

ENGINEERING EXTENSION

North Carolina State University

Annual Report 2006-2007

EXECUTIVE SUMMARY PREPARED BY T.A. HELMLINGER RATCLIFF, P.E.

The Industrial Extension Service (IES) hit a high mark this year for creating value for North Carolina. In this first year of the 1B4NC campaign, where IES promises to create \$1 billion in value for the state by 2010, IES clients reported \$209,732,456 in direct economic impact from IES services, up by \$110,933,022 from last year.

IES specialists were able to assist 786 individual manufacturing companies retain or create 697 jobs across the state. These companies reported \$148,339,993 in new and retained sales. They also reported \$54,847,356 in reduced costs of production or operation. The IES work also resulted in \$29,549,378 of new investments in updated equipment and infrastructure for those companies.

This was the year IES began to implement the strategic marketing plan. The internal client services team was formed and began to work with small companies and those that require the kind of help IES doesn't ordinarily provide – but the University may. This will free up account managers to sell at a higher level. The management team was reorganized so that three extension directors lead client services, client relations, and the new venture into industry clusters or sectors.

The development of clusters is just one way IES works the state's economic development community. IES contributes to the University Investment Priority "to foster innovation-driven economic development" and engage business leaders as partners in developing well-defined strategies for sustainable growth through the products and services offered. Over the past year, IES has realigned service territories to reflect the Economic Development Partnership Regions, requiring an increase to 15 account managers across the state. This involvement is expressing itself in several initiatives:

- The Piedmont Triad Region WIRED Project: The WIRED (Workforce Innovations in Regional Economic Development) grant from the US Department of Labor will provide up to \$5 million per year for three years to develop a model national economic development demonstration project in the Triad, sponsored by the Piedmont Triad Regional Partnership. In June 2006, the executive director accepted an invitation to join the operations team of the WIRED Project. The PTP Region became the model for integrating the local MEP center into the WIRED initiatives. To further this initiative, IES and PTP are seeking to fill a shared position, the manufacturing technology specialist, who will focus on technology transfer from research labs to manufacturing entities. The primary objective of this position will be to pull new and advanced technology out of NC State University and the Oak Ridge National Laboratory into the region.
- All Clusters Network: IES has partnered with the Research Triangle Regional Partnership to host monthly meetings for different industry clusters within the Triangle. A cluster is a group of companies who work in the same sector. RTRP

examples include biological agents and infectious diseases, advanced medical care, and informatics.

- The Cluster Strategy: Last year IES decided to embark on a strategy to develop expertise in significant industry clusters. This year, IES began to develop expertise in the following four clusters identified as a fit for IES: 1) metalworking and industrial machinery and automotive transportation equipment; 2) health care and pharmaceuticals; 3) information technology, computers, and communications; and 4) food processing. Two account managers have been reassigned to a particular cluster, and recruiting for new positions has begun. The cluster strategy will be a phased approach over the next five years with a pilot project in one or two targeted cluster industries reaching C-level (CEO, CFO, COO) clients in growing companies of various sizes in different geographic locations – both rural and metropolitan. IES anticipates that eventually the cluster strategy can build revenues to more than \$8 million for the four targeted clusters.
- Advanced Vehicle Research Center: Preliminary meetings have been held with the AVRC in Eastern North Carolina. This collaboration would jump-start IES participation in the automotive cluster.

Highlights of the Past Year

- 1B4NC: The promise from IES to create \$1 billion in value for the state by 2010 has been widely embraced by University system leadership. IES began offering the 1B4NC award to companies that reported at least \$1 million in the MEP survey. So far, we have recognized Tyco Electronics in Fuquay-Varina, Dixon Quick Coupling in Charlotte, Moen in New Bern and Southern Vinyl in Kinston,
- Growth strategies: IES is combining its work with clusters and its traditional products and services in order to create a team approach to a company. This transformational approach will help a company from a broader perspective than simply the factory floor; it would include leadership coaching, financial support, marketing, etc.
- Manufacturing Matters: IES launched a web site loosely based on the Iowa MEP that emphasizes the importance of manufacturing to North Carolina. Hickory Chair and Glen Raven are two of the companies who have been used to illustrate that manufacturing relies on intelligence and innovation. These examples have been picked up by the press. The web site will be used to launch a campaign to improve the image of manufacturing.
- New Products: New product development is a new metric for IES. Successful product development strategies aligned with the strategic imperatives of focusing on the fastest growing segments of the NC economy and transformation enterprise products and services will enable IES to be perceived as problem-solvers to top decision makers. The goal is for new product development and new customers to be greater than 20% of IES services.
- Fund-raising assessment: IES received approval from the NC State University Board of Trustees development committee to begin a feasibility study to

determine if there's support for a fund-raising campaign. The result of this work is due in September 2007.

- North Carolina Awards for Excellence: For the first time, an NCAfE winner also won the national Baldrige award. Premier health care of Charlotte was awarded the highest level at the NC Conference for Excellence in October 2006, and a couple of months later won at the national level.
- Six Sigma: The fourth annual Six Sigma Forum, hosted with the College of Textiles and Duke University Hospital in August 2006, attracted 149 attendees, a new record. Cross training of IES extension specialists has enabled the Six Sigma program to grow.
- MRL: The Minerals Research Laboratory in Asheville exceeded its financial goals, reaching \$250,000, which is \$100,000 above its target..

Volume of IES Results

	2002-03 Results	2003-04 Results	2004-05 Results	2005-06 Results	2006-07 Results
Industry Service Projects for Fee	382	360	428	380	627
Revenue	\$1.7M	\$1.9M	\$2.1M	\$2.6M	\$3.3M
Short Courses, Workshops & Conferences	384	194	236	229	242
Participants	3,550	2,899	3,595	3,438	3,318
Applied Research & Service Contracts	393	462	565	446	
\$ Received (Incl. Industry Projects)	\$5.7M	\$6.8M	\$9.3M	\$10.3M	
Economic Gain-Reported by Industry Served	\$85.6M	\$81M	\$70M	\$98.8M	\$232.7M
NC Jobs Retained or Created	1312	956	859	1237	756
Self-Generated Revenue (Sales & Service)	\$2.3M	\$3.M	\$3.2M	\$5.6M	
Percent of total revenue	27%	30%	26%	39%	

M = Million