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# **Science and Technology-Based Economic Development: *A Perspective from Georgia***

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# Mission

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**The Georgia Research Alliance connects business, university and government leaders to generate start-ups, attract industry, enhance jobs and create wealth.**



# Distinctive Elements

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- **Vision of the business community**
- **Public-private partnership**
- **Top executive leadership with power to commit their organizations**
- **Non-governmental structure to provide autonomy and buffering**
- **Virtual organization to initiate & coordinate efforts - - not run programs**



# Context

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**Coalescence of political and economic power**

**GRA brought university presidents into business-political alliance**



# Partners

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**The University of Georgia**

**Medical College of Georgia**

**Emory University**

**Clark Atlanta University**

**Georgia Institute of Technology**

**Georgia State University**



# Central Strategy

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- **Focus money on top people in top universities**
  - **Attract “the best and the brightest”**
  - **Use public and private funds to build strength around them**
  
- **Targeting, concentration, collaboration**

# Business Cycle

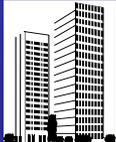


Public and private investment through GRA in research and development infrastructure

## Immediate outcomes



World class researchers



World class facilities and equipment



Non-state research dollars (federal, industry, private)

## Intermediate outcomes



World class ideas



World class graduates/ talent

## Longer-term outcomes



World class companies



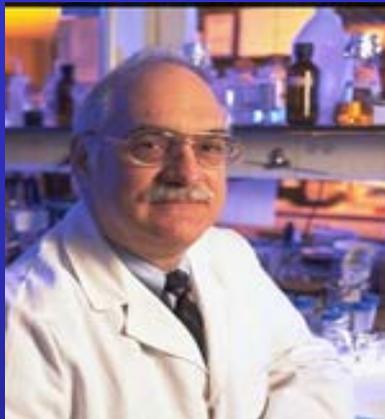
New jobs



Improved corporate profitability



# Eminent Scholars



- **Forty-nine endowments to date**
- **Key component of success**
- **Attract disproportionate share of research \$'s**
- **Attract the best graduate students**
- **Create the most interest with companies**



# Substantial Aggregate Impact

\$375 million of incremental state investment since 1990 has led to . . .

## Immediate outcomes

- Non-State Funding: \$1 billion brought to Georgia
- Researchers: 120 additional world class scholars and researchers brought to Georgia
- Jobs: 750 high-tech research jobs created at the Georgia's research universities

## Intermediate outcomes

- Ideas: 700 publications of research findings in scholarly journals
- Talent: 500 Ph.D. and Masters graduates

## Long-term outcomes

- Job Formation
  - 80 Companies started
  - 2000+ new high-tech jobs created
- Job Recruitment
  - Merial, Phillips, Caterpillar, Lucent, Bresagen



# Return on Investment

**University Research  
Expenditures in Georgia, 2002  
\$1.0 billion**

**Employs research professionals,  
technicians and support teams**

**Builds, improves and,  
operates facilities**

**Purchases goods and services**



**Generates additional sales of  
goods and service ~ \$1.93 billion**

**Creates need for additional jobs ~ 27,400**

**Generates additional earnings  
~ \$919 million**



# Technology Transfer Programs

<b>VentureLab</b>	<ul style="list-style-type: none"><li>• Creates high-growth companies based on research investment in universities</li></ul>
<b>GRA Innovation Fund</b>	<ul style="list-style-type: none"><li>• Cost-matching for university-industry teams developing/commercializing technology</li></ul>
<b>Challenge Grants</b>	<ul style="list-style-type: none"><li>• Cost-matching grants for teams of GRA Eminent Scholars to explore/develop technologies</li></ul>
<b>Technology Development Centers</b>	<ul style="list-style-type: none"><li>• Specialized equipment/labs to support early-stage companies residing in university incubators and other industry working with university faculty</li></ul>



# Sustaining the Momentum

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- **Successful in biotech with several major NSF/NIH funded centers of excellence (8<sup>th</sup> in nation in number of biotech companies)**
- **Taking specific actions to grow a highly focused research enterprise that contributes to the national nanoscience agenda (people and tools)**
- **Short-term economic gains are possible through major federal R&D grants**
- **Substantial economic impacts via industry formation/expansion are long-term (10 years away)**



# Federal-state Cooperation

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- Without a strong foundation of basic research, the commercial outcomes that we all seek in the name of national competitiveness and quality of life for our citizens cannot occur
- It is from a strong basic research engine that we will discover areas of innovation today unimagined
- Federal government should renew and strengthen its commitment to being the primary sponsor of basic research