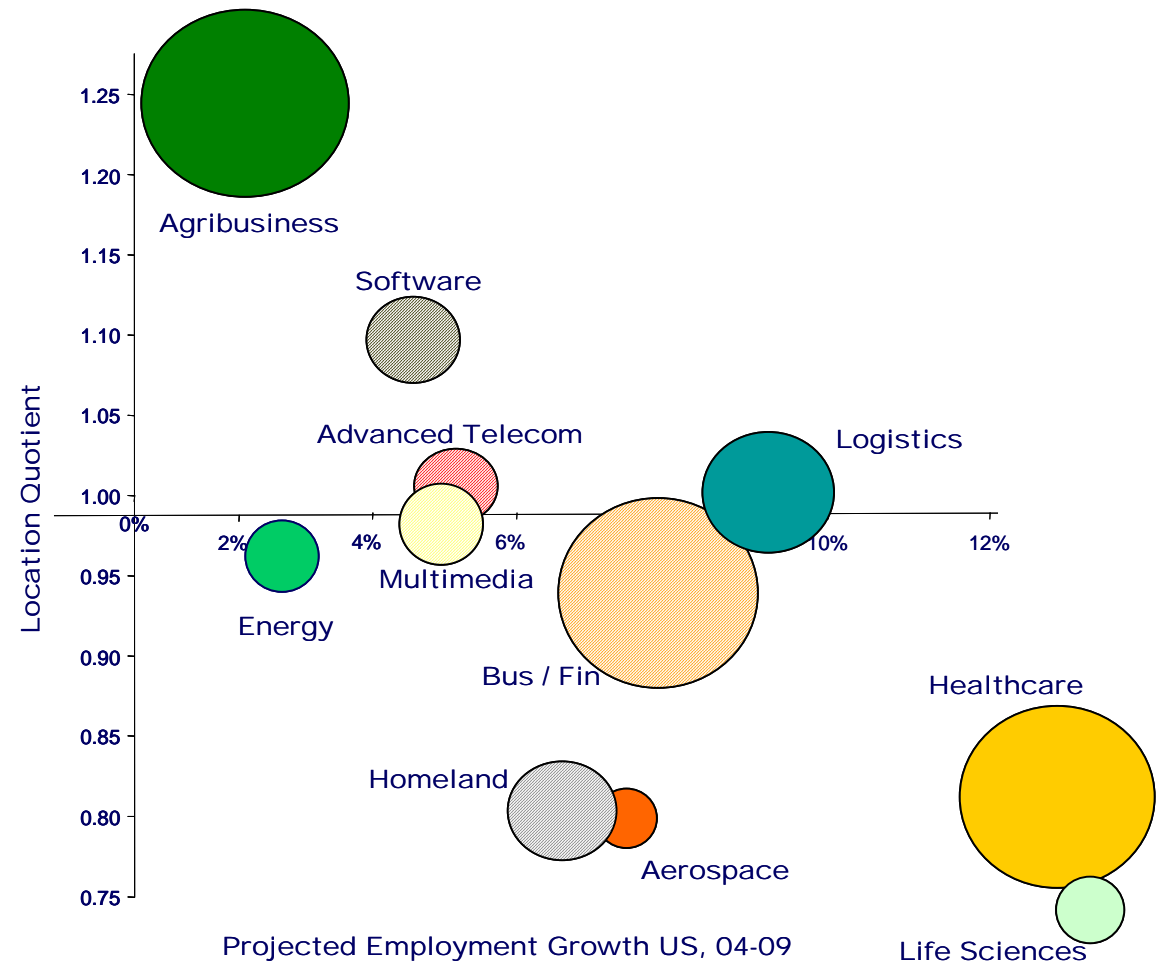
Workforce Availability /Quality	Operating Costs	Operating Environment	Quality of Life
<ul style="list-style-type: none"> <li>▪ Availability of experienced workforce</li> <li>▪ Educational attainment rates</li> <li>▪ Workforce demographics</li> <li>▪ Workforce growth characteristics</li> </ul>	<ul style="list-style-type: none"> <li>▪ Business taxes</li> <li>▪ Index of Workforce Cost</li> <li>▪ Building / Development Cost Index</li> <li>▪ Real Estate Cost Index</li> <li>▪ Utility costs</li> <li>▪ Other cost issues</li> </ul>	<ul style="list-style-type: none"> <li>▪ Air access (1-day meeting)</li> <li>▪ Access to key internal infrastructure</li> <li>▪ Other</li> </ul>	<ul style="list-style-type: none"> <li>▪ Crime rates</li> <li>▪ Local school quality</li> <li>▪ Cost of living</li> <li>▪ Personal taxes</li> <li>▪ Commute times</li> <li>▪ Housing market</li> <li>▪ Arts and recreation</li> <li>▪ Other</li> </ul>

## Recommendation Number One (continued): Small Improvements Yield Big Results

### Comment:

- Based on the work of this Task Force, we recommend that these Strategic Industries form the basis of a strategic approach to economic development. These industries employ 1.7 million Georgians (approximately 34% of the workforce).
- As a group, average payroll is \$55,000 (140% of Georgia average)
- Projected growth could add 30,000 net new jobs over the next five years (10% to the existing base).
- Each additional **10% of growth** would result in additional **3,000** jobs per year, or **\$165 million** in new direct payroll (almost \$10m in recurring state income tax revenue).
- Absent a Strategic Plan that identifies and coordinates strategies across these industries, Georgia may not realize its full potential and, in fact, may potentially lose ground.
- The enabling agency may, upon their discretion, add or delete industries based on an assessment that is objective and reasonable.
- The State's objective is to move bubbles up and to the right.

Georgia Relative Employment Concentration and Growth



**NOTE: Cross-hatching denotes a supporting industry. Bubble size represents relative size of industry cluster.**

## Recommendation Number Two: Bring Innovation to Georgia's Industries

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### Background Discussion

- “New business formation flows directly from research, development and commercialization of new technologies. Business attraction of industrial clusters is advanced by creating unique competitive advantages rooted in the science and technology institutions of a state. Business expansions will accelerate as companies adopt and adapt new technologies to improve the competitiveness of their products and processes. And, finally, business retention is increased as companies are able to solve competitive problems through the application of technology ...” *State Science & Technology Indicators: Fourth Edition; Office of Technology Policy; Washington D.C.*
- According to the above quoted report, Georgia fares well in the formation of new technology firms, but the State's ability to convert research dollars into Gross State Product dollars falls below our neighboring six southern states and in the bottom half of states nationally.
- Federal technology transfer mandates create enormous commercialization opportunities for the institutions and companies that find ways to access them.
- Pushing more research out into industry is challenging. The Southern Growth Policies Board states that unless a company has direct knowledge of a university or a government agency, its research, it may not begin the hunt. In most cases, they do not know what research they are looking for - only that they need product or process innovation.

Next Steps: Georgia needs a statewide, centralized commercialization center that proactively seeks licensable technologies for Georgia's industries.

- Georgia has an opportunity to help our industries, particularly the Traditional Industries and industries-at-risk, become more competitive.
- This Task Force proposes a new public-private partnership focused entirely on industry out-reach for the purpose of understanding competitive issues.
- This entity would become a central point of contact for industry, statewide, to understand the commercialization opportunities available to them, how to become more innovative, and therefore more competitive globally.
- The entity would work through OTLs to identify technologies, wherever they exist, and seek commercial opportunities for Georgia's industries. Recently adopted federal technology commercialization mandates support a central and focused effort to give Georgia's industries a competitive advantage.
- The measurements for success for this type of entity includes,
  - Number of new jobs created
  - Number of new research licenses granted within the state
  - Increase in trade from Traditional Industries
  - Improved performance for Traditional Industries

## Recommendation Number Three – Best Practices in Economic Development Programs

### Background Discussion

- Economic Development in Georgia has long been considered a team sport. There are numerous groups, both public and private that all seek to support and promote Georgia's economic base.
- The economic development game is changing as trade agreements globalize the factors of production. Technology is constantly evolving and industries are in constant change, while new industries appear annually.
- Unfortunately, Georgia's Economic Development Team all too often appears is fragmented and unfocused. While the team sport approach keeps the effort in balance, economic development is no single agency's business in state government. Too often, Georgia makes its processes the prospect's problems.
- This is not a problem unique to Georgia, however other states appear to be responding more rapidly to the winds of change and are developing different operating models.
- The Governor of Georgia is the key individual in setting the tone for economic development – only he can bring focus to the diverse agencies that bring value to the table. This type of leadership is critical in ensuring that these agencies are able to meet the needs of prospects.

*NOTE: See Competitiveness Task Force recommendations as to a Governor's Development Council and other issues.*

Next Steps: Georgia's economic development efforts should be directed by the Governor so as to ensure that they are consistent in their implementation, seamless in their accessibility to third parties, and future-focused to assure their relevance in a framework that establishes time-sensitive goals and measures results.

- The State urgently needs to develop a plan with measurable goals that are reviewed and revised annually. The plan must ensure that efforts are focused, consistent, relevant and responsive to the marketplace.
- Georgia separates marketing and project management from actual finance programs, leading to a gap between what can be promised and potentially delivered. Only the Governor can establish clear guidelines in this area.
- Given the nature of site location projects, the Governor should consider the establishment of a SWAT team (comprised of GDED and DCA) to gather pertinent information on projects requiring a decision in the next 60 days.
- Other states that have developed alternatives to traditional economic development have seen results. Notably, Florida has privatized marketing efforts through Enterprise FL, and has consolidated workforce programs. After a slow start this has resulted in several high profile projects (Scripps Institute) this year. PA, SC and NC have made notable changes over the last five years.

## Recommendation Number Four: Establish University-Affiliated Research Parks

### Background Discussion

- Research parks serve as locations where universities, communities and private companies can interact. Georgia currently lacks a university-affiliated research park of the scope required to be competitive. University-affiliated research parks are unique resources that allow a shared risk/return proposition for universities, private enterprises and the public sector.
- The role of the university-affiliated research park in economic development is as a catalyst for developing an industry cluster built around research at a university (and commercializing federal technologies). Research parks serve to enable partnerships and support business formation around university research.
- Research parks serve as locations for companies emerging out of technologies on campus and for expanding technology companies. They are important assets in recruiting federal research labs, a critical component to growing the life sciences.
- Georgia has had several high profile economic development prospects that have shown a strong interest in research parks. Research parks are attractive to companies because they offer the following location attributes:
  - University Partnership Opportunities
  - Unique Labor Resources
  - Specialized Resources and Capabilities
  - Quality of Life
  - Industry Cluster (Talent and Support)

Next Steps: Georgia should promote the establishment, where feasible, of university-affiliated research parks that leverage our research efforts, economic development assets and the state's private sector.

- There are emerging research park projects in GA, however the form of these projects and their location will impact the success of an overall strategy – for example a university affiliated research park in downtown Atlanta would have a different cost structure than in a non-metro area in close proximity to a research university. Both of these, however, can serve unique markets.
- This type of activity places unique demands on the academic institution and there are several “models” that exist for research park development. These can be completely public to completely private sector-driven.
- Initial thinking suggests the following success factors:
  - A location that is attractive from a site location standpoint as demonstrated by previous siting interest/activity.
  - A site in close proximity to a research university with interest in innovatively expanding its research base and growing partnerships with industry.
  - A site that is master planned, governed and administered by a university research foundation or other university entity such that they see it as core to the research enterprise.
  - Commitments to fund research park operations such that ground leases could be utilized to engage private developers, resources and clients.
  - A site that is supported by a joint development authority that can provide, infrastructure (broadly defined), marketing and other implementation support.

## Short Term Project Ideas For Jump-Starting Strategic Industries

*This Task Force uncovered dozens of Georgia-Grown ideas and initiatives that confirmed the viability of the proposed industries. These projects can form the basis of an initial strategic economic development plan for each industry in Georgia. In every case we encourage the enabling body to take ownership and involve all of Georgia's economic development programs. Several of these projects can have quick implementation schedules.*

Project Idea Industry	Industry Specific							Broadly Supporting				
	Prototype Project	Research Led Initiative	Integration with Existing Industries	Designate Industry Czar	Other Initiative	Enhanced Trade Promotion	Other Public-Private Idea	Innovation Center	General Incentives	Specialized Incentives	Integration with Local Efforts	Research Park
<b>Priority Clusters</b>												
Aerospace			✓			✓		✓	L			
Agribusiness	✓ 1					✓		P	L			
Advanced Telecommunications									L		✓	✓
Energy and Environmental	✓ 2			L				P	L	L		✓
Healthcare and Eldercare				✓	✓				L	✓	✓	
Life Sciences	✓ 3			L	✓			P	L	P		✓
Logistics and Transportation	✓ 4							✓	L		✓	
<b>Supporting</b>												
Business and Financial Services			✓						L			
Homeland Security and Defense		✓	✓						L			
Multimedia							✓	L	L	P/L		✓
Software Development									L			

**NOTE:**

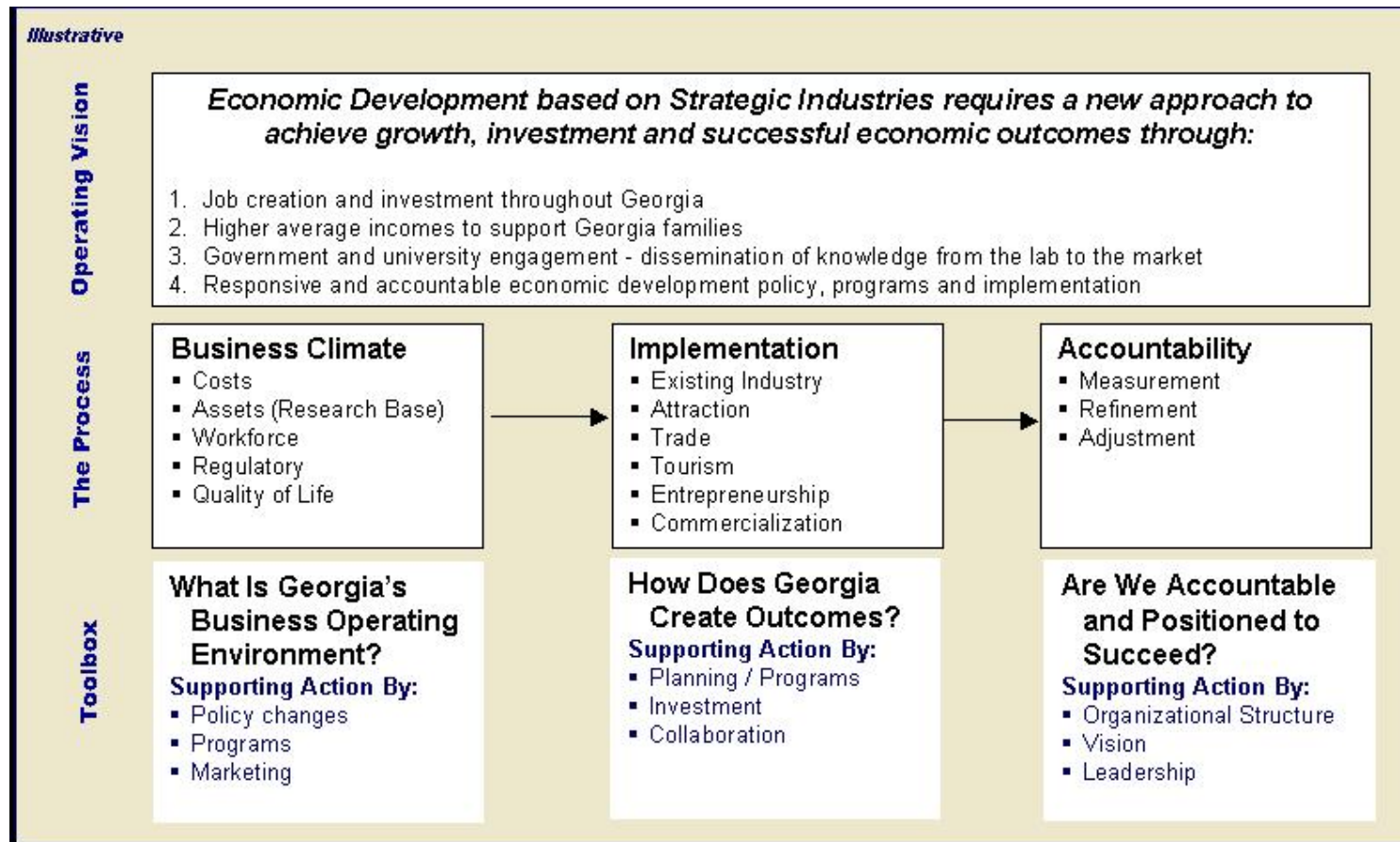
P = A known proposed activity  
 L = Idea promoted through industry listening session  
 Checkmark = Idea Floated by Task Force

**FOOTNOTES:**

1. Bio-refinery
2. Waste to Green Energy
3. Vaccine / Drug Discovery Initiative
4. Multi-modal

## Vision, Process, Toolbox – Things to Consider

*During this process, the Task Force recognized the numerous programs and efforts across Georgia that support economic development. The model below captures some of these important elements. We submit that in order for the State to reach its full potential, that all of these components be considered in the process, and that they support the Strategic Vision. Additionally, Georgia must ensure that the tools at our disposal adequately support each of the main processes.*



## **APPENDICES**

**Appendix A**

**Commission for a New Georgia**

**Notes Relating to Prior Topical Studies**

**Presented at 4/2/04 Meeting**

### **Exhibit A: Georgia State Economic Cluster Profile, Porter – Harvard University, 2002.**

Purpose: To evaluate industry clusters of significance in Georgia, to establish a basis for regional economic development in GA. Primary assumption is that “traded clusters” drive economic development (Economic Base Theory). This study includes an analysis of metro areas in the state.

Methodology: Data driven analysis – employment, growth, wages, state rankings. Also looked at innovation measures for the state.

#### Output:

- Identifies GA share of employment in traded clusters and growth in these clusters
- Identifies supporting functions for clusters and final consumption goods and services
- Finds that traded clusters are typically higher wage – Natl. Average traded cluster salary = \$44,000 vs. local cluster = \$28,000
- Identifies innovation as critical to cluster success
- Finds that Georgia led national growth rates (1990-1999) 3.1 vs. 1.9%. Georgia wages roughly on par with national average (-4%), wage inflation slightly higher in GA, traded cluster growth in GA outpaced US 2.3 vs. 1.2%, 4 patents per 10,000 residents in GA vs. 8 nationally.
- Identifies high wage clusters (IT, Power Gen., FIRE, Comm. Eqp. Oil and Gas, Distribution Services, Business Services, Aerospace, Medical Devices, Forest Products).
- Provides information on industry composition for other SE states.
- Provides ranking information from publications comparing GA to other states (noted that GA 42<sup>nd</sup> on healthiest state ranking, 36<sup>th</sup> on education ranking).
- Findings: 30% of GA workforce in traded clusters. GA economy diversified. Recommends focusing on future growth areas and not on industries that are in decline or subject to intense competitive pressure. Focus on strengthening regional traded clusters that show particular promise: power generation, textiles, forest products, aerospace, business services, chemical products, Ag products, transportation and logistics. Recommends on-going effort to support and grow regional clusters. Due to high pay and activity also mentions: plastics, automotive, hospitality and tourism, IT & knowledge creation, medical devices, biopharmaceuticals.

### **Exhibit B: Georgia Policy and Research: Industries of the Future**

Purpose: Identifies GA targets, traditional strengths, growth potential, etc. for the following: forestry, textiles, back office, tobacco, automotive, nano, bio, aero, value added ag, logistics, plastics, tourism, HQ, eco-manufacturing, micro manufacturing, material sciences.

### **Exhibit C: Maritime Logistics Innovation Center – to be addressed by Jeff Strane**

### **Exhibit D: A Framework to Make GA a Leader in the Biosciences, Battelle, 2002**

Purpose: To evaluate GA’s strengths in the biosciences and to recommend strategies to advance this industry in the state.

Methodology: Data and program analysis of GA. Documents number of companies, growth and other measures. Focus on fostering an environment supportive of the industry.

#### Output:

- Concludes that GA has the potential to develop a leading bioscience center as long as universities, state gov, and businesses are supportive and invest in the initiative.
- GA has a rapidly expanding bioscience base with excellence in key areas, but is not in top tier nationally.
- GA has a diversified research base (medical, biological, and agricultural sciences).
- GA is well positioned to leverage this diversified base in the following areas: infectious disease, cardiovascular treatments, ag and animal bio, behavioral neuroscience. Emerging strengths in cancer, drug discovery and vaccine development, advanced medical treatment and devices.
- Universities have been slow to foster an entrepreneurial culture – commercialization efforts are beginning.
- Small but growing cluster in Atlanta, Athens and Augusta – not yet critical mass. Mostly in traditional manufacturing segments with strong growth in drugs, pharma, research and testing.
- The cancer coalition provides good opportunity to create and enhance partnerships with biotechnology and pharma companies.
- Georgia lack domicile VC. Few resources to support entrepreneurs and start-up companies.
- Lacks facilities to accommodate the needs of emerging companies.
- Additional and significant investments are required to compete with other states – many states are competing for a role in the industry.
- Success factors: engaged universities, intensive networking, available capital, discretionary R&D funding, workforce, specialized facilities, supportive public policy, long-term perspective.
- 4 strategies to advance the industry with action items for each.
- Supports expanding workforce development programs, developing research parks, connections with industry, etc.
- Recommends an umbrella organization be formed: The Georgia Bioscience Consortium to include all stakeholders and identifies priority actions (\$6-\$7 million annually).

**Exhibit D: Overview of GRA Innovation Grants Program (new program) and information on the history and performance of GRA.**

**Exhibit D: Continuum, Georgia Research Alliance Publication.**

Purpose: GRA program overview and description piece; additional 05 GRA funding requests are attached. This section provides insight into the areas and strategies that GRA continues to follow in support of technology-led economic development and building a world-class research enterprise in GA.

Purpose: Marketing document for GRA programs.

**Exhibit E: Resource Profile, Life Sciences/Biotechnology Resource Profile, Moran, Stahl and Boyer 2003.**

Purpose: Commissioned by GDITT, this profile is used to distribute to companies considering GA as a business location. Many of the data elements are commonly requested by real estate and consulting firm working on behalf of clients considering relocation or expansion.

Outcomes:

- Snapshot for companies requiring initial information
- Finds that the Atlanta – Athens enrollment in biotech programs places it near the top in the nation
- Atlanta-Athens corridor currently a top 10 in the nation for R&D life sciences funding

**Exhibit F: Georgia Incubators and affiliated Companies – listing of companies in ATDC incubators.**

**Exhibit G: 5-Year Planning Process for Technology Transfer at MCG and UGA, commissioned by Board of Regents in 2003, Hamer, Siler George Associate and MIT.**

Purpose: To evaluate the technology transfer operations at MCG and UGA, to identify areas of collaboration, quantify the economic impact of technology transfer and to make recommendation to enhance this area.

Outcome:

- Provides tech transfer financial projections, forecast of tech transfer achievement and forecasted economic and financial impacts for MCG and UGA.
- Identifies priority recommendations for UGA and MCD – goal setting, internal marketing, conflict of interest, internal and external communication, training and budget.
- Provides detail on best practices for peer institutions and considerations for each institution.
- Recommends establishing technology fairs to enhance collaboration.
- Notes the importance of business incubation, start-up support and business plan competitions to enhance technology transfer activities.
- Notes that research collaboration between MCG and UGA is increasing.
- Notes GRA's venturelab program as an enhancement on each campus – also joint effort to maximize roles in the Georgia Cancer Coalition.
- Recommends transnational collaborative grants, collaborative research incentive funds and collaboration of tech transfer staffs to identify and advance collaboration opportunities.
- Interviewed 68 stakeholders across GA to assess tech transfer perceptions. Need for more staff was identified as an issue.
- Compares key metrics against peer institutions to determine potential future outcomes on tech transfer.

**Exhibit H: The Science and Engineering Workforce – Realizing America's Potential, NSF 2003.**

Purpose: Considers the problem of growing unemployment of scientific and engineering talent in some fields given the downturn in the business cycle and seeks to look at federal policy to combat the issue.

Outcomes:

- Identifies science and technology as the engines of growth in the US economy with 2 significant threats: global competition for talent and a decline in native-born scientists and engineers.
- Supports more resources for American undergraduates in S&E fields and more support for graduate level study.
- Supports more federal government spending on R&D.
- Supports better pay for teachers in these fields.

**Exhibit I: National Nanotechnology Initiative – R&D Supporting the Next Industrial Revolution, Supplement to the President's FY 04 Budget.**

Purpose: Report provides information on the Nanotechnology Industry, its emerging importance, scope and opportunity to transform many areas of the economy – Defines Nanoscience as the study of the unique properties of matter that occur at extremely small scales. The report goes on to describe the National Nano Initiative established in 2001, a collaboration of 15 governmental agencies.

Outcomes:

- Report outlines investment areas for R&D expenditures – from robotics to photomaps, etc.
- \$860 million requested for the initiative in 04, a 10% increase over 03, mostly for supporting university-based research programs. The report goes on to identify available funding by agency.
- The report goes on to provide a nice overview of project opportunities within each grand challenge area.

**Exhibit J: Issues to Consider in Structuring Research/Technology Parks, William N. Hearn, Prepared for the Commission on Technology Transfer, NASULGC – 2003.**

Purpose: This document lays out critical factors that should be considered before adopting a university-affiliated research park strategy. The document provides background information on university-affiliated research parks and proposes a common management structure.

**Exhibit K: An economic impact analysis of selected life sciences companies in the state of Georgia, Caesar, Hearn, Tanner, 2003 – prepared for GA Senate Hearings, 2003 – commissioned by a group of private sector companies.**

Purpose: This report measures the economic impact of 2 prototype bioscience companies in Georgia, a start-up company and a large-scale biomanufacturing facility.

Outcomes:

- The report identifies the direct indirect and induced impacts of these two types of enterprises.
- The report demonstrates the potential return of investment to the state on capturing these types on investments in Georgia.
- The report supports the need for greater resources for facilities financing in Georgia and also other investment means to recruit this industry to the state.
- The study identifies the various real estate challenges encountered in this market segment.

**Exhibit L: Overview of GA economic development history and especially using science-based development techniques**

**Exhibit M and N: Georgia Power Brochure**

**Additional Studies That Were Reviewed:**

- Metro Atlanta Bioscience Council Report (McKinsey), 2002
- Commercialization of Research within the USG, The need for IP Databases Washington Advisory Group
- Centers of Innovation Document

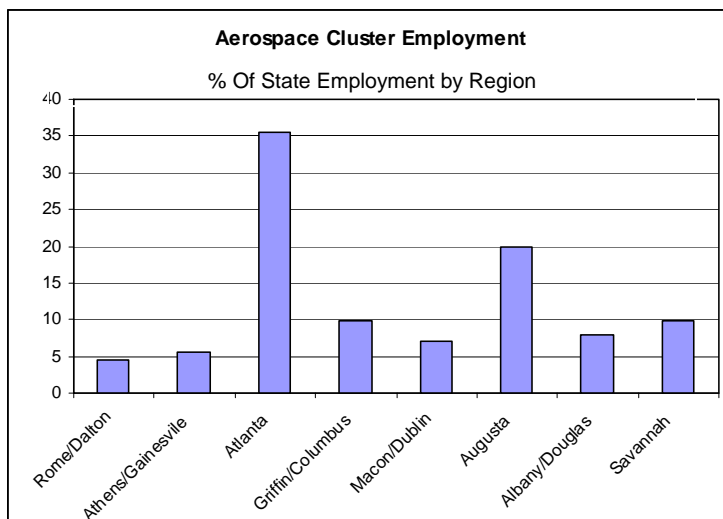
**Appendix B**

**Commission for a New Georgia**

**Assessment of Georgia Cluster Employment and Regions**

**Presented at 6/2/04 Meeting**

## Strategic Cluster Employment by Region



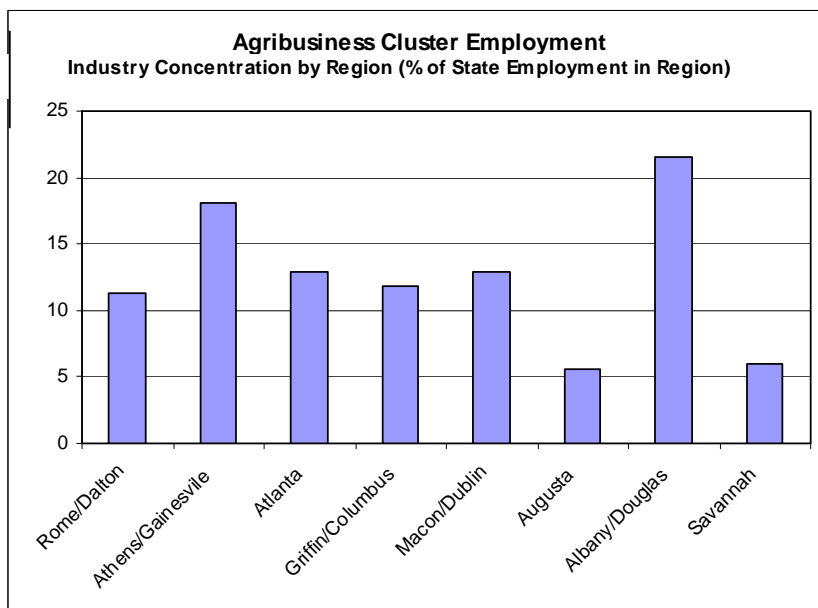
Aerospace	
4 Digit NAICS	Industry
333200	Industrial Machinery Manufacturing
333500	Metalworking Machinery Manufacturing
333600	Engine, Turbine, and Power Transmission Equipment Manufacturing
336400	Aerospace Product and Parts Manufacturing
336900	Other Transportation Equipment Manufacturing
541700	Scientific Research and Development Services

### Focus on Aerospace and Defense

- The aerospace and defense industry is generally performing well, led by increases in defense spending. All major defense contractors reported double-digit revenue increases in 2003. Cuts in the defense budget will limit growth going forward.
- The Department of Homeland Security will be taking over some of the Defense Budget items and will be an important driver going forward. Homeland Security is expanding traditional defense areas to include unified communications, imaging systems and surveillance equipment and software.
- Aircraft and shipbuilding remain the mainstays of the industry with aircraft construction focused on Boeing's 7E7 and the Airbus 380. Outsourcing for the 7E7 will be more significant than ever, with roughly 38% of parts for the airbus 380 currently coming from US suppliers, an ideal opportunity for Georgia manufacturers. Airbus currently has 130 orders from 11 customers for the 380, yet to be built.
- Georgia a top 10 employer in aerospace cluster employment (Porter Study) and has significant companies and supporting infrastructure in this area (including Georgia Tech programs and a new Innovation Center in Macon/Warner Robbins).
- A potential Mars exploration program could add an entirely new dimension to the effort.
- Projected revenues in this segment should average 7-8% annually through 2007.

Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company

## Strategic Cluster Employment by Region



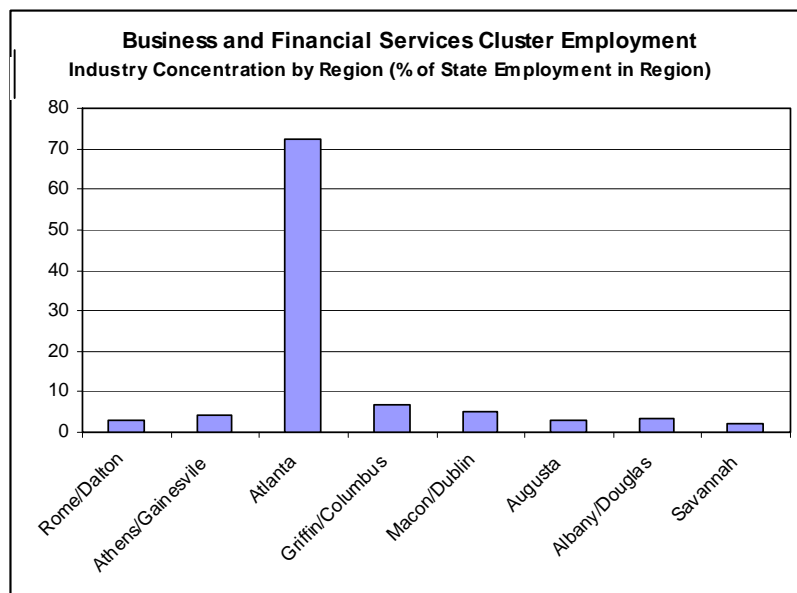
### Focus on Agriculture

- Negative trends in agriculture fueled by mad cow disease and other related issues are largely behind the industry and demand has turned favorable.
- In general, prices are on the rise – international markets are driving demand. Exports to China rose 140% last year. Trade deals currently under negotiation could benefit US producers.
- Federal government support for the industry is a strong driver and in doubt over the near term. Oil prices are another threat, though wages tend to rise more slowly than in other segments.
- Projected revenue growth in the 2-3% range projected annually through 2007.

*Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company*

Agribusiness	Industry
4 Digit NAICS	Industry
111100	Oilseed and Grain Farming
111200	Vegetable and Melon Farming
111300	Fruit and Tree Nut Farming
111400	Greenhouse, Nursery, and Floriculture Production
111900	Other Crop Farming
112100	Cattle Ranching and Farming
112200	Hog and Pig Farming
112300	Poultry and Egg Production
112400	Sheep and Goat Farming
112500	Animal Aquaculture
112900	Other Animal Production
113100	Timber Tract Operations
113200	Forest Nurseries and Gathering of Forest Products
113300	Logging
114100	Fishing
114200	Hunting and Trapping
115100	Support Activities for Crop Production
115200	Support Activities for Animal Production
115300	Support Activities for Forestry
311100	Animal Food Manufacturing
311200	Grain and Oilseed Milling
311300	Sugar and Confectionery Product Manufacturing
311400	Fruit and Vegetable Preserving and Specialty Food Manufacturing
311500	Dairy Product Manufacturing
311600	Animal Slaughtering and Processing
311700	Seafood Product Preparation and Packaging
311800	Bakeries and Tortilla Manufacturing
311900	Other Food Manufacturing
312100	Beverage Manufacturing
312200	Tobacco Manufacturing
321100	Sawmills and Wood Preservation
321200	Veneer, Plywood, and Engineered Wood Product Manufacturing
321900	Other Wood Product Manufacturing
322100	Pulp, Paper, and Paperboard Mills
322200	Converted Paper Product Manufacturing
325300	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing
333100	Agriculture, Construction, and Mining Machinery Manufacturing

## Strategic Cluster Employment by Region



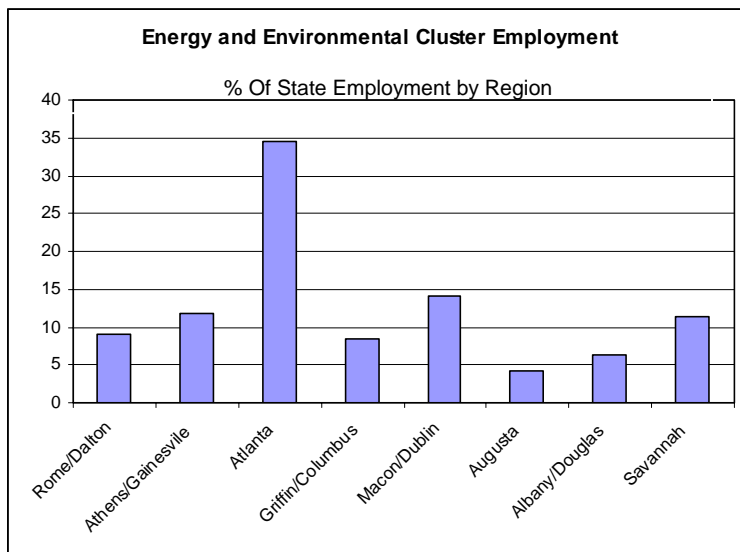
Business and Financial Services	
4 Digit NAICS	Industry
514200	Data Processing Services
521100	Monetary Authorities - Central Bank
522100	Depository Credit Intermediation
522200	Nondepository Credit Intermediation
522300	Activities Related to Credit Intermediation
523100	Securities and Commodity Contracts Intermediation and Brokerage
523200	Securities and Commodity Exchanges
523900	Other Financial Investment Activities
524100	Insurance Carriers
524200	Agencies, Brokerages, and Other Insurance Related Activities
525100	Insurance and Employee Benefit Funds
525900	Other Investment Pools and Funds
541600	Management, Scientific, and Technical Consulting Services
551100	Management of Companies and Enterprises

### Focus on Finance and Insurance Companies:

- Georgia is a leading business services center in the Southeast – also this appears to an industry with a strong future where Georgia has the assets to compete nationally. Macro drivers for this industry are fairly good, weighed down by consumer debt. Mortgage lending remains standout market segment. The need for redundant facilities (disaster recovery) and efficiency will continue to drive change in this industry. Georgia a top 10 employers in Business and Financial Services cluster employment.
- Georgia boasts strong public and private business schools that support this industry – the industry also employs a broad range of skill sets from clerical employees to management and technical (software skill sets).
- Advances in technology and integration of services help to ensure that this industry will continue to thrive and pay well. Economic growth should support growth over the next several quarters.
- The rally in financial services is supporting growth in the insurance industry. Increasing market share in China is expected to support growth going forward. Lack on new blockbuster products hinders growth, but employment growth will support a solid recovery.
- Revenues projected in the 6-7% annually through 2007.

*Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company*

## Strategic Cluster Employment by Region



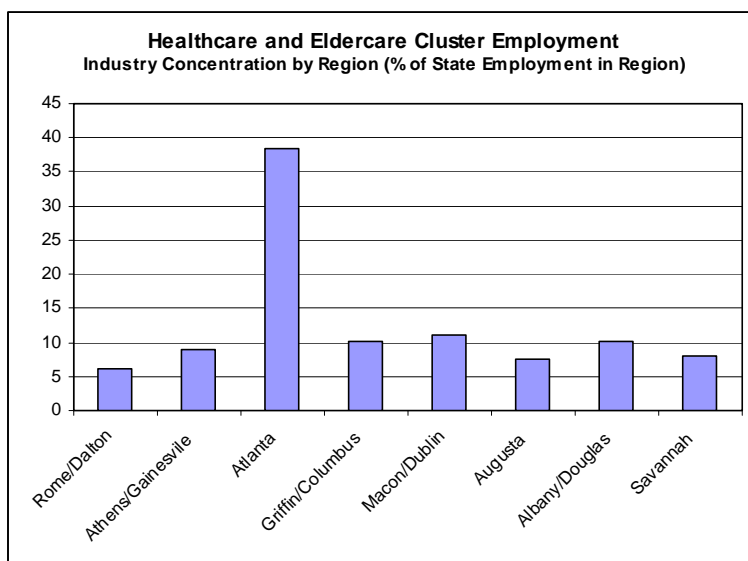
Energy and Environmental	
4 Digit NAICS	Industry
211100	Oil and Gas Extraction
212100	Coal Mining
212200	Metal Ore Mining
212300	Nonmetallic Mineral Mining and Quarrying
213100	Support Activities for Mining
221100	Electric Power Generation, Transmission and Distribution
221200	Natural Gas Distribution
221300	Water, Sewage and Other Systems
324100	Petroleum and Coal Products Manufacturing
333400	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing
333600	Engine, Turbine, and Power Transmission Equipment Manufacturing
541700	Scientific Research and Development Services
562200	Waste Treatment and Disposal
562900	Remediation and Other Waste Management Services

### Focus on Environmental Services

- Steady revenue gains in 2003 and continued growth in 2004. The ongoing recovery is leading to increased demand for environmental clean-up and waste management. The environmental services segment is a mature market that is not expected to experience rapid growth. Moderate gains can be expected, but not huge growth.
- The healthcare industry has been an important driver of demand for environmental services, one of the best performing industries in the US economy. Disposal of medical waste is highly regulated, boosting demand and allowing firms greater pricing power.
- The Defense Department is another major driver in this industry, with the agency requesting close to \$4.0 Billion for environmental initiatives. Another \$8.6 Billion is expected to flow through the Department of Energy.
- High energy costs threaten to weigh on profits in 2004. And if this situation persists, the thrust for alternative energy sources and "green power" will pick up momentum.
- Some of the greatest opportunities will come from overseas where strong growth will generate opportunities for environmental services. Strong economic growth would benefit the domestic industry as well. Demand for alternative and renewable energy creating opportunities for production of alternative energy, such as Wind Systems (GE Power Systems).
- Projected revenue growth in the 4-5% range through 2007.

Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company

## Strategic Cluster Employment by Region



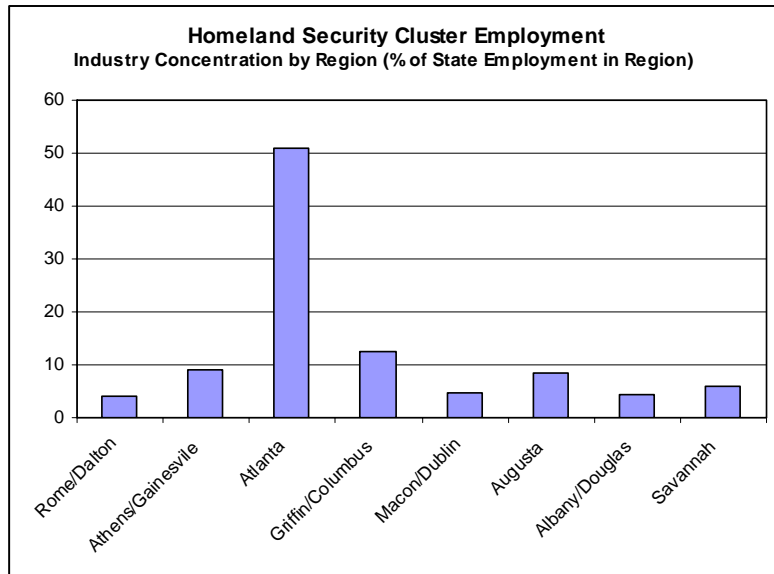
Healthcare and Eldercare	
4 Digit NAICS	Industry
339100	Medical Equipment and Supplies Manufacturing
621400	Outpatient Care Centers
621500	Medical and Diagnostic Laboratories
621600	Home Health Care Services
621900	Other Ambulatory Health Care Services
622100	General Medical and Surgical Hospitals
622200	Psychiatric and Substance Abuse Hospitals
622300	Specialty (except Psychiatric and Substance Abuse) Hospitals
623100	Nursing Care Facilities
623200	Residential Mental Retardation, Mental Health and Substance Abuse Facilities
623300	Community Care Facilities for the Elderly
623900	Other Residential Care Facilities

### Focus on Medical Supplies and Healthcare

- The medical device and equipment industry is expanding at a steady clip with strong sales and growth rates in 2003-2004. External demand is rising with export growth soaring above 10% nationally. Net operating margins soared above 10% in 2003. Rebounding world markets are also driving increased profits.
- The job market in this industry is strong, posting accelerated growth. There is very little downside risk in this industry with an ageing population – the picture weighed down by decreasing availability of venture capital.
- Technology is a key driver in this area with advances in spinal injury treatments, cardiac rhythm treatments and orthopedics. Demand for noninvasive procedures expected to provide robust growth opportunities going forward (heart valve repair, for example).
- Recently announced improvement by the Centers for Medicare and Medicaid Reimbursements should add growth as they are allowing more reimbursement for outpatient services. They are committed to including medical technology in their systems.
- Next generation services involve creating new forms of molecular medicine, improved nano-scale diagnosis and treatment, significant investments in biotechnology and cross application with nano.
- Ties to life sciences area.
- Near term outlook is strong, weighed down by reduced government support for equipment purchases.
- Projected revenue growth in the 7-8% range.

*Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company*

## Strategic Cluster Employment by Region



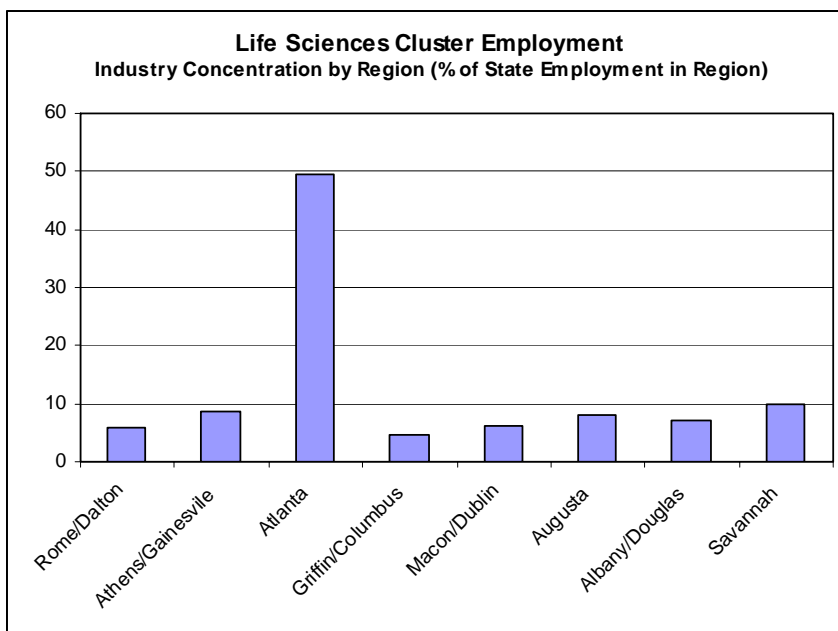
Homeland Security	
4 Digit NAICS	Industry
333200	Industrial Machinery Manufacturing
334300	Audio and Video Equipment Manufacturing
334400	Semiconductor and Other Electronic Component Manufacturing
334500	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
334600	Manufacturing and Reproducing Magnetic and Optical Media
335900	Other Electrical Equipment and Component Manufacturing
488100	Support Activities for Air Transportation
488200	Support Activities for Rail Transportation
488300	Support Activities for Water Transportation
488400	Support Activities for Road Transportation
488500	Freight Transportation Arrangement
488900	Other Support Activities for Transportation
541700	Scientific Research and Development Services
561700	Services to Buildings and Dwellings

### Focus on Homeland Security

- Georgia, as in many other states, has an office of homeland security to support nation security interests. The federal government is rapidly increasing spending in this area and a special effort should be placed on bringing federal research dollars in this segment to the state.
- Actual economic development activity – investment and job creation – may well fall in to other segments such as logistics and transportation (new technologies for monitoring shipments and maintaining safety), Life Sciences (combating bioterror), and advanced communications (imaging, surveillance and other communications equipment)

*Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company*

## Strategic Cluster Employment by Region



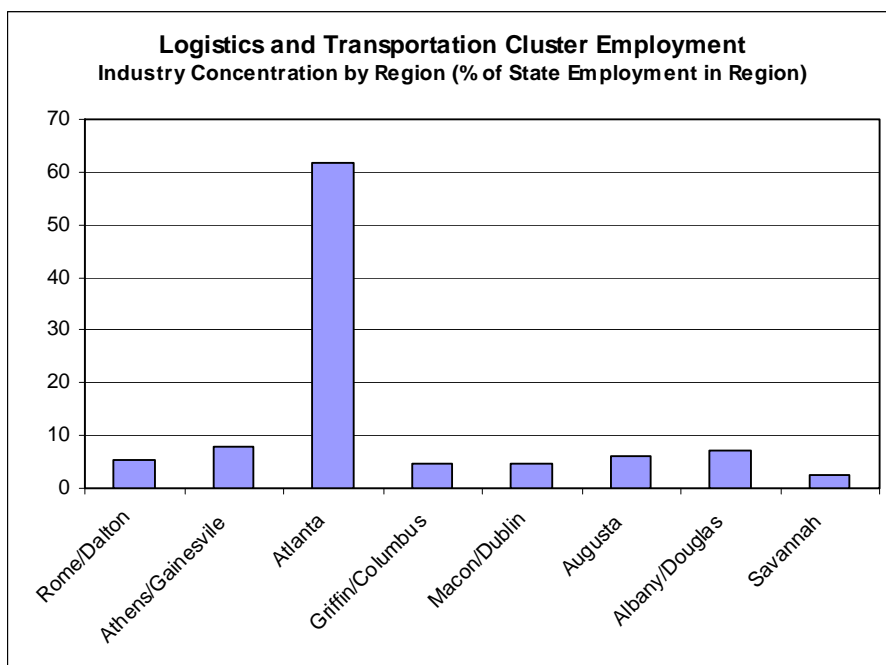
Life Sciences	
4 Digit NAICS	Industry
325100	Basic Chemical Manufacturing
325400	Pharmaceutical and Medicine Manufacturing
334500	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
339100	Medical Equipment and Supplies Manufacturing
541700	Scientific Research and Development Services
541900	Other Professional, Scientific, and Technical Services
621400	Outpatient Care Centers
621500	Medical and Diagnostic Laboratories

### Focus on Pharmaceuticals and Life Sciences

- Georgia is ranked 8<sup>th</sup> in the number of bioscience companies in the US (up from 9<sup>th</sup> in 2003) according to the E&Y national survey. The Centers for Disease Control's presence in Atlanta is an asset with 6,500 employees with significant growth planned. 10-year plans call for 2.5 million square feet of wet lab and other research-related support facilities.
- Georgia is leading the way in promoting new curricula to support life sciences: Georgia Tech's Bioengineering Program – UGA's Regulatory Science Program. Georgia has a strong, diverse and growing research base, fueled by state investments in the Georgia Research Alliance over the past decade (roughly \$26 million annually). Successful incubation programs at state and private universities are fueling the industry's growth.
- Large-scale biomanufacturing facilities seek a technically skilled workforce (Hall, Barrow, Newton, and Douglas Counties have all been evaluated for these types of facilities). A balanced strategy can benefit metro and non-metro areas.
- The large pharma industry is in a period of transition and high centered in NJ and the Atlantic seaboard with NC emerging as a national contender. The pipeline for new drugs is empty and there is a shift to new research areas, often focusing on rare conditions.
- Pricing pressure is extreme as potential federal regulation looms.

Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company

## Strategic Cluster Employment by Region



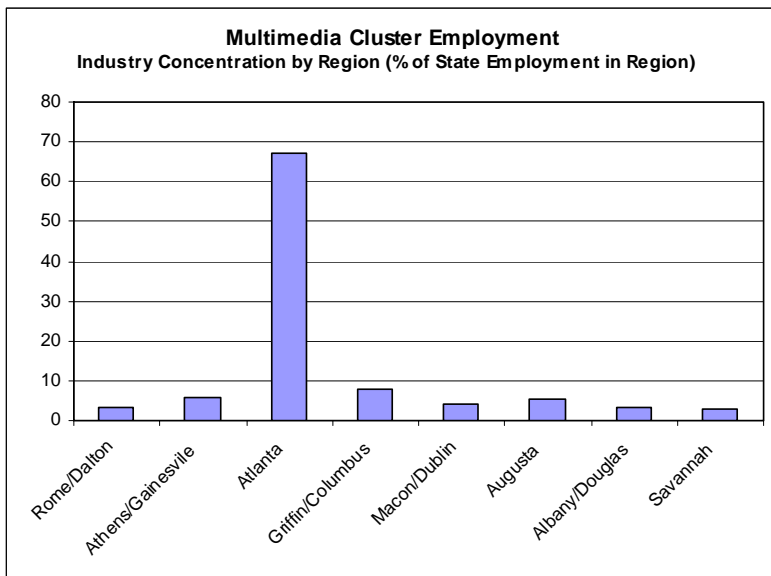
Logistics and Transportation	
4 Digit NAICS	Industry
336100	Motor Vehicle Manufacturing
336200	Motor Vehicle Body and Trailer Manufacturing
336300	Motor Vehicle Parts Manufacturing
336600	Ship and Boat Building
481100	Scheduled Air Transportation
481200	Nonscheduled Air Transportation
482100	Rail Transportation
483100	Deep Sea, Coastal, and Great Lakes Water Transportation
483200	Inland Water Transportation
484100	General Freight Trucking
484200	Specialized Freight Trucking
485100	Urban Transit Systems
485200	Interurban and Rural Bus Transportation
488100	Support Activities for Air Transportation
488200	Support Activities for Rail Transportation
488300	Support Activities for Water Transportation
488900	Other Support Activities for Transportation
493100	Warehousing and Storage

### Focus on Logistics, Wholesale Trade and Trucking

- Porter Study notes that Georgia has 4<sup>th</sup> largest logistics hub in US – anchored by world’s busiest airport, outstanding road infrastructure and port facilities. Leading industrial engineering programs at Georgia Universities – The Logistics Institute at Georgia Tech and – Global Logistics Innovation Center being developed at Georgia Tech are assets.
- The transportation industry is responsive to the business cycle and is already moving to a more stable expansionary trend. Freight traffic is up and tonnage index was up 6.2% from a year ago.
- UPS, Airlines, Manhattan Associates and other leading transportation companies in the state, support potential for growth.
- International trade flows are another driver and contributing to growth in transportation services. The movement to and from ports is an area of significant attention and trucking firms are instrumental to this. Intermodal transportation, with containerized cargo being a central focus, will become increasingly important to realizing a competitive advantage in Georgia.
- Legislative issues are also important drivers: highway spending bill is facing significant cuts. Current level would still represent a slight increase in spending.
- Near term developments may be in the area of rapid delivery of small cargo – trucking firms may seek merger opportunities with companies providing new solutions in this area.

Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company

## Strategic Cluster Employment by Region



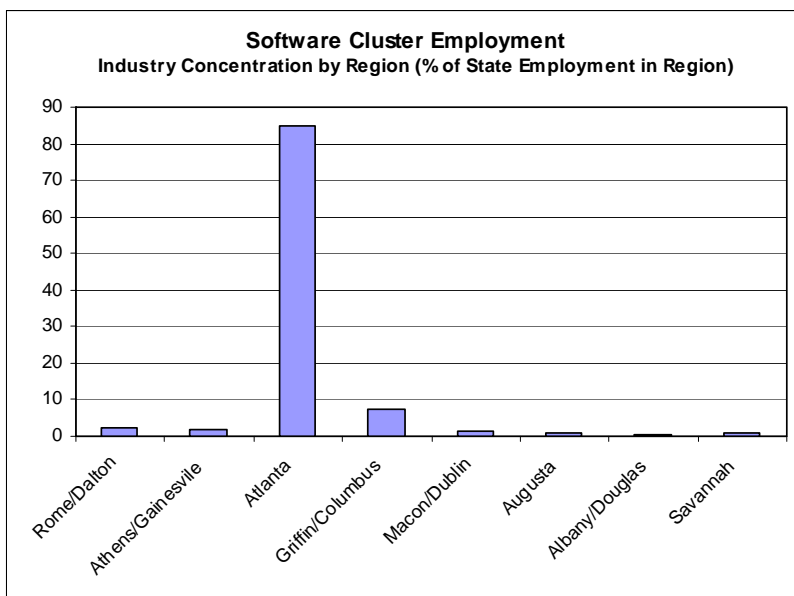
Multimedia	
4 Digit NAICS	Industry
323100	Printing and Related Support Activities
334300	Audio and Video Equipment Manufacturing
334600	Manufacturing and Reproducing Magnetic and Optical Media
335100	Electric Lighting Equipment Manufacturing
335900	Other Electrical Equipment and Component Manufacturing
511100	Newspaper, Periodical, Book, and Database Publishers
512100	Motion Picture and Video Industries
512200	Sound Recording Industries
513100	Radio and Television Broadcasting
513200	Cable Networks and Program Distribution
711300	Promoters of Performing Arts, Sports, and Similar Events
711400	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
711500	Independent Artists, Writers, and Performers

### Focus on Entertainment

- Firm growth trajectory predicted for this industry. Thomson Financial counted 460 industry transactions valued at over \$36 Billion. Improved cashflow leading to more deal making in 2004 and M&A activity across media – News Corp's 34% stake in Direct TV, for example.
- Consumer conditions are continuing to improve over the year ahead, but consumer spending will likely remain muted, due to high debt levels. Low dollar values abroad should help revenue picture domestically.
- Online music industry is looking to extend reach internationally with up to 50 new music download service expected to go online in 2004.
- Technology is the main engine of growth with emerging technologies opening up new entertainment distribution channels, primarily via the internet. Digital technologies will open doors for new markets not yet part of the industry. M&A activity over the past decade (Time Warner, Vivendi) is still being rationalized in the market, slowing growth somewhat.
- Film industry being driven by production costs, with marketing costs mounting. These issues surround the success or failure of a movie production. In TY, distributors are gaining power at the expense of content providers.
- Efficient new technologies: duplicating, copying, packaging CDs, unlimited supply of download content will continue to drive costs down. Long term success driven by success of newly streamlined businesses, cutting and divesting, product improvement.
- Revenue growth through 2007 projected at ~8%.

*Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company*

## Strategic Cluster Employment by Region



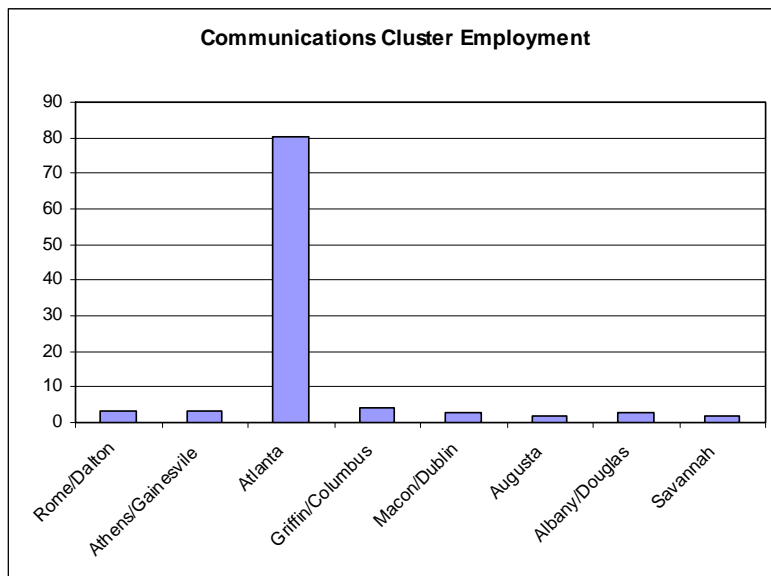
Software	
4 Digit NAICS	Industry
511200	Software Publishers
514101	Information Services
514200	Data Processing Services
541500	Computer Systems Design and Related Services

### Focus on Computer Software and Services

- Experiencing an accelerated cyclical rebound with improving revenue growth in recent quarters. Corporations well in to computer hardware replacement cycle – consumer spending on software up 8.5% In recent quarters, with corporate software investment climbed 11% in 2003, with 8% projected in 2004.
- Overall business conditions are good with companies having ample investment for growth. Large mergers (Oracle – Peoplesoft) have been stymied by Justice Department, setting the stage for enhanced competition.
- Accelerating job growth predicted in US; companies selling globally are benefiting from declining US dollar. Weak currency increases the value of international sales.
- Outsourcing is slowing job growth in IT, accounting, customer service, and even software development. Domestic IT services firms are benefiting from this trend. International outsourcing able to provide services for 25% of costs, threatening US economy.
- Key drivers: Digital TV, broadband Internet access, multimedia integration / wireless – market largely driven by innovation.
- Average revenue growth through 2007 is ~7.5%.

*Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company*

## Strategic Cluster Employment by Region



### Communications

#### 4 Digit NAICS

#### Industry

334100	Computer and Peripheral Equipment Manufacturing
334200	Communications Equipment Manufacturing
334400	Semiconductor and Other Electronic Component Manufacturing
513300	Telecommunications

#### Focus on Semiconductors and Equipment

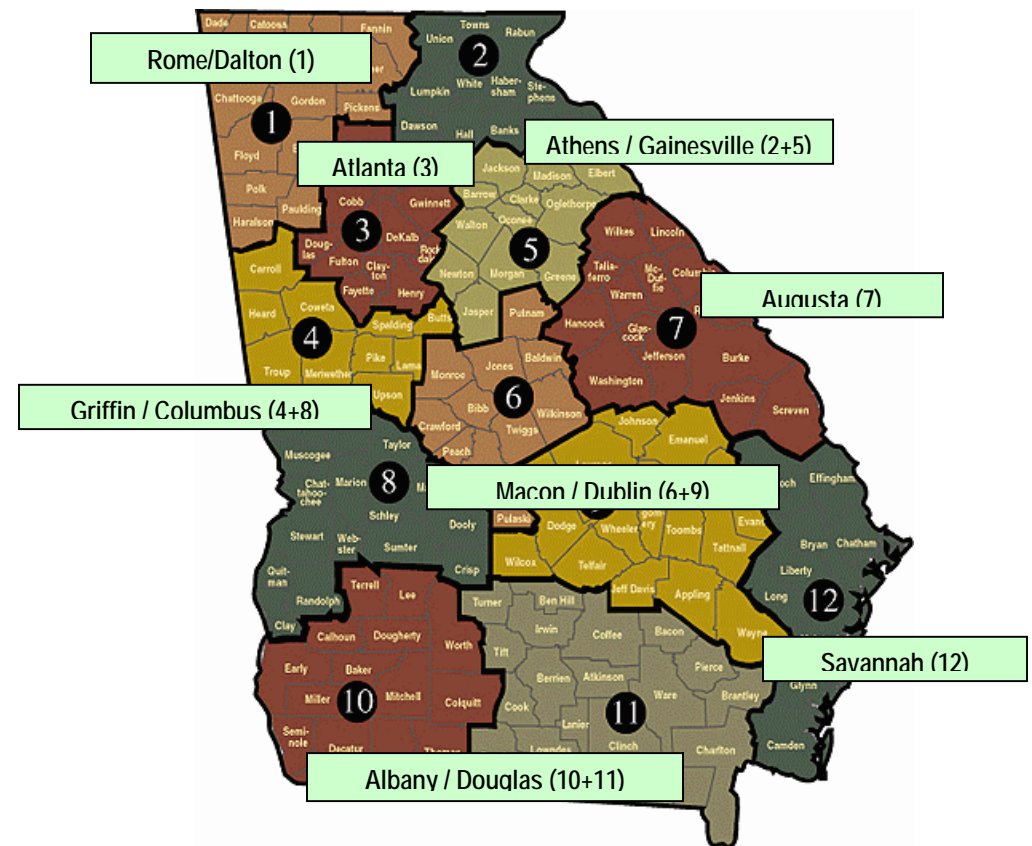
- Semiconductors are continues to experience a strong cyclical upturn driven by rising unit sales. Rising investment in IT should support this cluster going forward through business investment and healthy consumer spending on electronics.
- Bonus depreciation rules, set to expire this year, will further drive purchases by businesses, as a 50% depreciation will be allowed in year 1. A weak dollar is supporting profitability in international markets.
- China is rapidly becoming the largest user of chips (accounting for 40% of global chip sales) and a huge market for consumer products and related products. China currently imports 80% of the chips it consumes (\$2.5 Billion from the US). A 17% VAT in China has led to many US firms setting up operations in China.
- Strong growth in computer sales in driving industry growth from all major end user groups. with businesses accounting for more than 50% of domestic sales.
- Georgia is well positioned from an asset standpoint, with leading programs in advanced telecommunications across the state. Georgia has outstanding resources in Radio Frequency Technologies, telecom, software publishing and internet areas. The convergence of these areas should provide the state with a competitive advantage.
- Projected revenues through 2007 should approach 5-6% annually.

*Data gleaned from Economy.com, 2004, provided to SITF by Georgia Power Company*

## Regions of Georgia

- For the purposes of this regional economic analysis, the following regions are utilized. There are 8 regions total (4 less than Department of Community Affairs Delivery Areas and 1 more than Georgia Tech EDI Regions).
- Based on available information this grouping seems to make the most sense and achieves the result of not breaking the state into too many parts and breaking out the impacts of Atlanta.
- Information provided in this report contains the following data elements and is supporting information for the strategic industries task force:
  - 2-digit NAICS (North American Industrial Classification System) Regional employment, output and earnings for 2004-2009.
  - Tables are sorted by location quotient (measure of industry concentration vs. the US Average) and location quotients for the state as a whole are provided.
  - 3-digit employment for industries with >500 employees for top performing 2-digit industries are presented in order to further identify industry segments by region.

Georgia Regions (Strategic Industries Task Force)



## Albany/Douglas Economic Development Region

Albany/Douglas		2004 Employment		2004 Output (\$000s)		2004 Earnings (\$000s)			Employment Concentration	
2 Digit NAICS Industry		#	% of State	Total	% of State	Total	Average	% of State	Region L.Q.	State L.Q.
11	Agriculture, Forestry, Fishing and Hunting	22,112	28.1%	\$3,658,555	27.5%	\$558,766	\$25,270	27.5%	3.78	0.82
32	Manufacturing (materials)	28,728	14.6%	\$4,538,466	11.8%	\$950,153	\$33,074	12.1%	1.96	1.17
31	Manufacturing (Food)	25,011	11.2%	\$3,966,955	10.6%	\$658,952	\$26,346	10.1%	1.50	2.20
92	Public Administration	60,994	9.9%	\$2,673,365	8.4%	\$2,021,505	\$33,143	8.4%	1.34	1.06
62	Health Care and Social Assistance	43,828	9.4%	\$1,827,684	7.9%	\$1,233,936	\$28,154	8.0%	1.27	0.80
44	Retail Trade	37,230	8.6%	\$1,598,615	6.2%	\$652,784	\$17,534	6.2%	1.16	1.09
33	Manufacturing (metals and machinery)	19,592	8.1%	\$3,398,302	6.2%	\$744,659	\$38,008	6.9%	1.08	0.71
45	Retail	13,326	7.8%	\$534,956	6.6%	\$217,213	\$16,300	6.6%	1.05	0.97
81	Other Services (except Public Administration)	14,202	7.6%	\$602,642	5.4%	\$228,788	\$16,110	5.4%	1.02	0.90
23	Construction	17,592	6.7%	\$1,549,009	5.0%	\$518,464	\$29,472	5.1%	0.90	1.03
72	Accommodation and Food Services	24,005	6.2%	\$576,957	4.4%	\$230,769	\$9,613	4.4%	0.83	1.00
42	Wholesale Trade	14,728	5.9%	\$1,075,757	3.3%	\$463,731	\$31,486	3.3%	0.80	1.06
21	Mining	455	5.4%	\$64,224	5.0%	\$18,896	\$41,530	5.1%	0.73	0.50
22	Utilities	1,438	5.0%	\$493,470	4.4%	\$90,975	\$63,265	4.3%	0.68	1.20
48	Transportation and Warehousing	6,604	4.8%	\$955,949	5.4%	\$217,294	\$32,903	3.5%	0.64	1.14
49	Transportation and Warehousing	3,246	4.7%	\$225,210	3.9%	\$136,090	\$41,925	4.5%	0.64	1.20
52	Finance and Insurance	9,371	4.7%	\$956,460	3.6%	\$354,570	\$37,837	3.0%	0.63	0.88
71	Arts, Entertainment, and Recreation	2,178	4.5%	\$106,575	3.5%	\$37,323	\$17,136	3.1%	0.61	0.66
53	Real Estate and Rental and Leasing	3,398	4.5%	\$439,324	2.0%	\$66,126	\$19,460	2.3%	0.61	0.97
56	Administrative / Support / Waste Management / Remediation	17,503	4.1%	\$477,589	3.2%	\$328,920	\$18,792	3.0%	0.56	1.12
61	Educational Services	2,443	3.0%	\$76,577	2.4%	\$53,600	\$21,940	2.3%	0.40	0.81
55	Management of Companies and Enterprises	3,301	2.8%	\$58,967	1.6%	\$164,215	\$49,747	1.6%	0.38	1.06
54	Professional, Scientific, and Technical Services	7,325	2.7%	\$427,802	1.5%	\$224,936	\$30,708	1.4%	0.36	0.94
51	Information	4,306	2.4%	\$701,398	2.0%	\$218,232	\$50,681	1.8%	0.33	1.22
	Total	382,916		\$30,984,808		\$10,390,897				
	Average		7.2%		5.9%		\$30,435	5.8%		

NOTE: Data provided for employment, output and earnings by the Carl Vinson Institute of Government, The University of Georgia. Data are sorted by regional location quotient, with other data being shown for analysis or comparative purposes. The location quotient is a relative measure of industry concentration – in this case regional employment vs. US average industry concentration. For interpretation a LQ of 1.0 means that the region has the same industry concentration as the US economy overall – higher LQ indicates greater industry concentration at the regional level etc.

## Albany/Douglas Economic Development Region (continued)

Select 3-Digit Industries Within Top Performing 2-Digit Industries:

2 Digit NAICS	3 Digit NAICS	Industry	2004 Employment
11	111	Crop Production	6,140
31	314	Textile Product Mills	37,854
31	313	Textile Mills	21,974
31	311	Food Manufacturing	6,648
31	315	Apparel Manufacturing	1,601
31	312	Beverage and Tobacco Product Manufacturing	976
32	326	Plastics and Rubber Products Manufacturing	7,045
32	325	Chemical Manufacturing	5,508
32	323	Printing and Related Support Activities	2,650
32	327	Nonmetallic Mineral Product Manufacturing	2,263
32	322	Paper Manufacturing	1,803
32	321	Wood Product Manufacturing	1,792
33	332	Fabricated Metal Product Manufacturing	4,588
33	337	Furniture and Related Product Manufacturing	3,249
33	333	Machinery Manufacturing	2,820
33	336	Transportation Equipment Manufacturing	2,729
33	335	Electrical Equipment, Appliance, and Component Manufacturing	2,011
33	339	Miscellaneous Manufacturing	1,679
33	331	Primary Metal Manufacturing	1,660
33	334	Computer and Electronic Product Manufacturing	537
62	622	Hospitals	10,390
62	621	Ambulatory Health Care Services	9,795
62	623	Nursing and Residential Care Facilities	4,616
62	624	Social Assistance	4,254

## Athens/Gainesville Economic Development Region

Athens/Gainesville		2004 Employment		2004 Output (\$000s)		2004 Earnings (\$000s)			Employment Concentration	
2 Digit NAICS Industry		#	% of State	Total	% of State	Total	Average	% of State	Region L.Q.	State L.Q.
31	Manufacturing (Food)	40,006	17.9%	\$6,112,057	16.3%	\$1,020,393	\$25,506	15.6%	2.09	2.20
11	Agriculture, Forestry, Fishing and Hunting	13,404	17.0%	\$2,226,192	16.7%	\$347,111	\$25,896	17.1%	2.00	0.82
33	Manufacturing (metals and machinery)	36,245	14.9%	\$7,436,218	13.6%	\$1,512,050	\$41,717	13.9%	1.75	0.71
21	Mining	1,234	14.7%	\$137,195	10.8%	\$39,901	\$32,335	10.8%	1.72	0.50
32	Manufacturing (materials)	24,312	12.3%	\$4,369,717	11.3%	\$874,842	\$35,984	11.2%	1.44	1.17
44	Retail Trade	45,446	10.5%	\$2,369,900	9.1%	\$967,749	\$21,294	9.1%	1.23	1.09
23	Construction	26,864	10.2%	\$2,656,385	8.5%	\$832,756	\$30,999	8.1%	1.20	1.03
72	Accommodation and Food Services	37,105	9.5%	\$998,950	7.7%	\$397,705	\$10,718	7.6%	1.11	1.00
22	Utilities	2,685	9.4%	\$960,806	8.5%	\$179,063	\$66,690	8.4%	1.10	1.20
45	Retail	15,264	8.9%	\$643,667	7.9%	\$261,424	\$17,127	7.9%	1.05	0.97
71	Arts, Entertainment, and Recreation	4,135	8.6%	\$218,783	7.2%	\$84,008	\$20,316	6.9%	1.01	0.66
61	Educational Services	7,043	8.6%	\$220,777	6.9%	\$158,891	\$22,560	6.9%	1.01	0.81
62	Health Care and Social Assistance	38,303	8.2%	\$1,718,861	7.4%	\$1,155,138	\$30,158	7.5%	0.97	0.80
81	Other Services (except Public Administration)	15,257	8.2%	\$752,121	6.8%	\$267,535	\$17,535	6.3%	0.96	0.90
42	Wholesale Trade	18,004	7.2%	\$1,744,229	5.4%	\$752,020	\$41,770	5.4%	0.85	1.06
92	Public Administration	43,642	7.1%	\$1,888,883	5.9%	\$1,429,054	\$32,745	5.9%	0.83	1.06
56	Administrative / Support / Waste Management / Remediation	26,397	6.2%	\$897,869	6.0%	\$527,703	\$19,991	4.8%	0.73	1.12
52	Finance and Insurance	11,577	5.8%	\$1,297,086	4.8%	\$473,878	\$40,933	4.0%	0.68	0.88
53	Real Estate and Rental and Leasing	4,128	5.5%	\$761,239	3.4%	\$103,460	\$25,063	3.6%	0.64	0.97
48	Transportation and Warehousing	5,718	4.1%	\$597,703	3.4%	\$186,367	\$32,593	3.0%	0.48	1.14
54	Professional, Scientific, and Technical Services	10,955	4.0%	\$696,479	2.4%	\$366,356	\$33,442	2.2%	0.47	0.94
51	Information	6,531	3.7%	\$945,710	2.6%	\$347,879	\$53,266	2.9%	0.43	1.22
49	Transportation and Warehousing	2,446	3.6%	\$175,059	3.1%	\$93,583	\$38,260	3.1%	0.42	1.20
55	Management of Companies and Enterprises	3,156	2.7%	\$63,113	1.7%	\$175,759	\$55,690	1.7%	0.31	1.06
	Total	439,857		\$39,888,999		\$12,554,625				
	Average		8.7%		7.4%		\$32,191	7.3%		

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## Athens/Gainesville Economic Development Region (continued)

Select 3-Digit Industries Within Top Performing 2-Digit Industries:

2 Digit NAICS	3 Digit NAICS	Industry	2004 Employment
11	111	Crop Production	12,622
11	113	Forestry and Logging	634
31	311	Food Manufacturing	22,092
31	313	Textile Mills	12,040
31	315	Apparel Manufacturing	4,215
31	314	Textile Product Mills	1,319
32	321	Wood Product Manufacturing	6,126
32	325	Chemical Manufacturing	5,138
32	327	Nonmetallic Mineral Product Manufacturing	4,973
32	326	Plastics and Rubber Products Manufacturing	4,665
32	323	Printing and Related Support Activities	2,340
32	322	Paper Manufacturing	1,031
33	336	Transportation Equipment Manufacturing	8,712
33	332	Fabricated Metal Product Manufacturing	7,335
33	333	Machinery Manufacturing	5,530
33	335	Electrical Equipment, Appliance, and Component Manufacturing	4,684
33	339	Miscellaneous Manufacturing	4,521
33	337	Furniture and Related Product Manufacturing	2,349
33	334	Computer and Electronic Product Manufacturing	2,033
33	331	Primary Metal Manufacturing	1,081
62	622	Hospitals	15,532
62	621	Ambulatory Health Care Services	11,344
62	624	Social Assistance	5,918
62	623	Nursing and Residential Care Facilities	5,509

# Atlanta Economic Development Region

Atlanta		2004 Employment		2004 Output (\$000s)		2004 Earnings (\$000s)			Employment Concentration	
2 Digit NAICS Industry		#	% of State	Total	% of State	Total	Average	% of State	Region L.Q.	State L.Q.
55	Management of Companies and Enterprises	96,708	82.1%	\$3,345,194	88.6%	\$9,315,985	\$96,331	88.6%	1.61	1.06
54	Professional, Scientific, and Technical Services	213,605	78.3%	\$24,822,418	86.6%	\$14,472,643	\$67,754	87.7%	1.54	0.94
51	Information	135,580	76.3%	\$29,958,349	83.6%	\$10,062,925	\$74,221	82.8%	1.50	1.22
48	Transportation and Warehousing	95,186	68.8%	\$12,983,586	73.4%	\$4,840,281	\$50,851	77.3%	1.35	1.14
53	Real Estate and Rental and Leasing	51,523	68.2%	\$18,006,592	81.0%	\$2,294,780	\$44,539	80.0%	1.34	0.97
56	Administrative / Support / Waste Management / Remediation	286,655	67.8%	\$11,154,382	73.9%	\$8,369,060	\$29,196	76.7%	1.33	1.12
42	Wholesale Trade	167,267	67.2%	\$25,257,540	77.7%	\$10,890,086	\$65,106	77.7%	1.32	1.06
52	Finance and Insurance	128,185	64.2%	\$19,236,057	71.7%	\$8,955,231	\$69,862	75.4%	1.26	0.88
61	Educational Services	51,160	62.5%	\$2,199,799	68.8%	\$1,580,970	\$30,902	68.7%	1.23	0.81
71	Arts, Entertainment, and Recreation	28,341	59.0%	\$2,074,494	68.0%	\$870,889	\$30,729	71.2%	1.16	0.66
49	Transportation and Warehousing	38,563	56.2%	\$3,561,959	62.2%	\$1,639,083	\$42,504	54.1%	1.11	1.20
23	Construction	142,432	54.2%	\$20,024,931	64.4%	\$6,603,984	\$46,366	64.6%	1.07	1.03
81	Other Services (except Public Administration)	99,004	53.0%	\$6,948,229	62.4%	\$2,700,838	\$27,280	64.0%	1.04	0.90
72	Accommodation and Food Services	197,888	50.7%	\$7,901,105	60.7%	\$3,190,896	\$16,125	60.8%	1.00	1.00
45	Retail	81,684	47.8%	\$4,472,316	55.2%	\$1,818,028	\$22,257	55.2%	0.94	0.97
22	Utilities	12,948	45.4%	\$5,638,439	49.8%	\$1,068,251	\$82,503	50.4%	0.89	1.20
44	Retail Trade	195,447	45.1%	\$14,402,556	55.5%	\$5,878,566	\$30,078	55.5%	0.89	1.09
62	Health Care and Social Assistance	196,254	42.2%	\$11,527,327	49.6%	\$7,466,590	\$38,046	48.7%	0.83	0.80
92	Public Administration	232,631	37.9%	\$13,586,648	42.5%	\$10,267,327	\$44,136	42.5%	0.75	1.06
33	Manufacturing (metals and machinery)	85,047	35.0%	\$25,414,499	46.4%	\$4,507,885	\$53,005	41.5%	0.69	0.71
32	Manufacturing (materials)	59,616	30.2%	\$12,705,240	33.0%	\$2,670,173	\$44,790	34.0%	0.59	1.17
21	Mining	1,048	12.5%	\$188,187	14.8%	\$50,986	\$48,651	13.8%	0.25	0.50
31	Manufacturing (Food)	21,234	9.5%	\$5,297,208	14.1%	\$828,870	\$39,035	12.7%	0.19	2.20
11	Agriculture, Forestry, Fishing and Hunting	3,091	3.9%	\$534,338	4.0%	\$82,247	\$26,609	4.1%	0.08	0.82
	Total	2,621,097		\$281,241,393		\$120,426,574				
	Average		50.7%		57.8%		\$46,703	57.8%		

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## Atlanta Economic Development Region (continued)

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Select 3-Digit Industries Within Top Performing 2-Digit Industries:

2 Digit NAICS	3 Digit NAICS	Industry	2004 Employment
51	513	Broadcasting and Telecommunications	83,443
51	511	Publishing Industries	27,369
51	514	Information Services and Data Processing Services	16,519
51	512	Motion Picture and Sound Recording Industries	8,249
52	522	Credit Intermediation and Related Activities	56,465
52	524	Insurance Carriers and Related Activities	53,848
52	523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	15,063
52	525	Funds, Trusts, and Other Financial Vehicles	1,469
52	521	Monetary Authorities - Central Bank	1,340
53	531	Real Estate	32,392
53	532	Rental and Leasing Services	17,271
53	533	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	1,860
54	541	Professional, Scientific, and Technical Services	213,605
55	551	Management of Companies and Enterprises	96,708

## Augusta Economic Development Region

Augusta		2004 Employment		2004 Output (\$000s)		2004 Earnings (\$000s)			Employment Concentration	
2 Digit NAICS Industry		#	% of State	Total	% of State	Total	Average	% of State	Region L.Q.	State L.Q.
21	Mining	2,014	24.0%	\$332,379	26.1%	\$97,723	\$48,522	26.4%	5.12	0.50
92	Public Administration	48,424	7.9%	\$2,481,776	7.8%	\$1,873,496	\$38,689	7.8%	1.68	1.06
11	Agriculture, Forestry, Fishing and Hunting	5,900	7.5%	\$970,619	7.3%	\$150,976	\$25,589	7.4%	1.60	0.82
22	Utilities	1,895	6.6%	\$706,877	6.2%	\$130,124	\$68,667	6.1%	1.42	1.20
32	Manufacturing (materials)	13,089	6.6%	\$2,968,067	7.7%	\$572,594	\$43,746	7.3%	1.41	1.17
62	Health Care and Social Assistance	30,515	6.6%	\$1,398,522	6.0%	\$946,554	\$31,019	6.2%	1.40	0.80
49	Transportation and Warehousing	3,652	5.3%	\$257,730	4.5%	\$178,562	\$48,894	5.9%	1.13	1.20
71	Arts, Entertainment, and Recreation	2,490	5.2%	\$117,527	3.9%	\$39,546	\$15,882	3.2%	1.11	0.66
33	Manufacturing (metals and machinery)	12,445	5.1%	\$1,841,344	3.4%	\$467,671	\$37,579	4.3%	1.09	0.71
44	Retail Trade	20,425	4.7%	\$1,005,902	3.9%	\$410,478	\$20,097	3.9%	1.01	1.09
23	Construction	11,911	4.5%	\$1,022,284	3.3%	\$346,136	\$29,060	3.4%	0.97	1.03
45	Retail	7,721	4.5%	\$312,293	3.9%	\$126,775	\$16,420	3.8%	0.96	0.97
72	Accommodation and Food Services	17,472	4.5%	\$432,683	3.3%	\$174,083	\$9,964	3.3%	0.96	1.00
81	Other Services (except Public Administration)	8,367	4.5%	\$393,798	3.5%	\$142,663	\$17,051	3.4%	0.95	0.90
31	Manufacturing (Food)	10,015	4.5%	\$1,325,066	3.5%	\$264,032	\$26,364	4.0%	0.95	2.20
56	Administrative / Support / Waste Management / Remediation	15,122	3.6%	\$464,550	3.1%	\$283,603	\$18,754	2.6%	0.76	1.12
53	Real Estate and Rental and Leasing	2,550	3.4%	\$496,018	2.2%	\$63,042	\$24,722	2.2%	0.72	0.97
48	Transportation and Warehousing	4,076	2.9%	\$378,368	2.1%	\$136,863	\$33,578	2.2%	0.63	1.14
52	Finance and Insurance	5,258	2.6%	\$526,879	2.0%	\$214,259	\$40,749	1.8%	0.56	0.88
51	Information	4,018	2.3%	\$525,289	1.5%	\$172,787	\$43,003	1.4%	0.48	1.22
61	Educational Services	1,809	2.2%	\$51,369	1.6%	\$36,101	\$19,956	1.6%	0.47	0.81
42	Wholesale Trade	5,391	2.2%	\$478,411	1.5%	\$206,238	\$38,256	1.5%	0.46	1.06
54	Professional, Scientific, and Technical Services	5,234	1.9%	\$341,869	1.2%	\$181,793	\$34,733	1.1%	0.41	0.94
55	Management of Companies and Enterprises	1,939	1.6%	\$27,346	0.7%	\$76,158	\$39,277	0.7%	0.35	1.06
	Total	241,732		\$18,856,966		\$7,292,257				
	Average		5.2%		4.6%		\$32,107	4.7%		

NOTE: Data provided for employment, output and earnings by the Carl Vinson Institute of Government, The University of Georgia. Data are sorted by regional location quotient, with other data being shown for analysis or comparative purposes. The location quotient is a relative measure of industry concentration – in this case regional employment vs. US average industry concentration. For interpretation a LQ of 1.0 means that the region has the same industry concentration as the US economy overall – higher LQ indicates greater industry concentration at the regional level etc.

## Augusta Economic Development Region (continued)

Select 3-Digit Industries Within Top Performing 2-Digit Industries:

2 Digit NAICS	3 Digit NAICS	Industry	2004 Employment
31	313	Textile Mills	14,104
31	311	Food Manufacturing	11,354
31	314	Textile Product Mills	5,950
31	315	Apparel Manufacturing	3,429
32	326	Plastics and Rubber Products Manufacturing	6,742
32	321	Wood Product Manufacturing	4,885
32	323	Printing and Related Support Activities	3,062
32	322	Paper Manufacturing	2,099
32	327	Nonmetallic Mineral Product Manufacturing	1,875
32	325	Chemical Manufacturing	1,185
33	335	Electrical Equipment, Appliance, and Component Manufacturing	8,471
33	336	Transportation Equipment Manufacturing	5,455
33	332	Fabricated Metal Product Manufacturing	4,168
33	339	Miscellaneous Manufacturing	3,762
33	333	Machinery Manufacturing	3,643
33	331	Primary Metal Manufacturing	3,100
33	334	Computer and Electronic Product Manufacturing	2,929
33	337	Furniture and Related Product Manufacturing	1,920
62	622	Hospitals	16,421
62	621	Ambulatory Health Care Services	13,307
62	623	Nursing and Residential Care Facilities	7,961
62	624	Social Assistance	5,715
71	713	Amusement, Gambling, and Recreation Industries	2,295
71	711	Performing Arts, Spectator Sports, and Related Industries	589

# Griffin/Columbus Economic Development Region

Griffin/Columbus		2004 Employment		2004 Output (\$000s)		2004 Earnings (\$000s)			Employment Concentration	
2 Digit NAICS Industry		#	% of State	Total	% of State	Total	Average	% of State	Region L.Q.	State L.Q.
31	Manufacturing (Food)	35,108	15.7%	\$4,710,808	12.6%	\$993,329	\$28,294	15.2%	1.94	2.20
33	Manufacturing (metals and machinery)	33,448	13.7%	\$6,253,218	11.4%	\$1,339,339	\$40,042	12.3%	1.70	0.71
11	Agriculture, Forestry, Fishing and Hunting	10,448	13.3%	\$1,938,792	14.6%	\$274,543	\$26,277	13.5%	1.64	0.82
92	Public Administration	67,622	11.0%	\$3,165,638	9.9%	\$2,388,726	\$35,325	9.9%	1.36	1.06
32	Manufacturing (materials)	19,931	10.1%	\$2,978,062	7.7%	\$680,628	\$34,149	8.7%	1.25	1.17
49	Transportation and Warehousing	6,532	9.5%	\$427,983	7.5%	\$272,335	\$41,692	9.0%	1.18	1.20
62	Health Care and Social Assistance	43,404	9.3%	\$1,803,219	7.8%	\$1,209,975	\$27,877	7.9%	1.16	0.80
21	Mining	781	9.3%	\$104,590	8.2%	\$30,767	\$39,394	8.3%	1.15	0.50
22	Utilities	2,483	8.7%	\$873,871	7.7%	\$162,333	\$65,378	7.7%	1.08	1.20
45	Retail	13,958	8.2%	\$561,880	6.9%	\$228,213	\$16,350	6.9%	1.01	0.97
44	Retail Trade	35,382	8.2%	\$1,684,534	6.5%	\$687,093	\$19,419	6.5%	1.01	1.09
81	Other Services (except Public Administration)	13,699	7.3%	\$624,287	5.6%	\$228,079	\$16,649	5.4%	0.91	0.90
52	Finance and Insurance	14,534	7.3%	\$1,611,265	6.0%	\$629,973	\$43,345	5.3%	0.90	0.88
71	Arts, Entertainment, and Recreation	3,341	7.0%	\$170,163	5.6%	\$65,651	\$19,650	5.4%	0.86	0.66
72	Accommodation and Food Services	27,120	7.0%	\$707,756	5.4%	\$284,550	\$10,492	5.4%	0.86	1.00
51	Information	11,945	6.7%	\$1,277,877	3.6%	\$576,349	\$48,250	4.7%	0.83	1.22
23	Construction	17,218	6.6%	\$1,588,587	5.1%	\$530,224	\$30,795	5.2%	0.81	1.03
56	Administrative / Support / Waste Management / Remediation	23,866	5.6%	\$605,141	4.0%	\$421,035	\$17,642	3.9%	0.70	1.12
53	Real Estate and Rental and Leasing	3,715	4.9%	\$684,019	3.1%	\$89,461	\$24,081	3.1%	0.61	0.97
42	Wholesale Trade	10,893	4.4%	\$951,942	2.9%	\$410,313	\$37,668	2.9%	0.54	1.06
61	Educational Services	3,394	4.1%	\$99,644	3.1%	\$71,301	\$21,008	3.1%	0.51	0.81
55	Management of Companies and Enterprises	4,835	4.1%	\$122,093	3.2%	\$340,011	\$70,323	3.2%	0.51	1.06
48	Transportation and Warehousing	4,631	3.3%	\$376,112	2.1%	\$133,166	\$28,755	2.1%	0.41	1.14
54	Professional, Scientific, and Technical Services	8,105	3.0%	\$495,859	1.7%	\$240,661	\$29,693	1.5%	0.37	0.94
	<b>Total</b>	<b>416,393</b>		<b>\$33,817,340</b>		<b>\$12,288,055</b>				
	<b>Average</b>		<b>7.8%</b>		<b>6.3%</b>		<b>\$32,190</b>	<b>6.5%</b>		

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## Griffin/Columbus Economic Development Region (continued)

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Select 3-Digit Industries Within Top Performing 2-Digit Industries:

2 Digit NAICS	3 Digit NAICS	Industry	2004 Employment
11	111	Crop Production	11,967
11	113	Forestry and Logging	2,343
11	115	Support Activities for Agriculture and Forestry	548
31	311	Food Manufacturing	5,575
31	313	Textile Mills	3,665
31	314	Textile Product Mills	3,250
31	312	Beverage and Tobacco Product Manufacturing	3,127
31	315	Apparel Manufacturing	2,907
32	321	Wood Product Manufacturing	5,603
32	327	Nonmetallic Mineral Product Manufacturing	4,255
32	322	Paper Manufacturing	3,143
32	326	Plastics and Rubber Products Manufacturing	1,357
32	325	Chemical Manufacturing	925
32	323	Printing and Related Support Activities	742
33	333	Machinery Manufacturing	5,803
33	336	Transportation Equipment Manufacturing	4,600
33	332	Fabricated Metal Product Manufacturing	4,522
33	335	Electrical Equipment, Appliance, and Component Manufacturing	3,042
33	337	Furniture and Related Product Manufacturing	2,458
33	339	Miscellaneous Manufacturing	1,937
62	622	Hospitals	18,664
62	621	Ambulatory Health Care Services	14,332
62	623	Nursing and Residential Care Facilities	9,298
62	624	Social Assistance	6,645

# Macon/Dublin Economic Development Region

Macon/Dublin		2004 Employment		2004 Output (\$000s)		2004 Earnings (\$000s)			Employment Concentration	
2 Digit NAICS Industry		#	% of State	Total	% of State	Total	Average	% of State	Region L.Q.	State L.Q.
21 Mining		1,724	20.6%	\$286,468	22.5%	\$83,832	\$48,626	22.7%	2.81	0.50
11 Agriculture, Forestry, Fishing and Hunting		14,865	18.9%	\$2,444,972	18.4%	\$381,615	\$25,672	18.8%	2.58	0.82
22 Utilities		3,763	13.2%	\$1,386,763	12.2%	\$254,977	\$67,759	12.0%	1.80	1.20
62 Health Care and Social Assistance		48,939	10.5%	\$2,032,049	8.7%	\$1,375,383	\$28,104	9.0%	1.44	0.80
92 Public Administration		61,886	10.1%	\$3,238,006	10.1%	\$2,442,323	\$39,465	10.1%	1.38	1.06
33 Manufacturing (metals and machinery)		22,868	9.4%	\$3,932,361	7.2%	\$841,308	\$36,790	7.7%	1.28	0.71
31 Manufacturing (Food)		18,528	8.3%	\$5,389,663	14.4%	\$577,732	\$31,182	8.9%	1.13	2.20
32 Manufacturing (materials)		16,162	8.2%	\$2,707,094	7.0%	\$581,943	\$36,007	7.4%	1.12	1.17
44 Retail Trade		35,058	8.1%	\$1,639,277	6.3%	\$668,983	\$19,082	6.3%	1.11	1.09
52 Finance and Insurance		16,072	8.1%	\$1,578,118	5.9%	\$641,740	\$39,929	5.4%	1.10	0.88
61 Educational Services		6,531	8.0%	\$213,352	6.7%	\$154,860	\$23,712	6.7%	1.09	0.81
45 Retail		12,884	7.5%	\$519,205	6.4%	\$210,829	\$16,364	6.4%	1.03	0.97
49 Transportation and Warehousing		4,987	7.3%	\$411,913	7.2%	\$281,792	\$56,505	9.3%	0.99	1.20
81 Other Services (except Public Administration)		13,036	7.0%	\$602,826	5.4%	\$220,669	\$16,928	5.2%	0.95	0.90
72 Accommodation and Food Services		26,958	6.9%	\$631,738	4.9%	\$254,287	\$9,433	4.8%	0.94	1.00
23 Construction		15,589	5.9%	\$1,425,809	4.6%	\$461,065	\$29,576	4.5%	0.81	1.03
53 Real Estate and Rental and Leasing		3,233	4.3%	\$583,906	2.6%	\$76,322	\$23,607	2.7%	0.58	0.97
54 Professional, Scientific, and Technical Services		11,536	4.2%	\$818,754	2.9%	\$433,561	\$37,583	2.6%	0.58	0.94
56 Administrative / Support / Waste Management / Remediation		17,660	4.2%	\$478,236	3.2%	\$326,373	\$18,481	3.0%	0.57	1.12
42 Wholesale Trade		10,178	4.1%	\$904,080	2.8%	\$389,696	\$38,288	2.8%	0.56	1.06
48 Transportation and Warehousing		5,303	3.8%	\$597,229	3.4%	\$158,439	\$29,877	2.5%	0.52	1.14
71 Arts, Entertainment, and Recreation		1,724	3.6%	\$70,637	2.3%	\$25,592	\$14,845	2.1%	0.49	0.66
51 Information		5,533	3.1%	\$773,103	2.2%	\$250,143	\$45,209	2.1%	0.43	1.22
55 Management of Companies and Enterprises		2,161	1.8%	\$36,379	1.0%	\$101,313	\$46,882	1.0%	0.25	1.06
Total		377,178		\$32,701,938		\$11,194,777				
Average			7.8%		7.0%		\$32,496	6.8%		

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## Macon/Dublin Economic Development Region (continued)

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Select 3-Digit Industries Within Top Performing 2-Digit Industries:

2 Digit NAICS	3 Digit NAICS	Industry	2004 Employment
11	111	Crop Production	1,557
31	311	Food Manufacturing	4,203
32	322	Paper Manufacturing	6,490
32	325	Chemical Manufacturing	3,233
32	327	Nonmetallic Mineral Product Manufacturing	1,914
32	321	Wood Product Manufacturing	1,553
33	336	Transportation Equipment Manufacturing	8,648
33	333	Machinery Manufacturing	2,834
33	332	Fabricated Metal Product Manufacturing	1,521
33	339	Miscellaneous Manufacturing	705
62	622	Hospitals	13,200
62	621	Ambulatory Health Care Services	12,029
62	624	Social Assistance	5,044
62	623	Nursing and Residential Care Facilities	4,082

## Rome/Dalton Economic Development Region

Rome/Dalton		2004 Employment		2004 Output (\$000s)		2004 Earnings (\$000s)			Employment Concentration	
2 Digit NAICS	Industry	#	% of State	Total	% of State	Total	Average	% of State	Region L.Q.	State L.Q.
31	Manufacturing (Food)	69,413	31.0%	\$9,828,792	26.2%	\$2,039,891	\$29,388	31.3%	4.52	2.20
21	Mining	1,113	13.3%	\$159,148	12.5%	\$46,754	\$42,007	12.6%	1.94	0.50
32	Manufacturing (materials)	21,081	10.7%	\$4,383,306	11.4%	\$821,834	\$38,985	10.5%	1.56	1.17
11	Agriculture, Forestry, Fishing and Hunting	6,693	8.5%	\$1,144,766	8.6%	\$175,586	\$26,234	8.7%	1.24	0.82
33	Manufacturing (metals and machinery)	19,273	7.9%	\$3,437,891	6.3%	\$747,282	\$38,774	6.9%	1.16	0.71
45	Retail	13,359	7.8%	\$558,377	6.9%	\$226,707	\$16,970	6.9%	1.14	0.97
44	Retail Trade	33,877	7.8%	\$1,688,002	6.5%	\$688,563	\$20,325	6.5%	1.14	1.09
61	Educational Services	5,628	6.9%	\$199,177	6.2%	\$144,663	\$25,704	6.3%	1.00	0.81
22	Utilities	1,847	6.5%	\$720,579	6.4%	\$132,513	\$71,745	6.2%	0.95	1.20
62	Health Care and Social Assistance	29,055	6.3%	\$1,241,951	5.3%	\$832,905	\$28,666	5.4%	0.91	0.80
72	Accommodation and Food Services	24,352	6.2%	\$636,802	4.9%	\$253,887	\$10,426	4.8%	0.91	1.00
81	Other Services (except Public Administration)	11,544	6.2%	\$576,767	5.2%	\$203,694	\$17,645	4.8%	0.90	0.90
92	Public Administration	35,661	5.8%	\$1,517,918	4.7%	\$1,149,654	\$32,238	4.8%	0.85	1.06
42	Wholesale Trade	14,285	5.7%	\$1,267,389	3.9%	\$546,324	\$38,245	3.9%	0.84	1.06
23	Construction	14,612	5.6%	\$1,286,165	4.1%	\$427,161	\$29,234	4.2%	0.81	1.03
48	Transportation and Warehousing	7,209	5.2%	\$752,607	4.3%	\$257,496	\$35,719	4.1%	0.76	1.14
71	Arts, Entertainment, and Recreation	1,984	4.1%	\$95,842	3.1%	\$31,107	\$15,679	2.5%	0.60	0.66
56	Administrative / Support / Waste Management / Remediation	15,027	3.6%	\$437,143	2.9%	\$279,917	\$18,628	2.6%	0.52	1.12
52	Finance and Insurance	6,900	3.5%	\$829,124	3.1%	\$282,365	\$40,922	2.4%	0.50	0.88
53	Real Estate and Rental and Leasing	2,473	3.3%	\$441,895	2.0%	\$58,468	\$23,643	2.0%	0.48	0.97
55	Management of Companies and Enterprises	3,714	3.2%	\$73,004	1.9%	\$203,312	\$54,742	1.9%	0.46	1.06
54	Professional, Scientific, and Technical Services	7,683	2.8%	\$506,112	1.8%	\$292,790	\$38,109	1.8%	0.41	0.94
51	Information	4,742	2.7%	\$871,420	2.4%	\$263,856	\$55,642	2.2%	0.39	1.22
49	Transportation and Warehousing	1,730	2.5%	\$120,278	2.1%	\$53,553	\$30,955	1.8%	0.37	1.20
	Total	353,255		\$32,774,455		\$10,160,282				
	Average		7.0%		5.9%		\$32,526	6.0%		

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## Rome/Dalton Economic Development Region (continued)

Select 3-Digit Industries Within Top Performing 2-Digit Industries:

2 Digit NAICS	3 Digit NAICS	Industry	2004 Employment
11	111	Crop Production	17,657
11	113	Forestry and Logging	2,225
11	115	Support Activities for Agriculture and Forestry	2,124
31	311	Food Manufacturing	11,520
31	313	Textile Mills	7,501
31	315	Apparel Manufacturing	3,473
31	312	Beverage and Tobacco Product Manufacturing	1,275
31	314	Textile Product Mills	1,203
32	321	Wood Product Manufacturing	14,142
32	326	Plastics and Rubber Products Manufacturing	4,870
32	322	Paper Manufacturing	4,362
32	325	Chemical Manufacturing	3,392
32	327	Nonmetallic Mineral Product Manufacturing	1,181
32	323	Printing and Related Support Activities	737
33	336	Transportation Equipment Manufacturing	7,598
33	332	Fabricated Metal Product Manufacturing	5,399
33	333	Machinery Manufacturing	2,146
33	335	Electrical Equipment, Appliance, and Component Manufacturing	1,377
33	337	Furniture and Related Product Manufacturing	1,168
33	331	Primary Metal Manufacturing	1,140
62	622	Hospitals	18,259
62	621	Ambulatory Health Care Services	12,763
62	623	Nursing and Residential Care Facilities	6,847
62	624	Social Assistance	5,959

# Savannah Economic Development Region

Savannah		2004 Employment		2004 Output (\$000s)		2004 Earnings (\$000s)			Employment Concentration	
2 Digit NAICS Industry		#	% of State	Total	% of State	Total	Average	% of State	Region L.Q.	State L.Q.
49	Transportation and Warehousing	7,475	10.9%	\$546,900	9.5%	\$374,705	\$50,128	12.4%	1.74	1.20
92	Public Administration	63,058	10.3%	\$3,450,787	10.8%	\$2,599,506	\$41,224	10.8%	1.64	1.06
72	Accommodation and Food Services	35,147	9.0%	\$1,136,290	8.7%	\$462,358	\$13,155	8.8%	1.44	1.00
71	Arts, Entertainment, and Recreation	3,805	7.9%	\$198,089	6.5%	\$68,628	\$18,036	5.6%	1.27	0.66
45	Retail	12,631	7.4%	\$502,016	6.2%	\$203,933	\$16,145	6.2%	1.18	0.97
62	Health Care and Social Assistance	34,355	7.4%	\$1,678,979	7.2%	\$1,111,967	\$32,367	7.3%	1.18	0.80
32	Manufacturing (materials)	14,518	7.4%	\$3,882,334	10.1%	\$692,119	\$47,673	8.8%	1.18	1.17
44	Retail Trade	30,417	7.0%	\$1,554,326	6.0%	\$634,010	\$20,844	6.0%	1.12	1.09
48	Transportation and Warehousing	9,710	7.0%	\$1,054,072	6.0%	\$331,827	\$34,174	5.3%	1.12	1.14
81	Other Services (except Public Administration)	11,833	6.3%	\$626,892	5.6%	\$230,702	\$19,496	5.5%	1.01	0.90
23	Construction	16,605	6.3%	\$1,537,311	4.9%	\$498,723	\$30,035	4.9%	1.01	1.03
53	Real Estate and Rental and Leasing	4,560	6.0%	\$816,050	3.7%	\$116,015	\$25,442	4.0%	0.96	0.97
33	Manufacturing (metals and machinery)	14,409	5.9%	\$3,023,369	5.5%	\$710,175	\$49,287	6.5%	0.95	0.71
22	Utilities	1,443	5.1%	\$550,022	4.9%	\$102,490	\$71,026	4.8%	0.81	1.20
56	Administrative / Support / Waste Management / Remediation	20,408	4.8%	\$571,291	3.8%	\$377,618	\$18,503	3.5%	0.77	1.12
61	Educational Services	3,912	4.8%	\$138,562	4.3%	\$99,544	\$25,446	4.3%	0.76	0.81
52	Finance and Insurance	7,618	4.8%	\$791,816	3.0%	\$321,662	\$42,224	2.7%	0.61	0.88
42	Wholesale Trade	8,149	3.8%	\$812,876	2.5%	\$350,488	\$43,010	2.5%	0.52	1.06
54	Professional, Scientific, and Technical Services	8,305	3.3%	\$548,462	1.9%	\$288,314	\$34,716	1.7%	0.49	0.94
51	Information	5,051	3.0%	\$781,846	2.2%	\$255,330	\$50,550	2.1%	0.45	1.22
11	Agriculture, Forestry, Fishing and Hunting	2,165	2.8%	\$391,037	2.9%	\$57,668	\$26,636	2.8%	0.44	0.82
31	Manufacturing (Food)	4,663	2.1%	\$841,915	2.2%	\$137,965	\$29,587	2.1%	0.33	2.20
55	Management of Companies and Enterprises	2,046	1.7%	\$50,157	1.3%	\$139,682	\$68,271	1.3%	0.28	1.06
21	Mining	19	0.2%	\$2,636	0.2%	\$775	\$40,789	0.2%	0.04	0.50
	Total	322,302		\$25,488,035		\$10,166,204				
	Average		5.6%		5.0%		\$35,365	5.0%		

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## Savannah Economic Development Region (continued)

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Select 3-Digit Industries Within Top Performing 2-Digit Industries:

2 Digit NAICS	3 Digit NAICS	Industry	2004 Employment
33	332	Fabricated Metal Product Manufacturing	3,534
33	336	Transportation Equipment Manufacturing	3,406
33	333	Machinery Manufacturing	2,423
33	339	Miscellaneous Manufacturing	934
33	335	Electrical Equipment, Appliance, and Component Manufacturing	748
33	331	Primary Metal Manufacturing	735
33	337	Furniture and Related Product Manufacturing	660
56	561	Administrative and Support Services	14,584
56	562	Waste Management and Remediation Services	538
62	622	Hospitals	12,531
62	621	Ambulatory Health Care Services	9,839
62	623	Nursing and Residential Care Facilities	5,467
62	624	Social Assistance	2,678
71	713	Amusement, Gambling, and Recreation Industries	2,124
72	722	Food Services and Drinking Places	15,742
72	721	Accommodation	1,730

**Appendix C**

**Commission for a New Georgia**

**Select Notes From Industry Listening Sessions**

## Life Sciences Listening Session

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Date: 4/14/04

Participants:

**David Dodd, Serologicals**

**Bill Johnston, Inhibited**

**Russ Medford, AtheroGenics**

**Nadine Craig, UCB Pharma**

**Alan Roemer, Pharmasset**

**Jeff Strane, GDITT**

**Kris Clark, GDITT**

**Russell Allen, Atlanta Bioscience Council / Chamber**

**Jack Spencer, Georgia Biomedical Partnership**

**Will Hearn, Strategic Industries Task Force**

**Competitiveness Task Force**

*Discussion Questions:*

**In general, how would you rate the state's overall approach to supporting the development in the life sciences over the past 3-5 years?**

The effort has not been very effective, needs more work and has been insufficient to be competitive. Georgia's strategy is not well articulated and lacks leadership. While GDITT created higher level of focus through staff additions, it is unclear what the substance of the strategy is. There is a "community" of life sciences agencies and entities, but it is unclear what substance is behind the "pep rally."

The life sciences community knows one another and is frustrated with lack of strategic initiative. Awareness is there, but leadership is lacking; there lacks a consistent driving element.

**In your view, who are the primary agencies/entities responsible for developing this industry?**

- Various agencies: GDITT / MACOC / Chambers and government related / Georgia Power. Host of groups, but no cohesion, no single point of contact mandated to advance the industry.
- Their needs to be a central coordinated effort to support existing companies, one that could be a power broker for all involved. For outside the state, larger companies can locate resources; smaller companies need help in getting to the right area of support.
- Companies in and outside the state need help in getting the right information in a professional and efficient manner. Access to the right people and information is key. There are some funds / resources available in Georgia, but unfortunately few are aware of them.
- The effort to support life sciences in Georgia is informal at present, but we do not see Georgia getting on the radar screen. The competitive environment is moving rapidly and this industry is a zero sum gain. There will be areas that succeed while the rest will fall behind.

- There need to be a focused entity to be able to effectively serve prospects across a wide spectrum of needs. Venue occurs when GDITT picks up the phone and makes a call, but their needs to be more.
- State must work harder to build awareness. Georgia has a very high self-image, but the out-of-state perspective is that there is not much going on in Georgia. Comprehensive package that is attractive.
- There needs to be a structured plan implemented that makes sense to companies in and outside of the state.

**In your view, is the state of Georgia adequately addressing the needs of this industry through these entities / agencies?**

- No, though the facilities financing fund is a start. It needs more and must be open to the entire industry in Georgia. This could be a differentiating factor in Georgia.
- Disappointment of recently announced GRA Innovation Fund, a \$5million dollar fund that was not publicized prior to awards being granted mostly to GRA companies. It was essentially a closed bidding process. Next set of companies must be more inclusive.

**Are there other states that you feel we ought to benchmark against?**

NC, MD, FL, MI, CT, PA

**What do you see as Georgia's key assets in recruiting life sciences companies to Georgia?**

- Transportation
- International recruitment
- University System Assets
- Cost of Living
- Quality of Life
- BIO is coming to Georgia in 2009. A smaller, national meeting will occur as early as next year and may be best state meeting of the year. A Buzz will exist and we to build programs around that.
- Georgia Tech's Bioengineering Program moved up to #2 in the nation.

**What do you see as Georgia's key liabilities in recruiting life sciences companies?**

- No resident venture capital and no apparent programs to address the issue. GA has 1-2 players with bridges to national syndicates University and Venture funds are strong in MA and CA where this industry is strong. We need to work to set up satellite offices in GA to become a center for VC in the South.
- Georgia lacks a critical mass, though Atlanta ranks 6<sup>th</sup> in degrees conferred in bio conferred.
- Graduates leave state to find employment elsewhere, due to lacking employment opportunities.
- Lacks comprehensive unified life sciences initiatives that are apparent in other states.
- There is lacking alternative employment for management in the local market, making this a difficult market to recruit in to.
- The state needs a critical mass of early, middle and large companies. Georgia needs balanced industry.
- Georgia is not viewed as a competitor in the life sciences. Lacks an identity of a cohesive industry.
- Real estate and access to wet labs is a weakness.

**How ought the state measure success in growing this industry?**

- Rankings over time
- Jobs

- % Manufacturing employment in life sciences
- Economic impact
- Absolute number of companies
- Additional tax revenues
- Early stage investment dollars coming in to GA
- IPOs
- Strategic benchmark – against NC.
- Jobs by function – professional / technical / administrative
- It is critical that the state set up some goals and begins to track progress.
- The state needs to formally set up a task force and establish a strategic plan for the state.

### **How can the state of Georgia best leverage the assets and expertise within Life Sciences companies in Georgia?**

- Stop introducing legislation that is countered productive - price indexing for pharmaceutical drugs. Lots of wasted effort and time.
- Enabling pension and insurance companies to invest in small start-up companies.
- Establish a Life Sciences Czar that is endowed with the programs and political ability to get something accomplished. Governor directed commission. Great PR and effort.
- Monetize NOL carry-forwards. Monetize other incentive programs. Important to get the state on a level playing field with other states.
- Unified Bioscience Initiative, led by the private sector with state support.

### **Are workforce development programs focused on the life sciences necessary to grow the industry in Georgia?**

- It is nice to have Regulatory Affairs at UGA, but we must also develop biomanufacturing through DTAE.
- Need for coordination to grow the industry.

### **How can the state best leverage this industry to provide economic impacts across the state?**

- Must have a plan to demonstrate the value of the industry to the entire state. Need for political support.
- There will always be companies forming close to the universities, a strategy that supports the larger metro areas and some university towns across Georgia.
- Biomanufacturing can pop up anywhere – and rural parts of Georgia will be preferred. Recent projects have focused on Douglas, Barrow and Hall counties. Savannah also can benefit.
- The state should target headquarters for life sciences companies, or subsidiary headquarters. The state must recruit and develop both small to medium-sized biotech companies and biomanufacturing. A manufacturing and a HQ/R&D approach.
- The state needs a focused effort on clinical research organizations and on third party operators for cGMP facilities. The two biggest expenses for companies are clinical trials and people.

### **In your view, what is the number one hurdle to growing this industry in Georgia?**

- The Governor must step out and make this a priority, a prime agenda item. The governor needs to establish a task for on this to include the political influencers. Once we get the plan, drive the agenda home. Need to act quickly.

- The top executive in the state must make this part of his vision for the state and that will make the difference. The governor's office has demonstrated that this industry is not a priority – through not making calls on economic development projects and not being present for meetings.
- Relative to the Life Sciences summit, and other meeting to be held in Georgia, we have delivered an opportunity and we need state to pick up the opportunity.
- If the state willing to make to investment, the companies will come to the table.
- State must step up to realize investments made by taking the next step.
- The state should consider setting up a specialized, more focused effort to address the needs of this industry.
- This industry is not being exported – these jobs will not be going overseas, especially in the biomanufacturing area.
- Given recent changes to incentive laws in competitor states such as NC and the overall competitiveness for footloose investment in this segment, Georgia needs to aggressively level the playing field?
- For the industry to move forward, the Governor must be active and in front of it.
- Other Governors are allocating a significant portion of their time to this industry. From the 50-year perspective, this may be the most important industry in GA. Saving lives and building communities

## **Multimedia (Film-specific) Listening Session Notes**

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Date: 4/28/04

Participants:

List can be provided

*Discussion Questions:*

**In general, how would you rate the state's overall approach to supporting film promotion development over the past 3-5 years?**

- Globally about \$ - going where production can get the best deal.
- There are different types of financial support - GA has done everything possible on the ground.
- Increasingly incentives driven as the environment has changed. Movies (TV and Film) increasingly location independent and footloose with a focus on production costs. Canada has done well due to dollar valuation, but there are other challenges there.
- Accountants decide where to site production – only big name directors can say where to film.
- Rebates based on expenditures – investment tax credits.
- 20% back on every dollar spent. On all expenses. State forgoes 20% to drive growth.
- Foregone income over cost. Time issues on Canada – and labor restrictions.
- How is the private sector engaged? Private sector to lead this effort?

**In your view, who are the primary agencies/entities responsible for developing this industry?**

- State Office of Film Promotion. Also, Turner Broadcasting has a vested interest in promoting the industry – building 3 studios on Techwood. We depend on local government to support the community. Support - need for contract professionals.
- Need alternative opportunities. If they are going out of state, they are not here.
- Georgia Film Office: Eastern Europe, Asia, Caribbean, all going after this industry.
- Local economic development.
- Industry is all about where people spend large amounts of \$ and utilize few resources.

**In your view, is the state of Georgia adequately addressing the needs of this industry through these entities / agencies?**

- No – we must either pass comprehensive incentives to grow the industry or get out of the business all together.

**Are there other states that you feel we ought to benchmark against?**

- LA, NC, IL

**What do you see as Georgia's key assets in recruiting film production companies to Georgia?**

- Access

- Diversity
- Local talent and infrastructure
- Corporate interest
- TV Studios
- Linkages with music industry. Entire industry that is trying to develop here.
- Trained and ready – UGA / mass communication SCAD largest activity postproduction facility - lots of film directing in state. Animation – GTRC – Georgia Tech campus – package for animation division – performing arts. Georgia Tech’s computer engineering program. Not discounting 35mm film production, but we need to focus on changing technologies. Technical colleges – Turner has teamed with Chattahoochee Tech to create entry-level positions – SCAD and Art Inst. Are leaving the state.
- Innovation: specifics: HDTV mobile unit at Turner.
- Uniquely qualified to get things done – we have the infrastructure – transfer Houses (good facilities) - 3<sup>rd</sup> party equipment providers – specialty crane, camera cars, Chapman Crane. Post Production facilities – editing, sound mixing-sweetening.
- Film – transportation network.

**What do you see as Georgia’s key liabilities in recruiting film production?**

- GA has become a more expensive option
- Providing talent to other Southeastern States

**How ought the state measure success in growing this industry?**

- Expenditures in GA
- Increases in tourism dollars
- Private sector financial contributions to support film production

**How can the state of Georgia best leverage the assets and expertise within film production companies in Georgia?**

- Get more activity in the state

**How can the state best leverage this industry to provide economic impacts across the state?**

- Pass incentives contingent on private sector contributions of \$1 million over 4 years that will be used to market the benefits of this industry across GA.
- Leverage local economic development efforts.
- Leverage universities and creative class across GA

**In your view, what is the number one hurdle to growing this industry in Georgia?**

- Competitiveness
- Lost deals the day the bill did not pass

**Appendix D**

**Commission for a New Georgia**

**Corporate Functions and High Growth Job Potential**

*Presented at 5/19/04 Meeting*

## Industry Composition Matrix – Areas for High Opportunity Job Creation

(Illustrative)

	Industry Functions / Potential for Job Creation								
	Raw Materials / Resource Dependent	Raw Materials Processing	Manufacturing - Intermediate	Manufacturing - Final	Services - Consumer	Services - Business	R&D - Basic	R&D - Applied	Headquarters
Aerospace									
Agribusiness									
Energy and Environmental									
Healthcare and Eldercare									
Homeland Security and Defense									
Life Sciences									
Business and Financial Services									
Multimedia									
Software Development									
Logistics and Transportation									
Communications									
Nanotechnology									

**NOTE: Green indicates areas for high opportunity job creation**

## Industry Composition Matrix – Areas for High Opportunity Job Creation

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- The above table represents a framework for identifying potential high opportunity areas for job creation for the functional areas within industries identified by the strategic industries task force. The cells in green represent optimal areas for policy focus, while those cells left white represent areas that might offer less direct benefit. Given that these are very broad, strategic industry clusters, this framework is only effective at capturing commonalities at a very high level.
- All of the industries identified are comprised of firms that perform somewhat specialized roles that are captured in the broad functional areas above. For example a firm may have their corporate headquarters in a location that serves the requirements of a headquarters location with diverse functions such as manufacturing or customer service located in areas that are most appropriate for those uses. In this respect, site location criteria are more likely to vary based on the functional area, rather than on an industry-by-industry basis.
- This matrix is not meant to be an all-inclusive detailed assessment of the functions within these industries. Rather it is meant to create a high level picture of where opportunities might exist and where a specific focus might create benefits across industries. Given the high crossover potential in how these industries have been identified, more research may be necessary to actually begin to focus recruitment and growth efforts over time.

The functions are defined as follows:

1. Raw Materials / Resource Dependent: Industries that derive value directly from the extraction or basic processing of natural resources: agriculture production, forestry, deposits of natural resources and the like.
2. Raw Materials Processing: Industries that derive value from the processing of raw materials into intermediate and or finished goods. These might include adding value to natural resources for delivery to companies who then produce final goods. The logistics and transportation area is seen as an opportunity area in this segment because it is a critical service provider in the transportation and servicing of raw materials. Advances in Nanotechnology may provide new ways to process raw materials or create new products out of raw materials.
3. Manufacturing – Intermediate: These are firms that process raw materials into products that are shipped to other firms as input into a manufacturing process. There are many companies in Georgia that fall in to this category and these companies are subject to severe production cost competition that would tend to make them susceptible to seeking optimal cost operating cost locations. Many emerging areas such as products serving homeland security needs or emerging environmental devices will fall into this functional area.
4. Manufacturing – Final: These are manufacturing enterprises that are creating goods for final consumption, either directly to the consumer or to other businesses. All of these industries will have segments that are manufacturing final goods and this functional area would be a high job creation opportunity across a broad spectrum of existing and emerging industries.

## Industry Composition Matrix – Areas for High Opportunity Job Creation

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5. Services - Consumer: This area is comprised of firms engaged in services primarily focused on the consumer. Consumers will create the demand for new products and services in this functional area, be that healthcare services or agribusiness. The communications area is a good example as communications companies develop new products for wireless communication.
6. Services – Business: This functional area is defined at the enterprise level as firms that are providing services to other businesses. In some cases there may be crossover companies that are serving both the direct consumer market and supporting demand from other businesses. Many of these strategic industries will be providing services, technologies and products to businesses that in turn support final demand.
7. R&D Basic: This area is comprised of firms that are heavily dependent in basic research to create new products and services. These may be industries that are still emerging, but offer strong growth opportunities in the future. An example of this would be the life sciences, an area comprised of many segments that are dependent on basic research to come up with health solutions that are translated into businesses and technologies with economic impact.
8. R&D Applied: This segment is comprised of firms that are more dependent on applied research. These may be industries that have large R&D expenditures focused on the products and services they currently sell. In this regard, these firms are focused on refining and fine-tuning existing products and services. All of these industries will have demand for applied research to support innovation at the enterprise level.
9. Corporate Headquarters: All of these industries will be comprised of corporate headquarters functions. The corporate headquarters operations represent an important functional area from an economic development standpoint, bringing higher paying jobs and a senior executive talent to the state. These industries vary in terms of their maturity, concentration, and the degree to which a corporate headquarters strategy can be successful. Many of these segments will also have numerous non-profit supporting agencies that can serve as vital components of an economic development strategy.

**Appendix E**

**Commission for a New Georgia**

**Cluster Scoring Framework**

## Cluster Scoring Framework Methodology

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- The following 6 pages represent *one approach* to evaluating and prioritizing target industry clusters for the state of Georgia. The process of strategically targeting resources to promote economic development is by its very nature complex and not easily packaged into short answers. This is especially true where the geography of analysis is a state with a strong resources/asset base, varying business operating environments and divergent priorities. Nonetheless, it is important for the state to take a critical look at strategic industries in order to ensure that the economy is sound and growing in the future.
- The task force has devised a preliminary set of criteria to evaluate strategic industry clusters that is subject to the limitations of time, resources and data availability. In utilizing these criteria, the task force recognizes that this is just one approach and there may be additional criteria that are used to evaluate clusters on importance to the state. One of our guiding principles is that this process needs to be revisited on an annual basis to measure where we are, what progress we are making and how the state's efforts can become more responsive. One example of a criterion not considered here would be the scope/extent of focused curricula and training resources that might be available to support the industry cluster over time. The purpose of this methodology is not to eliminate efforts that support poor performing areas, but rather to establish a methodology to prioritize strategic clusters based on established measures. The criteria used in this evaluation are:
  - Cluster with Growth Potential – a cluster ought to demonstrate favorable growth rates nationally so that there is a “market of opportunity.”
  - Cluster with Relatively High Wages – a cluster that will support higher income for Georgians. Higher paying industries will typically form the “economic base” of a region (see Porter Study).
  - Cluster with Georgia Resources to Build Upon – a cluster that has the potential to succeed based on an existing employment concentration. This measure indirectly measures supporting resources in Georgia.
  - Market Opportunities – are there known or suggested market opportunities upon which to base a strategy going forward?
  - Research Base / Innovation Driven – given that many industries are driven by innovation and technology advancement and Georgia's recognition of research as a critical element supporting economic development, are there strategic research resources available that can be a differentiating factor in the cluster that speak to Georgia's advantages?

## Cluster Scoring Framework Methodology (continued)

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- The following methodology was utilized in evaluating these strategic industry clusters:
  - Identification of all industries of interest (derived from an analysis of studies and consulting reports prepared on behalf of a number of entities and agencies, both public and private, in Georgia). The task force also solicited input from industry experts and task force members from around Georgia.
  - Upon compiling the initial list, the task force compiled meaningful and accepted industry clusters, or groupings of industries, some of which are consistent with studies conducted and reviewed in the initial phase of work.
  - The 10 identified clusters; all representing (for the most part) industries with identifiable NAICS codes were evaluated based on the 5 established criteria above. See pages below for supporting detail.
    - A factor scoring and weighting system was utilized to prioritize and evaluate the industries based on the criteria. In three instances, quantifiable measures are used, while the last two are based on input from state agencies, initiatives underway or the regional analysis. Where possible, comments are provided in the model to support the scoring.
    - All clusters are scored and the criteria are weighted to rank order the industries as they perform against established criteria – see results page for supporting detail.
    - Four different sensitivities are used (double-weighting individual criteria) and the final performance is based on the average performance on all sensitivities.

## Scoring Framework – Clusters with Future Growth Potential

	Cluster with Future Growth Potential		1
Industries	Projected % Employment Growth Rates 04-09 (GA / US)	Comment	Score
Agribusiness	-1 / 1	Serves local and international demand in certain segments	1
Business and Financial Services	8 / 7	Georgia strength with relatively high mobility	3
Advanced Telecommunications	6 / 5	Global demand with dynamically changing technologies	3
Energy and Environmental	2 / 3	Emerging needs and technologies	1
Healthcare and Eldercare	11 / 12	Global, national and community need	5
Homeland Security and Defense	7 / 7	Robust demand for new technologies and products	3
Life Sciences	14 / 14	Global need - comprised of small and large opportunity segments	5
Logistics and Transportation	10 / 8	Becoming technology driven, GA outpacing US	5
Multimedia	6 / 5	International growth - leading US industry. Many opportunity segments	3
Software Development	36 / 5	Continues to drive innovation - existing and evolving growth markets	5
Note on Scoring: 1=Marginal 3=Favorable 5=Optimal			

### NOTE: Cluster with Future Growth Potential

This criterion reflects the need to focus Georgia resources on clusters with favorable national growth rates over the near term (5 years). Strategies enhancing these clusters would lead to Georgia's growth in these clusters to a point where we are equal to or outpacing the US growth overall. In this case, industries with relatively lower projected national growth are given a relatively lower score. Economic development policies need to place importance on elevating growth rates in GA vs. national averages.

## Scoring Framework - Clusters with Relatively High Wages

	Cluster with Relatively High Wages		2
Industries	2004 Wage Index vs. Georgia Average	Comment	Score
Agribusiness	81	Productivity and value-added segments can enhance wages	1
Business and Financial Services	180	International competition - yet average salaries typically above existing rates	5
Advanced Telecommunications	200	High average salaries	5
Energy and Environmental	150	High average salaries	5
Healthcare and Eldercare	82	Wage rates are favorable for many areas - clerical / insurance segments draw averages down	1
Homeland Security and Defense	95	Emerging initiatives will involve technology and research, enabling higher wages over time	1
Life Sciences	120	High average salaries	5
Logistics and Transportation	120	High average salaries	5
Multimedia	120	Competitive salaries in many areas	5
Software Development	210	Historic strong growth and wage scales - growing international competition	5
Note on Scoring: 1=Marginal 3=Favorable 5=Optimal			

NOTE: 2004 Wage Index vs. Georgia Average (100=Georgia Average=~\$37,000)

This criterion reflects the need to dedicate resources towards clusters that will support higher incomes in Georgia. In this case the above wage index is based on the total average wage paid in Georgia. This criterion should indirectly benefit traded clusters, which by their nature pay higher salaries. Likewise this area should reward industries that tend to have international markets.

## Scoring Framework - Clusters with Georgia Resources to Build Upon

	Cluster with Georgia Resources to Build Upon		1
Industries	Employment Concentration vs. US Average	Comment	Score
Agribusiness	2.21	Higher industry concentration than US	5
Business and Financial Services	0.98	Large GA employer - strong business schools - close to US employment concentration	3
Advanced Telecommunications	1.02	Many leading companies and infrastructure	3
Energy and Environmental	0.96	Mirrors US employment	3
Healthcare and Eldercare	0.76	Suggestive of underserved segment in GA	1
Homeland Security and Defense	0.77	Suggestive of underserved segment in GA	1
Life Sciences	0.72	Suggestive of underserved segment in GA	1
Logistics and Transportation	1.09	Mirrors US employment	3
Multimedia	0.98	Mirrors US employment	3
Software Development	1.10	Mirrors US employment - strong growth projected	3
Note on Scoring: 1=Marginal 3=Favorable 5=Optimal			

**NOTE: Cluster with Georgia Resources to Build Upon**

(1.0=Equal employment concentration in GA as in US overall).  
 This criterion reflects the need to have resources in Georgia upon which to build a strategy. In this case, the location quotient measure employment concentration, but also indirectly measures the resources that we have in place that support an industry. We assume that where we have reasonable advantages are in areas where Georgia employment concentration exceeds 1.0.

## Scoring Framework – Clusters with Market Segments

Cluster with Market Segments		1
Industries	Market Opportunities	Score
Aerospace	General aviation / parts and maintenance / specialized aircraft / parts manufacturing / exports / homeland security	3
Agribusiness	Greater exports / more value-added / cooperative ventures	3
Business and Financial Services	Transactions Processing / Banking and Financial services	3
Advanced Telecommunications	Telecom services / RF devices / electronic commerce	3
Energy and Environmental	Green power / emerging technologies / ties to agricultural and renewables	5
Healthcare and Eldercare	Needs of rural Georgia / prevention / general health	5
Homeland Security and Defense	Port-related logistics services / CDC and Bioterrorism - close ties to life sciences and logistics areas	1
Life Sciences	Clinical trials / treatment of disease / cardiovascular	3
Logistics and Transportation	Better positioning of logistics assets in GA / cargo / rail / ports / transportation equipment	5
Multimedia	Film production / TV-cable / sports / publishing / tourism / other media	3
Software Development	Close ties to many different industry clusters	1
Note on Scoring: 1=Marginal 3=Favorable 5=Optimal		

NOTE: Cluster with Market Segments

This criterion reflects the need to have the ability to identify market opportunities that have potential in Georgia. These comments are based on input from industry experts and market studies that were submitted to the task force.

## Scoring Framework – Clusters with Innovation and Technology Potential

	<b>Cluster Driven by Innovation and New Technologies</b> 1	
<b>Industries</b>	<b>Research Base - Innovation Driven</b> Score	
Aerospace	Supported by innovation center in Macon / Warner Robbins / Georgia Tech	5
Agribusiness	Supported by Ag Experiment Stations and specialized schools for forestry, food and other specialized resources / GRA	3
Business and Financial Services	Market driven innovations in structure and organization - close ties to software	1
Advanced Telecommunications	GRA focus area / Georgia Tech	5
Energy and Environmental	GRA focus area - Clark Atlanta / UGA	5
Healthcare and Eldercare	GRA Focus Area / Medical Schools and hospitals around the state	5
Homeland Security and Defense	Close linkages to advances in logistics and transportation	1
Life Sciences	Strong and growing research base / pending innovation center in Augusta / GRA Focus area ? Georgia Tech-Emory	5
Logistics and Transportation	Supported by innovation center in Savannah / Georgia Tech	3
Multimedia	Close ties to software / equipment for production	3
Software Development	Supported by schools of computer science around Georgia	1
Note on Scoring: 1=Marginal 3=Favorable 5=Optimal		

NOTE: Cluster Driven by Innovation and New Technologies

This criterion reflects the task force's desire to reward clusters that appear to have a high tendency towards innovation. This section also rewards clusters for having received attention from Georgia's research-driven initiatives such as The Georgia Research Alliance and Centers of Innovation that are being funded through OneGeorgia. These research-related assets should create a core resource to build upon and support long-term competitive advantage.

## Results

Scenario:	Equal Weight	Double Weight Growth	Double Weight Innovation	Double Weight High Wages	Average Score
Aerospace	17	20	22	22	20
Agribusiness	13	14	16	14	14
Energy and Environmental	19	20	24	24	22
Healthcare and Eldercare	17	22	22	18	20
Life Sciences	19	24	24	24	23
Logistics and Transportation	21	26	24	26	24
Business and Financial Services	15	18	16	20	17
Advanced Telecommunications	19	22	24	24	22
Homeland Security and Defense	7	10	8	8	8
Multimedia	17	20	20	22	20
Software Development	15	20	16	20	18

NOTE: Enabling agency could determine to add additional criteria or modify scoring methodology to better reflect the state's ultimate interest. At a minimum, the state should clearly articulate where it will place an emphasis so that local efforts can plan accordingly.

This approach should be used as a planning tool, but can also be useful in determining how progress will be measured.

Results will vary based on industry definitions and level of detail.

**Appendix F**

**Commission for a New Georgia**

**Illustrative Regulatory Framework**

**Presented to Competitiveness Task Force June 8<sup>th</sup>, 2004**

## Illustrative Incentives Framework - Assumptions

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- Georgia's statutory incentive policies are not structured to reward specific industries or industry clusters. Instead, the state's statutory incentive programs are income tax based and rely on the state pulling together non-statutory programs that address land acquisition, equipment purchase and other grant programs that flow to local development authorities.
- The BEST Legislation is designed to improve the chances of the more rural counties by increasing the value of the income tax credits for more "distressed" areas based on a 4-tier system. The value of income tax credits to the site location decisions is nominal at best – income tax credits are of very little benefit at the enterprise level (it is a small amount of money and the firm must be profitable and paying income taxes), and the tax credits are perceived as being bureaucratic (more trouble than they are worth). Ultimately no company will make a siting decision based on income tax credits, unless all other factors are equal.
- At a minimum, Georgia should understand and measure the effectiveness of BEST (The task force is informed that the BEST income tax credits are the least used tax credits in Georgia behind retraining and R&D credits).
- Many states have adopted incentive legislation to grow and attract strategic industries (notably NC – JDIG and pending legislation for biopharma).
- The strategic industries task force believes that the state's incentive policies need to be competitive with other states yet ought not to be excessive. Any individual project's incentive package needs to be evaluated against both the direct potential tax revenues and the broader potential benefits (direct and indirect).
- The strategic industries task force further believes that a more competitive set of statutory programs will allow the state to stay in the process longer and may ultimately help to minimize the need for onerous incentive packages in the final stages that attempt to offset statutory programs in other states.
- Additionally, given the size of the state and the diversity across the state. State government will never be successful in bringing growth to all counties in Georgia. The state might consider incentives that encourage greater collaboration at the county level. Counties will need to ensure that the building blocks of economic development (health, schools, quality of life) are in place in order for the state to be successful in a broader context.
- The task force believes that this philosophy is in line with the Governor's approach to good government and might provide, including the following concepts:
  - Make Georgia More Competitive
  - State Government will Help Those Who Help Themselves

## Illustrative Incentives Framework

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Concepts:

1 – Retain BEST as one option. Any corporate entity creating jobs and meeting requirements would be eligible for BEST, **or**

2 - “BEST2” (or to be named),” **or** limit this legislation to strategic industries (*FL has a list of 20 strategic industries that includes both industries and functions, such as Corporate HQ activities. The list could be updated annually*).

Component A: High Wage Jobs Competitiveness Rebate (this program has the added benefit of having a bigger impact in rural areas where meeting wage requirements would be easier therefore increasing the amount of the rebates. This approach might actually do a better job spreading jobs around Georgia to lower cost areas, where opportunities exist).

### Illustrative

% of Local Catchment Area Average Wage	Benefit *
110	10% rebate of payroll taxes over 5 years
120	20% rebate of payroll taxes over 5 years
>130	30% rebate of payroll taxes over 5 years

*NOTE: Rebates are not costs to the state, but rather foregone income and intended to drive a greater share of economic activity to the state – that would otherwise not be here. ROI would need to consider indirect and induced benefits.*

Component B: Georgia Regional Development Opportunity Areas (certified by Georgia Department of Economic Development designated process): Companies that create jobs and make investments in locations that are designated regional development opportunity areas would be eligible for component A and a number of enhanced incentives. The requirements might be as follows:

- Eligibility for Best1 and Best2
- Companies locate in sites governed by joint development authorities, where a legal contract exists for at least two counties to share in development, servicing and tax revenues for that site, and a minimum of 300 jobs and \$50 million investment; non MSAs a minimum of 50 jobs and \$25 million investment (or tier investment and job creation having no more than 3 tiers as makes sense).
- Guaranteed Access to enhanced QuickStart and ICAPP workforce programs
- Perhaps GRA programs could be used to purchase R&D equipment in these areas
- Eligibility for accelerated depreciation in these areas for state personal property taxes
- Tax abatement would be up the JDA, but these incentives should reduce the scope and level of abatement offered or required

- Exemption from state sales taxes on construction
- Enhanced state R&D tax credit to promote research – TBD, but at least as aggressive as near competitors
- Other

*NOTE: The state often participates in incentives through land acquisition and equipment purchases through development authorities. In this case the state could agree to reimburse the JDA a % of the land costs as companies take down acreage. This would serve as the state's investment in the project over time and help the JDA pay down their debt here they are rewarded over time for their own success.*

#### Other General Assumptions Regarding Incentives:

1. Incentives are important to Georgia's competitive business recruitment and expansion efforts. Georgia will strive to compete for new investment based on the strength of our business climate, not on the strict merits of financial incentives. At the same time, the state recognizes the importance of strategically competing for new investment and the long-term benefits this creates for Georgia citizens.
2. Incentives to recruit companies to Georgia should not put existing companies and/or taxpayers at a competitive disadvantage in any part of the state. Georgia should utilize incentives only after due diligence is complete. The state should only offer incentives where good business practices have been engaged to support the decision (ROI, partner analysis, credit-worthiness, economic impact).
3. The state recognizes the importance of investment in infrastructure (workforce, regional development authorities, water/sewer, etc) as "incentives" that will ultimately contribute to Georgia's economic development success.
4. Incentives are a partnership between state and local government. The state should strive to optimize local impact through utilizing regional development authorities where appropriate.