



For Further Reading:

Southern Growth Policies Board has produced a series of reports with analysis of innovation trends in the South. The *Invented Here* report series, as well as other technology and innovation publications, appear at www.southern.org/pubs/pubs.shtml#tech.

The Council on Competitiveness makes recommendations on harnessing innovation for economic competitiveness. Their website (www.compete.org) features data and reports about innovation, including the recent report of the National Innovation Initiative, *Innovate America: Thriving in a World of Challenge and Change*.

The Ewing Marion Kauffman Foundation hosts one of the most significant websites focusing on information, programs, and publications about entrepreneurship. Visit www.kauffman.org/entrepreneurship.cfm.

The Eisenhower National Clearinghouse for Mathematics and Science Education is a master website for all information relating to K-12 math and science teaching and learning. The website includes curriculum resources, professional teacher development materials, information for students and parents, and other services. Visit www.goenc.com.

About Southern Growth Policies Board

Southern Growth Policies Board is a non-partisan public policy think tank based in Research Triangle Park, North Carolina. Formed by the region's governors in 1971, Southern Growth Policies Board develops and advances visionary economic development policies by providing a forum for collaboration among a diverse cross-section of the region's governors, legislators, business and academic leaders and the economic and community development sectors. Supported by the governments of 13 Southern states—Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Virginia, West Virginia and the commonwealth of Puerto Rico—Southern Growth provides a gathering place for regional collaboration.

Southern Growth's research focus encompasses the major drivers for economic development in the South—innovation and technology, globalization, the changing nature of the workforce and the vital role of the community. Southern Growth provides its members, and the region, with authoritative research, discussion forums and pilot projects that define the critical issues shaping the South. Southern Growth develops new regional strategies for economic development and identifies best practices to facilitate action. To learn more about Southern Growth Policies Board, visit www.southern.org.

Innovation and Technology: Making Choices for Your Community

Take a minute to think about this riddle: *How is a personal computer like the railroad?*

The answer is that both were innovations that revolutionized the economy. Innovation—new ideas that lead to new products and new ways of doing things—creates economic prosperity.

Technology is the primary tool for innovation. Many people think that innovation and technology are only associated with new industries like computers and biotechnology. It's true that high-tech businesses are significant contributors to the economy, and the jobs they create are generally good ones—in 2004, the American Electronics Association found that the average high technology wage was 84 percent higher than the average private sector wage. However, the best companies in traditional industries, such as manufacturing and retail, also use innovation as a competitive advantage.

Wal-Mart, for example, pioneered the use of advanced computer systems for basic business operations such as inventory control and purchasing. An Arkansas-based manufacturer of protective gloves for the military is now making gloves that were once made in China by using new methods to speed up delivery from 22 to three days. And, companies all over the world have found new markets for their products by using the Internet to sell goods and services on-line.

"We are and remain the world's leader in innovation," said the president of the National Association of Manufacturers in 2005. "But we do not enjoy that status by divine right, and we cannot assume that we are safely ahead of the world."

Challenges include:

- Less than a third of the nation's 8th graders were found to be proficient in math and science in 2003. Most Southern states trailed the national average.
- Industries in the South are not investing as much in research and development as are firms in other areas of the country. If the South's businesses met the national average in 2001, \$23 billion more would have been invested in the region.
- Both the U.S. and the South have seen dramatic drops in venture capital—a key ingredient in taking innovations to the marketplace.

What can your community do to make the most of the economic potential of technology and innovation? The Southern Growth Policies Board has designed this discussion booklet to start a conversation about the best way to approach this issue in your community.

Approach 1

Focus on Building Knowledge

Knowledge and ideas spark the development of new processes and products. If we focus on building knowledge—among people, institutions, and businesses—homegrown innovation and high technology businesses and products will follow.

What Can Be Done?

- Reform K-12 math and science education, including strengthening high school graduation requirements in math and science.
- Facilitate research and development partnerships between local universities and businesses.
- Improve the flow of information on technology trends to local businesses through regular briefings, training programs and networking events.
- Ensure that all community residents are computer and Internet literate.

In Support

- Science, engineering, information technology and math are fields that provide the knowledge needed for the fastest growing industries and occupations in the U.S.
- We need to help the competitiveness of our existing companies by providing a technology savvy workforce and community.
- Inventors often establish new businesses in the area where their idea or invention was first created.

In Opposition

- We've tried to improve education for decades. What makes us think we can make a difference now?
- Our young people are likely to leave for technology hot spots after they've received their education. Why waste our money?
- It takes a long time for research ideas to turn into commercial products or services—and ultimately, jobs.

Approach 2

Focus on Encouraging Entrepreneurship

Entrepreneurs turn ideas into jobs and wealth. New companies have been responsible for nearly all "radical" innovations since World War II—from the heart valve to the personal computer. We need to focus on supporting entrepreneurs in turning these innovative ideas into businesses.

What Can Be Done?

- Educate for entrepreneurship, in K-12 and beyond.
- Increase the local pool of venture and other financial capital for emerging businesses. Help match entrepreneurs with investors.
- Create services to support entrepreneurs, such as incubators, business assistance programs, and organizations that connect entrepreneurs with experienced business owners.
- Reduce regulations that hamper new business development.

In Support

- Small businesses create the majority of new jobs in the country.
- New businesses create competition for established firms, encouraging them to be more innovative.
- Homegrown businesses are less likely than transplants to move to other areas.

In Opposition

- Entrepreneurship is too risky. Many new companies fail. Besides, it takes too long to grow.
- Most small businesses remain small. It's unrealistic to assume that they'll all become the next Microsoft.
- Entrepreneurs are born, not created.

Approach 3

Focus on Recruiting Innovation

Recruitment has brought many jobs to the region. We just need to target recruitment to emerging industries such as biotechnology and nanotechnology. This can bring in good jobs more quickly, and with more certainty, than other approaches.

What Can Be Done?

- Prepare the infrastructure—such as advanced telecommunications, laboratory space, and technology parks— that technology-driven companies need.
- Provide tax and other incentives geared towards technology-driven businesses.
- Offer individualized job training programs for high-technology companies.
- Act with other communities to create a quality of life that is attractive to high-tech workers, and advertise these qualities to technology companies.

In Support

- Technology-driven businesses are a quick source of high-paying jobs.
- Our community can benefit from the technology and managerial talent, tax revenues, and other things that these companies bring with them.
- Recruited businesses can serve as anchors to attract other businesses in a specific industry.

In Opposition

- Providing state-of-the-art infrastructure—and keeping it up-to-date—is just too expensive.
- It's risky to chase the latest technology fad. Look at what happened to the dot-com industry.
- Relocated companies have few ties to the community. What's to prevent these companies from moving out three years from now?