



## Planning the Master Key to Success

Louisiana EPSCoR planning grants are like the proverbial acorns from which big oaks grow.

The Consortium for Education, Research and Technology of North Louisiana (CERT), for example, parlayed planning grants into big economic development gains.

Organized in 1996, CERT's mission is to uplift North Louisiana and its workforce by matching the resources of its 12 member institutions with economic and workforce development stakeholders in the 22-parish region of North Louisiana. Formed with the conviction that there is strength in numbers in terms of both research and economic development, CERT began with nine universities and its founding member, the Biomedical Research Foundation of Northwest Louisiana. Its membership roster now includes all 11 universities and colleges in north Louisiana.

CERT was also formed as an institutional sponsor of the InterTech Science Park, the Shreveport/Bossier area's "long-term strategy for creating economic development based on the knowledge industry." It is the Foundation's endorsed vehicle for its members to collaborate in curricula, develop joint programs, coordinate technology transfer projects, promote technology-related economic development, and provide workforce training.

"The institutions knew that in order to be more competitive, they had to establish more multi-institutional collaborations and work together as a region," says Ms. Patti F. Trudell, CERT's Executive Director. "One of our objectives is to encourage collaboration among the region's higher education institutions and technical colleges to better meet the needs of industry.

"We accomplish this by serving as a vehicle for the universities and colleges to collaborate in curricula, the development of joint programs, coordination of technology transfer projects, the promotion of technology-related economic development, and workforce training."

Two planning grants that played a big role in facilitating CERT's impressive economic development gains in North Louisiana were:

A \$75,000 U.S. Department of Commerce Experimental Program to Stimulate Competitive Technology (EPSCoT) grant\* awarded in 1999 to develop a North Louisiana region-specific plan to improve the climate for technology-based business development through a workforce development plan.

"A strategic plan for a North Louisiana industry/education workforce development partnership was a necessary step toward improving the climate for technology-based business development," points out Ms. Trudell, who had not yet joined CERT but was a member of the constituency that developed the plan.

*\*The \$75,000 award was funded through a joint \$550,000 initiative to accelerate the commercialization of university-based technologies in Louisiana by the Board of Regents Support Fund and the Experimental Program to Stimulate Competitive Technology (EPSCoT) of the U.S. Department of Commerce.*



*Faculty and students explained their research project posters at CERT's Bio Research Day, held May 1, 2006 at the Louisiana Tech University Technology Transfer Center in Shreveport. Among those reviewing the posters was Dr. Paul Sisson, LSU Shreveport Dean, College of Sciences, second from left.*

A \$50,000 National Science Foundation EPSCoR Planning Grant followed in 2002. Its objective: to lay the groundwork for a CERT Institute for Biomedical Informatics (CIBI). "Bioinformatics is the acquisition, processing, storage, management, retrieval, analysis, exploration, presentation, security, and use of biomedical and life sciences data sets for research and applications," she explains.

That spring, a CERT Bioinformatics Task Force identified a strategic need for the development of biomedical informatics curricula and programs to respond to the demands of research, industry and a changing healthcare environment. The establishment of CIBI was proposed to provide coordination of biomedical and biotechnology research and education efforts.

CIBI's goal is the development of a nationally recognized multi-north Louisiana university bioinformatics (life sciences) research center with an associated doctorate program that is at the intersection of biomedical and computer science.

"Based on emerging national trends, the program concept is timely," concludes Ms. Trudell. "It will fill a much needed education gap in north Louisiana and the integrated multi-institutional program design is truly novel. A well-supported and efficiently implemented CIBI could become a nationally-pioneering academic keystone."

The NSF EPSCoR planning grant was instrumental in the signing of a Memorandum of Understanding by the Chancellors of LSU Shreveport and LSU Health Sciences Center Shreveport, and the President of Louisiana Tech to pursue the development of a joint Ph.D. program in Bioinformatics, which will be submitted to the Board of Regents for approval in early 2007.

It also contributed to the approval of a five-year NIH grant to LSU Shreveport (LSUS), Louisiana Tech (LaTech) and The University of Louisiana at Monroe (ULM) in which each was awarded approximately \$1,500,000. LSU Health Sciences Center Shreveport and LSU Shreveport are collaborating in the research.

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In 2003, CERT was awarded a three-year \$600,000 NSF Partnership for Innovation grant, which was matched by a three-year \$30,000 Louisiana Board of Regents grant, to establish the North Louisiana Partnership for Innovation (NLPI). "NLPI represents a focused infrastructure that provides the means to inform stakeholders, recruit innovation opportunities and facilitate the transfer of knowledge and technology among academe, industry and government through personal outreach and access to the information, expertise and resources available among these entities," says Ms. Trudell.

In participation with NLPI, CERT has achieved a number of initiatives aimed at reaching that goal:

- A multi-institutional biotechnology curriculum under development between LSUS, Bossier Community College and Southern University at Shreveport;
- A graduate certificate in Funding Entrepreneurship embedded in Centenary's MBA program has awarded 30 certificates and resulted in several new start-up businesses;
- A collaborative patent application by LA Tech and LSU Health Sciences Center Shreveport (LSUHSC-S);
- A licensing agreement between LSUHSC-S and a Boston biotech company that may relocate to Shreveport. Two patents have been filed;
- Four new technologies under development and one new start-up at LSUS;
- A novel La Tech technology licensed to a start-up company in Ruston, LA;
- A joint course in Bioinformatics offered concurrently at LSU, LSUHSC-S and the University of Massachusetts-Lowell;
- A La Tech patent for nanoscale films licensed to a nanotechnology company;
- La Tech students' research to commercialize a 2005 technology developed by La Tech and LSUHSC-S that resulted in a patent application;
- A patent application by La Tech for the self-assembly of metallic nanowires licensed by a Ruston company;
- Collaboration of Louisiana Community and Technical Colleges in three regions for faculty training, business/industry partnerships, program enhancement via new equipment and software; and development of online learning communities;
- A Regional Workforce Development Council formed by La Tech
- Implementation of 11 Science and Technology Action Response Teams, a cadre of experts to serve as a portal to the resources of CERT institutions;

## CERT University Membership Roster

CERT members include two historically black institutions; technical and community colleges and universities; and liberal arts, comprehensive and research institutions. The partnership ensures broad participation of all types of academic institutions and citizens. Participating institutions are:

The Biomedical Research Foundation of Northwest Louisiana, Bossier Parish Community College, Centenary College of Louisiana, Grambling State University, Louisiana Delta Community College, Louisiana State University Health Sciences Center in Shreveport, Louisiana State University in Shreveport, Louisiana Tech University, Louisiana Technical College, Northwestern State University, Southern University at Shreveport and the University of Louisiana at Monroe.

- Implementation of a Technology Resource Database to acquaint business and industry with technological resources available at North Louisiana's higher education institutions;
- Expansion of the Southern University Shreveport computer science program to include web design and development of a computer technology workforce;
- Ongoing programs to make regional business and industry aware of ULM and NLPI and how to do business with a university;
- A Northeast Louisiana Brownfields Workshop by ULM to demonstrate the economic potential of brownfields—abandoned or underused industrial or commercial property—and ULM and NLPI roles in developing brownfield projects; and
- A partnership for brownfield projects between ULM's Department of Toxicology and U.S Army Corps of Engineers.

Since receiving the 2002 planning grant, as of June 30, 2006, CERT had received close to \$1.4 million in grants and contracts.

Besides the obvious careful planning, what about CERT impresses funding agencies? According to Ms. Trudell, it's the Consortium's collaborative roster.

Louisiana NSF EPSCoR Project Director Michael Khonsari agrees, adding that "This was precisely in the spirit of Louisiana EPSCoR Planning Grants: to entice and enrich collaborations among Louisiana higher education institutions.

"The 27 funded EPSCoR proposals have been those that showed the greatest level of partnering creativity, presented the strongest case for the proposed program, and demonstrated the strongest level of institutional support as evaluated by out-of-state reviewers."



Louisiana EPSCoR  
P.O. Box 3677  
Baton Rouge, LA 70821-3677