

• **What is High Technology?**

There is no escaping it: we live in a high-tech world. We drive to work in computer-controlled cars [virtually all modern cars have microchip-guided sensors]; we listen to music, watch videos and communicate using portable digital devices, and we log on to computers and the internet at work and at home. Even the local movie house has gone high-tech, with digital projectors displaying the output from digital media instead of motion picture film.

In the world of business, high technology is an umbrella term referring to any industry that applies scientific and technical knowledge to the design and development of new products or processes. Subsectors include aerospace, biotechnology, information technology, electronic media/digital gaming, robotics, advanced alternative energy and nuclear energy, among others.

• **Why pursue high tech companies?**

Globally, high tech has been synonymous with high growth since the 1950s. The economies of states like California, home of Silicon Valley, and North Carolina – with its world famous Research Triangle Park [RTP] in the Durham, Chapel Hill, and Raleigh area – have benefited greatly from their investments in the high tech sector. North Carolina became a high technology magnet and its economy was completely revitalized. The RTP, covering only a few thousand acres, hosts companies that employ 39,000 full-time knowledge workers, plus thousands of contract workers. That's nearly as many as the total number employed in high-tech jobs in all of Louisiana.

Between 2001 and 2008, per capita income in Louisiana lagged between 10 and 28 percentage points behind the national average. The best per capita income years were 2007 and 2008. Louisiana's traditional high-pay sectors – oil and gas and petrochemical – constitute a small percentage of the state's workforce, and one that's been shrinking over the past decade.

High tech jobs have two very attractive aspects: substantially higher pay and substantially lower unemployment rate compared to average US employment. As reported in TechAmerica's *Cyberstates 2009* study, Louisiana's average technology wage of \$58,409 is 52% higher than average private sector wages of \$38,427. In 2008, the US technology unemployment rate was about half of the average US unemployment rate.

• **Where does Louisiana stand?**

In 2007, just over 1.9 million people were employed in Louisiana; fewer than 43,000 of them were high tech workers, according to the *Cyberstates 2009* report. Louisiana ranks 31st in high-tech employment.

Other rankings show problem areas for Louisiana's dream of becoming "Silicon Bayou" – a reference to Silicon Valley, near San Francisco, which has been a hot spot for high tech businesses for decades.

- Louisiana ranks 44th in Knowledge Jobs [measures the employment of Information Technology professionals outside the IT industry]¹
- Louisiana ranks 44th in Technological Innovation Capacity²
- Louisiana ranks 45th in venture capital investments -- \$8.17 million in 2008
- Low rate of patents awarded per 1,000 individuals in Science and Engineering occupations. Louisiana: 8.0 per 1,000; US average: 16.7 per thousand.

• Why are we behind?

Education

According to the *2008 State New Economy Index*, "In today's New Economy, knowledge-based jobs are driving prosperity. These jobs tend to be managerial, professional, and technical positions held by individuals with at least two years of college." The *Index* ranked Louisiana 47th in workforce education.

Louisiana's high illiteracy rate, its high dropout rate for high school, and its low college graduation rate have all worked against the goal of attracting high-tech businesses. That's because these many of these jobs demand high levels of education. Twenty-three percent of Louisianans 25 years of age or older hold at least a bachelor's degree³.

Unfortunately, Louisiana has a long history of losing its best and brightest graduates to better opportunities in other states, further weakening its ability to compete in the high-tech marketplace.

Louisiana ranked 41st in number of scientists and engineers as a percentage of the workforce.

Lack of research & development

Louisiana lags far behind other states in one of the key components of what some call an "Innovation Economy". The Baton Rouge Area Chamber recently published *The Innovation Economy in Louisiana, Part 1*, the first in a series of White Papers on the status of Louisiana's efforts to create such an economy. Lack of research and development was identified as a major impediment to achieving that goal.

¹ The Information Technology & Innovation Foundation & The Kauffman Foundation. *The 2008 State New Economy Index: Benchmarking economic Transformation in the States*. ITIF & The Kauffman Foundation, 2008.

² Ibid.

³ 2009 *SREB Fact Book on Higher Education*, Southern Regional Education Board

**Excerpts from: *The Innovation Economy in Louisiana, Part 1*
Baton Rouge Area Chamber, 2009**

Louisiana's focus on research and development has traditionally been low. *Louisiana: Vision 2020* and the subsequent update in 2003 demonstrated the state's weak position in research and development. In 1994, Louisiana's research and development expenditures per capita were 17.5% of the national average. That percentage had not changed by 1999. The 2003 update to *Louisiana: Vision 2020* stated "Intellectual capital leads to the ideas, technologies, and know-how used to create products and processes. Research and development in companies and at universities stimulates intellectual capital, and is highly correlated to an increase in innovation and technology development."

The most recent data available from the National Science Foundation show that the situation has not improved.¹⁰ Total research and development expenditures in Louisiana per \$1,000 of state GDP continue to significantly trail the national average (Figure 2). If Louisiana's economic future depends on an innovation-based economy and innovations depend on research and development as an engine for creative ideas, then it is imperative that Louisiana's policymakers reverse a decade's long trend of under-investment in research and development.

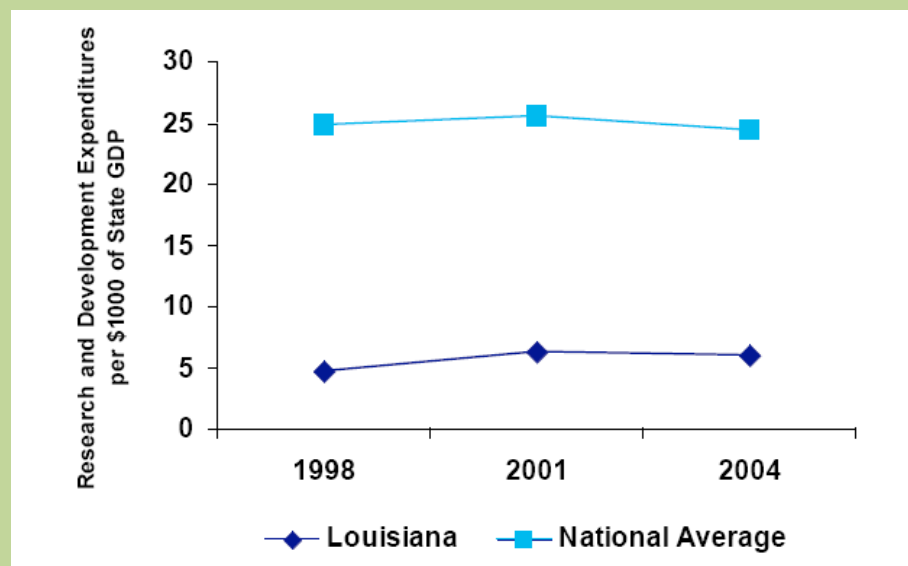


Figure 2. Comparison of research and development expenditures in Louisiana per \$1,000 GDP compared to the national average.
(Source: National Science Foundation *Science and Engineering Indicators, 2008*.)

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State Support for University Research

It is commonly accepted that states with world-class research universities have a higher likelihood of building and sustaining an innovation-based economy.

World-class research universities require much external funding to support research activities. As a percentage of state Gross Domestic Product, Louisiana's investment in academic research and development has fallen behind the national average within the past several years (Figure 3).

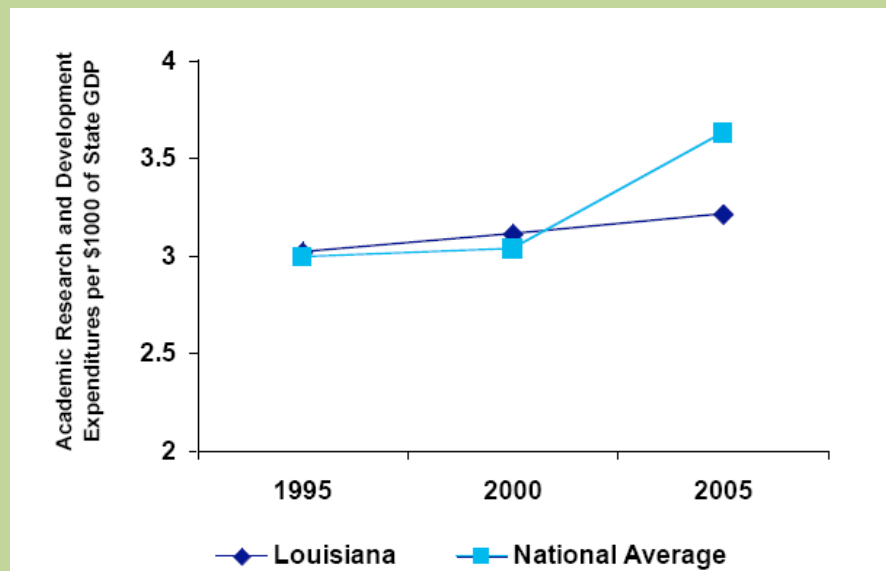


Figure 3. Academic research and development expenditures per \$1,000 of state GDP.
(Source: National Science Foundation *Science and Engineering Indicators*, 2008.)

... Analysis of state, federal, and total academic research and development expenditures per capita for 2007 demonstrate that Louisiana has a peculiar imbalance. The national average for state financed academic and research expenditures per capita is \$11.12 Louisiana spends \$24 per capita on academic research and development. However, the national average (by state) for federal academic research and development expenditures per capita is \$108, and Louisiana trails this figure with a rate of \$62. Finally, the national average (by state) for total academic research and development expenditures per capita is \$172. Louisiana also trails this with a total academic research and development expenditure per capita rate of \$137. The imbalance shown in Figure 4 is a troubling demonstration of state research

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investments that are not yielding significant federal and private research funding.

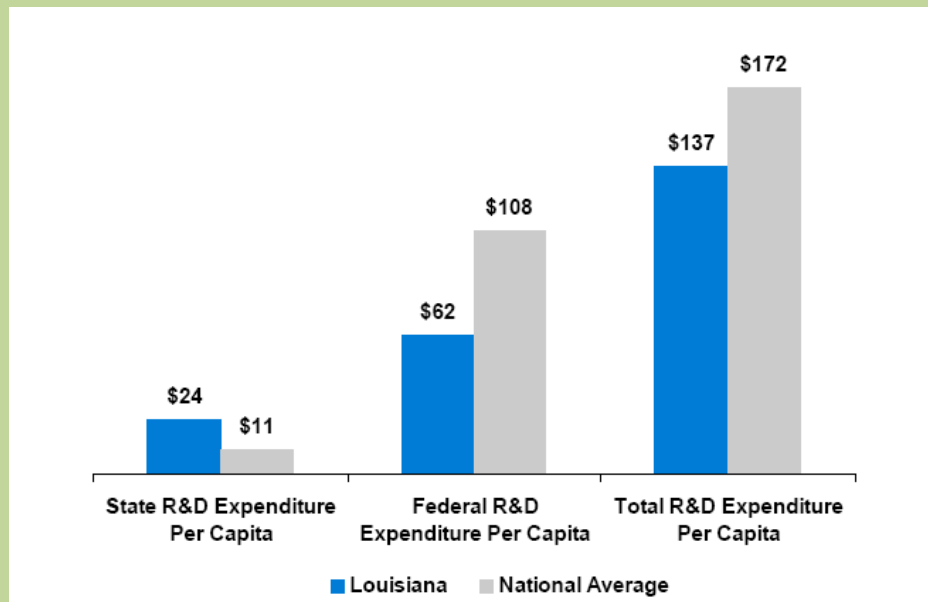


Figure 4. Louisiana leads the national average in state academic research and development expenditures per capita, but trails in federal and total academic research and development expenditures per capita for state universities and research institutes.
(Source: National Science Foundation WebCASPAP; U.S. Census Bureau; BRAC analysis.)

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Industry-based Research and Development

Private sector investments in research and development provide approximately two-thirds of all research and development funding²⁵. Significant gains in total research and development expenditures in Louisiana depend heavily on increasing private sector spending on research and development. In the past, industrial research laboratories of oil, gas, and petrochemical companies accounted for major research investments in Louisiana. These industrial laboratories made a significant contribution to Louisiana’s research and development posture.

²⁵ The Information Technology & Innovation Foundation (ITIF) and The Kauffman Foundation. *The 2008 State New Economy Index: Benchmarking Economic Transformation in the States*. ITIF and The Kauffman Foundation, 2008.

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Unfortunately, Louisiana's ranking compared to other states has been near the bottom based on private sector research expenditures (42nd in 2002 and 41st in 2003 through 2005).²⁶

These extremely low rankings are accompanied by Louisiana's ranking in the bottom twenty-five percent of states for the number of scientists and engineers as a percentage of the workforce and the number of patents issued to companies per 1,000 workers²⁷.

Louisiana's share of industrial research and development funding as a percentage of the national total has shown little significant growth since 2000 (Figure 6). In 1963, private sector research in Louisiana accounted for over 1% of all industrial research and development expenditures in the nation. In 2007, that share fell by almost an order of magnitude to 0.14%.

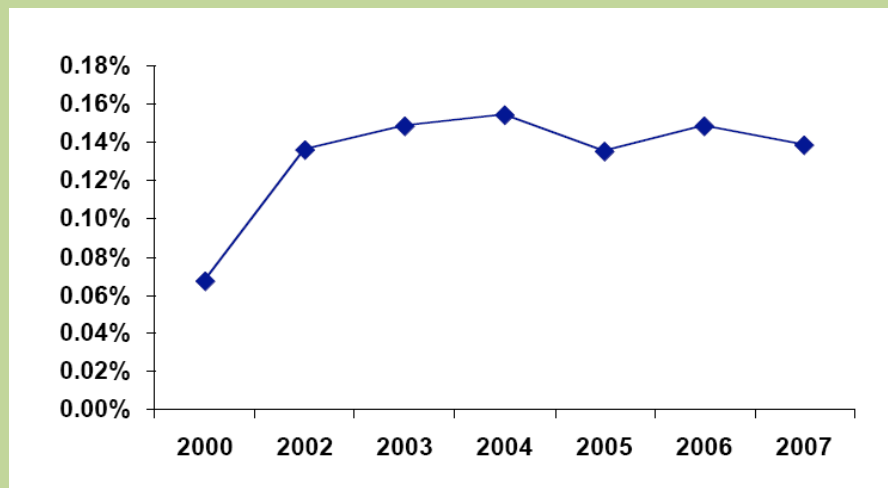


Figure 6. Growth in industry-based research and development expenditures in Louisiana as a percentage of national expenditures. Note: Industrial research and development figures for 2001 are unavailable through NSF, presumably disrupted by events surrounding the 9/11 attacks.

(Sources: Louisiana Economic Development Council Louisiana: Vision 2020, 2003 Update; NSF Statistics, 2009, www.nsf.gov/statistics, Last accessed on Aug 4, 2009.)

²⁶ National Science Foundation Industrial Research and Development Statistics, <http://www.nsf.gov/statistics/industry/>, Last Accessed on August 6, 2009.

*Excerpts from: The Innovation Economy in Louisiana, Part 1
Baton Rouge Area Chamber, 2009*

Furthermore, Louisiana research and development employment in 2007 was 26% of the national average, ranking the state thirty-second in the U.S.²⁸. This data shows that Louisiana is behind most of the nation in the capacity to support private sector research and development. The state is capable of reversing course.

The state's current portfolio of major private sector research capability is largely based on chemical, petrochemical, oil, gas, and energy technology . . .

There are very few large corporations with major research and development operations in Louisiana and none in information technology, environmental technologies, health care, life sciences, or other high-growth sectors located in Louisiana (emphasis added).

To download the full *Innovation Economy in Louisiana* report, go to the Baton Rouge Area Chamber site at www.brac.org and click on "Research" under the "About BRAC" heading.

²⁷ The Information Technology & Innovation Foundation (ITIF) and The Kauffmann Foundation. *The 2008 State New Economy Index: Benchmarking Economic Transformation in the States*. ITIF and The Kauffman Foundation, 2008.

²⁸ TechAmerica. *Cyberstates 2009: A Complete State-by-State Overview of the High Technology Industry*. TechAmerica, 2009.

Lack of venture capital

"Venture capital is in its infancy in Louisiana. Historically early stage investing in Louisiana has been done by high net worth individuals but it is sporadic, not well organized and does not provide sufficient capital or resources to early stage companies. Out of state venture funds and Louisiana CAPCO's [Certified Capital Company Programs] provide large pools of capital to late stage companies requiring large equity and debt financing. As a result of this gap in financing, early stage high technology companies either do not get started, struggle for financing or move out of Louisiana."

~ *The Louisiana Fund website*

Venture capital typically comes into play after a process or product leaves the research and development phase and goes through the commercialization phase. Without funding, even the best ideas will languish. Louisiana lags far behind other states in availability of venture capital for many types of businesses, especially start-up companies. In 2006, the national average for venture capital dispersed per \$1,000 of gross domestic product was 1.98. In Louisiana, it was 0.06.

According to PriceWaterhouseCoopers, just \$12 million in venture capital deals were struck in Louisiana in 2006 and early 2007. Georgia deals totaled \$457 million; North Carolina: \$770 million.

• Past efforts to pursue high-tech jobs

Funding Incubators and Research Parks

In the early 1960s, Louisiana began the first of many attempts to leap-frog into the 21 century through science and technology. By the end of the 1990s, there were fewer than a dozen incubators in Louisiana. The state's initial efforts in jump-starting high-tech ventures met with mixed success, at best.

- **GSRI:** In 1964, the Gulf South Research Institute was created to conduct applied research and foster technology transfer – making the scientific discoveries of academic research commercially viable. GSRI did a lot of biomedical research and garnered a few patents, but failed to spur much in the way of start-ups.
- **[The Center for Advanced Microstructures and Devices:](#)** CAMD is the only state-funded synchrotron in the U.S. The heart of the facility is an electron storage ring built exclusively to provide synchrotron radiation. CAMD conducts research in basic sciences and microfabrication and has attracted scientist and engineers from Louisiana universities, along with distinguished scientists from national and international institutions. Although CAMD has pulled in millions of dollars in federal research funds, it's never lived up to what was initially touted as great potential to create spin-off companies and generate high numbers of high-tech jobs.
- **[Biomedical Research Foundation of Northwest Louisiana:](#)** Funded through private and public support in 1986, the foundation, through InterTech Park, has created a physical environment for life science enterprises and related technologies. The foundation has a close working relationship with LSU Health Sciences Center in Shreveport, and provides support and resources for technology and business innovation through personnel, research, facilities, and funding. Currently, over 300 employees are working for 20 home-grown or recruited companies hosted by the foundation.
- **[LSU Business & Technology Center:](#)** The LBTC opened for business in 1988, with the goal of nurturing start-ups. According to its annual report, between 1989 and 2008, the center has

assisted in the starting of 499 businesses, thereby creating or saving 9,421 jobs. LBTC has won numerous national awards over the years for its assistance to entrepreneurs.

- **UNO Research & Technology Park:** UNO began acquiring land in 1990 and state funding soon followed, mainly for building construction. According to a 2002 report prepared for the Louisiana Department of Economic Development, The Park helped generate thousands of jobs during its first decade of operation. It has been cited as one of the more successful such ventures in the state, and has plans for expansion.

State Initiatives

[*The Innovation Economy in Louisiana*](#) report by the Baton Rouge Area Chamber cites a long list of state government attempts to kick-start high-technology enterprises in Louisiana. While praising past planning efforts, the reports asserts, “The economic future of the state is too important to keep repeating the cycle of planning-without-follow-through.”

Start Year	Name of Initiative	Purpose	Outcome
1964	Gulf South Research Institute	Conduct applied research; technology transfer	Underperformed; underfunded
1980s	Louisiana Partnership for Technology & Innovation [formerly GSRI]	Facilitate technological innovation	Down-sized version of GSRI
1984	Louisiana Science & Technology Foundation	Develop new technologies; support “entrepreneurial technologists”	Lack of funding to implement plan
1980s	Quest for Technology	Support technology transfer	Technology Transfer Offices created in Louisiana universities
1990s	Office of Technology, Innovation & Modernization, Dept. of Economic Development	Innovation-based economic development	Phased out
1990s	Technology Policy for Louisiana [draft]	Create technologically competent workforce by 2004; state to have ability to develop, commercialize & use new products/ processes/services	Not funded
1996	Louisiana Economic Development Council [ceased operation in 2009]	Create state master plan for economic development	Published <i>Louisiana: Vision 2020</i>

2007	Building Louisiana's Innovation Economy Report	Create plan to leverage academic research capabilities for innovation-based economic development	On-going
2009	Louisiana Innovation Council	Create comprehensive innovation-based economic strategy for Louisiana	On-going

• Current status

New incubators

Currently, Louisiana has 17 business incubators (not all high tech) in operation, according to the [Louisiana Business Incubation Association](#). Total state funding for university-related high-tech incubators has exceeded \$100 million over the past two decades. Some money has paid for research equipment, but the bulk of the funds have gone for buildings and capital improvements.

- [Louisiana Immersive Technologies Enterprise](#): LITE began operations in 2006. It is a \$27 million, 70,000-square-foot facility located at the Research Park of the University of Louisiana. LITE is a 3-D immersive visualization and high-performance computing resource center hosting clients in commercial industry, government and university sectors.
- [Louisiana Tech Enterprise Campus](#): Groundbreaking took place in the fall of 2009. The state is investing \$25 million in the new campus, which will encompass approximately 30 acres in its initial phase and ultimately more than 50 acres. Enterprise Campus will serve as a home for high-tech companies looking to utilize the intellectual and research strengths of Louisiana Tech. It is also expected to house government entities that wish to partner with the university in research, education and training, and other business development activities.

New businesses

- **High-tech Manufacturing:** V-Vehicle Company (VVC, a San Diego firm, has announced plans to build advanced, energy-efficient cars in Monroe. According to the Louisiana Department of Economic Development, the project will create over 1,400 direct jobs at an average annual salary of nearly \$40,000, plus benefits, as well as a capital investment of at least \$248 million.
- **Biotech:** TransGenRx is spin-off biomedical company, born out of research at the LSU Ag Center. The firm, founded in 2007, has signed its first large deal: a \$30 million order to produce human growth hormone for a pharmaceutical company based in Argentina.

- **Digital media**
 - **Nerjyzed (pronounced Energized) Entertainment**, Inc. is a privately held African-American owned interactive digital media entertainment company headquartered in Baton Rouge, Louisiana. Founded in 2004, Nerjyzed develops and publishes interactive software, films and music.
 - **Electronic Arts (EA)** built a first-of-its-kind global quality assurance center in Baton Rouge, creating 20 new full time jobs and more than 200 additional part-time jobs for students at LSU, Southern University and Baton Rouge Community College.
 - **The Shaw Group** will manufacture modules for nuclear power plants in Lake Charles. Completed modules will be shipped globally to work sites.
 - **Pixel Magic** creates digital visual effects for film and television. It will open a new studio at the Louisiana Immersive Technologies Enterprise center. Officials said the company would create 12 jobs within the first year and 40 jobs within three years. Pixel Magic credits include *Marley & Me*, *300*, and *Mr. and Mrs. Smith*.

Tax law changes

Until recently, customized software created by Louisiana developers was subject to state sales and use taxes. In the summer of 2003, a tax phase-out began that provided 100 percent tax exemption by July, 2005.

A Research & Development Tax Credit encourages existing businesses in Louisiana to establish or continue research and development activities within the state. The credits maybe carried forward for up to ten years, or under certain circumstances, may be sold.

In an effort to attract venture capital to the state, Louisiana changed its tax paw to provide for a state-level New Markets Tax credit [The federal New Markets Tax Credit program is a multi-year initiative administered by the U.S. Department of the Treasury that promotes economic growth and job creation in low-income communities]. The 2002 law -- one of the first in the nation -- provided for an 11% credit against income taxes, spread over seven years, but because of the low value of the credit, the program drew little investor interest.

In 2007, the Legislature raised the credit value to 25% over the first three years of the investment. Louisiana was soon able to raise \$200 million of investment capital.

The state provides a 25% tax credit for digital interactive media expenditures made in Louisiana, plus a 10% additional tax credit on payroll expenditures for Louisiana residents (effective total tax credit rate of 35%). There is no annual cap on tax credits, and the tax credit can be sold or applied against Louisiana tax liability.

In 2009, Louisiana doubled its research and development tax credit value to 40% for firms with fifty employees or less and provides a tax credit equal to 40% of the awarded amount to firms who win SBIR grants. These incentives are also refundable and enable small companies to obtain credits for their entire research and development budget. According to the report, *The Innovation Economy in Louisiana*, these improvements create one of the most attractive and progressive tax climates for private sector research and development in the nation.

Incentives

The Quality Jobs Program encourages businesses to locate in the state by offering wage rebates of up to 6% for five years [renewable for an additional five years]. The program specifically targets companies working in biotechnology and bio medical; micro-manufacturing; software, internet and telecommunications; environmental technology; food technology, and advanced materials.

The Louisiana Business and Technology Center (LBTC) instituted an SBIR Phase-zero program modeled on a successful program in Vermont. This program provides competitive planning grants of \$2,500 to small companies. LBTC estimates a 50% success rate of Phase-zero recipients winning Phase-one awards from federal agencies. LBTC currently depends on grants for funding this initiative. The grants run out in 2009, and no sustained funding has been found, so far.

Initiatives

- **Lafayette Utilities System** : LUS is owned by the City of Lafayette. After nearly a decade of struggles against lawsuits and fierce resistance from private broadband-providers, it now has in place its fiber connections for area residents. The 65 mile, 96-strand SONET –based infrastructure provides wholesale broadband access. Voters approved the system in 2005, but it took a Louisiana Supreme Court ruling in favor of LUS in 2007 to clear the way for deployment. According to LUS, Lafayette has attracted businesses to the area because of the fiber network. Canadian marketing company NuComm (since taken over by Transcom WorldWide S.A.) said it was moving to Lafayette because of the city's technology.
- **Louisiana Optical Network Initiative:** [LONI](#), is a state-of-the-art, fiber optics network that runs throughout Louisiana, and connects Louisiana and Mississippi research universities to one another as well as [National LambdaRail](#) and Internet2. LONI connects Louisiana's major research universities, allowing greater collaboration on research. LONI provides Louisiana researchers with one of the most advanced optical networks in the country and the most powerful distributed supercomputer resources available to any academic community with over 85 teraflops of computational capacity.

Emphasis on commercialization of university research

Recently, greater emphasis has been placed on “technology transfer” within universities. Technology transfer occurs when university research is commercialized - turned into viable products or processes. Commercialization includes technology licenses, patents, and the creation of startup companies. In this way, innovations are put to practical use, and jobs are created. Many Louisiana universities now have offices that directly oversee technology transfer activities. Below are some recent successes:

Technology Transfer Activities [2002-2008]:

Louisiana State University System¹

Invention Disclosures	863
Licensing Income	\$23,660,349
Licenses/Options Signed	86
Start-up Companies Formed	16
US Patents Issued	181

NOTES

1. this report is a compilation of data from LSU A&M, LSU Ag Center, LSU's PBRC, LSU HSC-NO, LSU-HSC-S, UNO and LSU-S
2. "PVP certificate" = plant variety protection certificate, similar to a patent, provides special protection for plants/seed varieties, crucial for the Ag Center

University of Louisiana System

Invention Disclosures	344
Licensing Income	\$2,025,172
Licenses/Options Signed	24
Start-up Companies Formed	17
US Patents Issued	35

• Education

High-tech employers generally look for workers with competency in math and science. In the 2008 *K-12 STEM* [Science, Technology, Engineering and Math] *ED Report Card*, published by the [STEM ED Coalition](#), Louisiana lagged behind most other states in most categories. Here's a sampling:

Rank	NAEP Scores [Nat'l Assessment of Educational Progress]	LA	US
42	2007 Grade 8 Mathematics Average Score	272	280
46	2007 Percentage At or Above Proficiency" in Math	19%	31%
38	2005 Grade 8 Science Average Score (latest)	138	147

ACT Scores			
47	Louisiana's 2007 Average ACT Science Score	19.9	21.0
47	Louisiana's 2007 Average ACT Math Score	19.5	21.0
College Readiness: % of ACT-Tested Students			
47	ACT Algebra --% of H.S. Graduates ready for College Level	30%	43%
47	ACT Biology -- % of H.S. Graduates ready for College Level	19%	28%
Key Educational Stats – Public Schools			
50	% of H.S. Students who Graduated as Reported by State, 2005	78.7%	86.5%
2	Low –Income Students	61.2%	40.9%

The [Louisiana Systemic Initiatives Program \(LaSIP\)](#) was established to improve mathematics and science education in the state through a cooperative effort from the different education agencies and the National Science Foundation. This goal is addressed, in part, by providing professional development in mathematics and science. For fiscal year 2007-08, LaSIP funded professional development projects that prepare teachers with the in-depth content knowledge and effective classroom skills needed to increase student academic achievement.

Many Louisiana students receive a good grounding in STEM-related courses, and go on to pursue technology and science degrees and careers. In Carencro, the [Academy of Information Technology](#) specializes in preparing students for a technology-based career path.

AOIT offers college prep academic courses in math, science, social studies, English, foreign language, and Fine Arts survey. Technology courses are offered in the areas of Digital Media, Web Design, Programming, Computer Networking, Computer Repair and Maintenance, and Databases. Students are given the opportunity to Intern, arranged by Academy, in the area of IT in the summer between the junior and senior years.

Two-year colleges

Although employees with baccalaureate degrees may expect higher salaries and greater opportunities for advancement, technical and two-year colleges provide a solid foundation for many types of high-tech work.

Some observers feel that looming state budget cuts could result in one or more four-year colleges being converted to two-year institutions. What effect the presumably larger number of two-year degree holders would have on high-tech hiring is hard to predict.

Flagship status for LSU

Over the years, a stream of reports on economic development in Louisiana have strongly recommended that substantial and sustained resources be directed towards making LSU the flagship research institution in the state, and a Tier 1 school, nationally. Proponents say that such status is needed to attract the best and brightest faculty, as well as prized federal research dollars. The additional brain-power and funding would spur research that could lead to higher levels of technology transfer, and thus generate much-needed economic activity.

Workforce development

The Incumbent Worker Training Program's Small Business Employee Training Program (SBET) is designed to benefit business and industry by assisting in the skill development of existing employees through individual, standardized (off-the shelf) training. Employers are reimbursed for tuition and required textbooks and manuals once the training has been completed and proper documentation has been submitted to the Louisiana Workforce Commission (LWC).

• Models

- The **Emerging Technology Fund (ETF)** began in Texas in 2005 with the mission of financially supporting research and commercialization development through competitive grants. Since 2006, over \$220 million has been awarded to Texas universities and industry.
- The **Georgia Research Alliance (GRA)** is a public-private partnership created in 1990. GRA brings business, research universities, and state government together to cooperatively promote a robust and sustained innovation-based economy in Georgia. The alliance achieves this goal through three programs: recruiting eminent scholars with well-funded endowed chairs and research support; creating centers of research excellence, and commercialization. Since 1990, commercialization of GRA research has directly resulted in the formation of 150 companies which have created over 5,500 jobs and have attracted \$300 million in early-stage funding⁴.

• Threats

Budget cuts may be the biggest near-term threat to Louisiana's long-time pursuit of an Innovation Economy. Many involved in the hunt for high-tech companies point to the need for a first-class university to attract research and spark commercialization of innovations. Because of system-wide cutbacks at LSU, the fiscal year 2009-2010 operating budget for CAMD was reduced by half. LSU officials have said budget constrains may force closure of the research facility. Larger state deficits in the next two years will severely strain other university programs and could have a chilling effect on faculty recruitment.

• Positives

Louisiana faces many challenges in its pursuit of high technology jobs. But the state has made progress over the years. Though still low in national rankings, Mark Lewis, head of the Louisiana Technology Council says, "What people don't know about is that between 2002 and 2007 Louisiana was one of the top 10 growing states in technology workforce and they were seventh in terms of percentage growth in technology workers."

⁴ 2008 Georgia Research Alliance Annual Report,
http://www.gra.org/Portals/11/PubsFiles/GRA_AR08web.pdf.

A 2008 study by the Center for Digital Education ranked Louisiana number 5 in the US for educational use of technology in the classroom.

Also in 2008, *Southern Business and Development Magazine* named Lafayette one of the Top Ten Great Innovation Markets in the South for its efforts in attracting innovation-driven enterprises to the region. The magazine cited the LUS broadband fiber initiative, the Louisiana Optical Network Initiative [LONI] and the Louisiana Immersive Technologies Enterprise [LITE].

Finally, Louisiana universities, by virtue of their geographic location and exposure to hurricanes, have acquired significant expertise in coastal geology, morphology and ecology; energy resource management and computer modeling of severe weather events. All of these areas of research have global relevance – especially in a time of climate change. With hundreds of millions of the world’s citizens living as coastal dwellers, such knowledge has great potential -- through technology transfer -- to be both useful and profitable for workers in Louisiana’s Knowledge Economy.

- **Resources**

Download the full [2008 K-12 STEM ED Report](#) for Louisiana

Download the [2008 State New Economy Index](#)

[Click here for a complete list of Incentives and Programs offered by the state.](#)