



**The Southern Advanced Materials in Transportation Alliance  
(SAMTA)  
Nov. 1, 2010**

***SAMTA Mission Statement***

*Increase the amount of Southern research, products, employees, companies, and production facilities in advanced materials for the automotive and aerospace industries.*

**Introduction and Background**

The revitalization of the U.S. manufacturing industry has become more of a national priority. Nowhere is this more critical to the overall economic well-being of citizens than in the South, with its large manufacturing and industrial base. Increasingly, the answer to the revitalization question is the creation of regional innovation clusters. Southern Growth proposes the identification and facilitation of these clusters as a means of fostering the manufacturing base in the South.

A review of Southern state technology plans and assets reveals that the South is ripe for the formation of an innovation cluster centered on advanced materials for the transportation industry. Such a cluster combines traditional industrial strengths with current research capabilities to make it a “sweet spot” of future manufacturing.

Historically, the South has had a strong base of materials manufacture. The textiles industry spawned a strong fibers industry around composites. This momentum is now morphing into research, development, and production of nanomaterials. About two thirds of our states target nanotechnology or advanced materials for special economic development consideration.

The confluence of materials science, nanotechnology, and the transportation industries represents a strong opportunity for cluster promotion. The advanced materials cluster would work both in the geographic and the virtual worlds, with Southern Growth threading together local and regional resources. Some of the South's significant strengths in this area appear below.

- The South has become a world leader in automotive production, with foreign automotive manufacturers joining an impressive presence by U.S. companies. The majority of Southern states are targeting the automotive industry. New announcements by Korean manufacturers and Volkswagen continue to add to the South's impressive automotive base. V-Vehicles, a new vehicle producer, has chosen Louisiana as site of its first manufacturing plant.
- The South has impressive research assets in this area, including Oak Ridge National Laboratory, the NASCAR Research and Development Center, the International Center for Automotive Research in Greenville, South Carolina, the Center for Advanced Vehicular Systems at Mississippi State, and the Nissan Research Center in Nashville.
- Four Southern states have targeted the aerospace industry. The recent announcement that Boeing has chosen South Carolina as the site for its second assembly line for the 787 Dreamliner boosts the South's presence in this industry. Research assets include Marshall Space Flight Center in Alabama; NASA Langley Research Center in Virginia; and Cape Canaveral in Florida.
- Oak Ridge National Laboratory has been a source of materials research and commercialization since its founding. ORNL has world-leading facilities to examine and characterize materials at the atomic scale, to simulate and model the development of new materials to fully understand their properties, and then to actually develop and refine materials in close partnership with industrial partners. In fact, ORNL has won more R&D 100 Awards, conveyed for excellence in transferring innovative ideas to the commercial marketplace, than any other national laboratory.

To increase investment in R&D, production capacity, and employment in this industry, Southern Growth proposes the formation of the Southern Advance Materials in Transportation Alliance (SAMTA). Clusters are the foot soldiers in the fight for an innovation economy. As mentioned in *The Geography of Innovation: The Federal Government and the Growth of Regional Innovation Clusters*, regional clusters

*are critical components of national competitiveness. Geographic regions that are bound together by a network of shared advantages create virtuous cycles of innovation that succeed by emphasizing the key strength of the local businesses, universities, and other research and development institutions, and non-profit organizations.*

Regions with strong innovation clusters have “higher rates of innovation and entrepreneurship and better wages.” Research shows that clusters are positively associated with growth in per-capita gross domestic product.

### **Description**

SAMTA will be both a physical and virtual cluster. The physical component of SAMTA consists of the regional geography of the cluster, exploited historically by regional organizations such as Southern Growth, Southern States Energy Board, and Southern Governors Association. The virtual part of the cluster uses new telecommunications technologies to create virtual communities bound together by common interests.

SAMTA will:

- *Lead by private industry.*

A private-industry chair, along with a public sector co-chair, will lead the cluster, with Southern Growth acting in its traditional strengths as convener and facilitator. An advisory committee of researchers, product manufacturers, parts makers, workforce developers, local and regional governmental leaders, and economic developers will act as a guide for cluster development.

- *Identify 2-3 working groups.*

Southern Growth will use industry data and technology contacts within each state to identify these groups and their location to each other. Working groups will exist by application-with the strategy that the application will drive much of the research.

- *Seed and support each working group.*

Each segment will receive logistical, administrative and financial support by Southern Growth, with supporting partners of Southern Technology Council membership in each area. The financial support needs to last for three years with a declining level of activity from Southern Growth. The target is for the creation of a self-sustaining cluster.

- *Use “cluster of clusters (working groups)” concept where appropriate.*

Many of the cluster functions are alike because of similarities within the transportation industry. Southern Growth will use technology to connect the clusters when appropriate such as shared industry analysis and manufacturing issues. Southern Growth plans to use the concept of open innovation among customer participants to increase networking and identify new opportunities.

- *Place emphasis on end-user applications.*

The firms that make automotive and aerospace products will be the overarching target of the cluster. The facilitation of these business people with the research community and policymakers is one of the chief activities of SAMTA.

A set of principles will guide the formation and operation of the cluster.

- SAMTA welcomes all participants in the advanced materials transportation industry.
- SAMTA operates in a pure private/public partnership, with both sides represented in cluster management.
- Nearly all activities will be based on telecommunications, with the exception of one general meeting a year.
- The cluster, after a period of incubation, will be self-supporting.

**Structure**

SAMTA will be structured to maximize public/private sector cooperation, create wide Southern involvement, and will have the following characteristics.

- Two co-chairs: one from private companies, one from the public sector.
- Executive committee: two co-chairs, director of Southern Technology Council, executive director of Southern Growth Policies Board, appointee of current Chairman of Southern Growth Policies Board or Southern Technology Council, and two members at large.
- Steering committee: two from each state; one from private companies, one from the public sector.
- Membership: representatives from transportation companies, universities, community colleges, public labs, etc.

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*For further information about SAMTA, contact Scott Doron, director of Southern Technology Council at (919) 941-5145 or sdoron@southern.org.*