



The Laboratory's Impact on Northern New Mexico Economic Development

Industrial Business Development Division Summary



Leveraging the Laboratory's Technical Excellence for Regional Business Development

Los Alamos National Laboratory (LANL) is partnering with the northern New Mexico business community to develop new ways to use emerging Laboratory technologies to stimulate high-tech business startups, create job opportunities, and attract businesses and capital to the region to ensure the growth and sustainability of the regional economy. The Laboratory's Industrial Business Development (IBD) Division offers a broad range of services to assist regional businesses as well as LANL scientists and potential entrepreneurs. In addition to ensuring that intellectual property protection is in place, this assistance includes help with business counseling, market assessments, training venues, networking opportunities, and potential funding sources.

Over the past six years, IBD has assisted approximately 200 clients, including Laboratory scientists exploring a business concept, emerging regional technology businesses, and entities considering collaboration with or licensing a technology from the Laboratory. IBD's clients include 70 new startup businesses that have created over 270 new jobs and attracted over \$67M in external capital to the region.

The Laboratory has supported New Mexico economic development by

- issuing 35 commercial licenses to New Mexico firms***
- collaborating in 55 Cooperative Research & Development Agreements***
- assisting New Mexico firms via 39 Work for Others Agreements***
- providing access to LANL labs through 37 User Facility Agreements***

In addition, since 1998

- 26 Lab employees have taken Entrepreneurial Leave of Absence (ELOA) to work with new or existing NM small businesses***

More than 200 regional press articles have appeared since 1997 featuring programs and events sponsored and client firms that have been assisted by LANL's IBD Division.

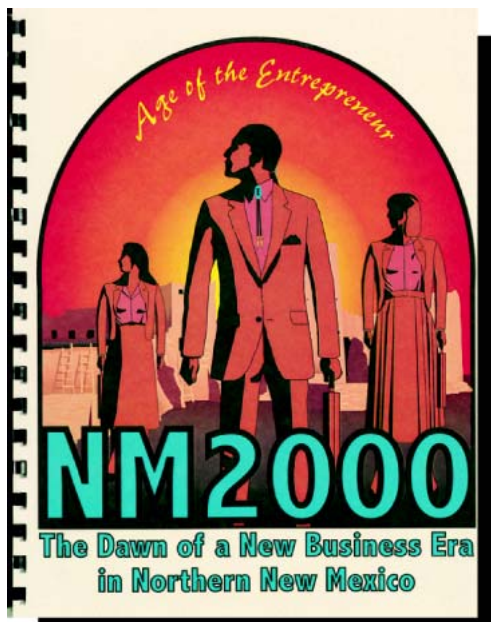
IBD's technology transfer and economic development programs have been recognized as "outstanding" and "best practices" by DOE, DOC, and the Federal Laboratory Consortium.

Turning Technologies into Businesses— Program Investments

Over the past six years, the Laboratory's IBD Division has helped nearly 200 LANL innovators and emerging New Mexico firms with commercialization activities. Seventy of these clients are new regional technology firms. IBD helped new startups develop business plans, identify and obtain funding, find management talent, and launch their ventures. Since 1997 these firms have created over 270 jobs and secured over \$67M in investment capital for the region.

Highlights of LANL IBD's investment in the northern New Mexico business economy:

- **Sixty collaborative R&D projects with regional small businesses between 1993–2000**—many led to new business formations.
- **\$700,000 investment in regional technology maturation awards** helped 23 regional companies further develop and commercialize their companies' inventions, creating more than 50 jobs and generating over \$3M in revenues.
- **Fifty regional companies and Lab entrepreneurs participated in 90 projects completed**



through LANL IBD's MBA internship program.

Assistance included market assessments, business plan development, financial analysis, introduction to investors and other services. Thirty-seven MBAs from nationally ranked business schools have participated. Nine internship alumnae relocated to New Mexico to assume full-time employment with regional technology firms or the Laboratory.

- **IBD sponsored 22 business development workshops** on topics such as business plan fundamentals, marketing, and financing alternatives. These events attracted over 2300 participants from the region and the Lab. IBD also co-organizes and co-sponsors the New Mexico ISO 9000 quality training program in cooperation with the state Economic Development Department and Sandia National Labs.
- **Eighty-five LANL staff** participated in assessment of their inventions' commercial potential since 2001 through IBD's "**Commercialization and Entrepreneurship**" training workshops. Over 50% of course graduates are actively working on business or commercialization plans with IBD to develop new licensing and commercialization opportunities.
- **A \$450k "Technology Maturation Fund"** reinvests a portion of UC licensing royalties and other funds to further develop early stage Lab technologies for transfer to the private sector.
- **IBD participates in the initiation or enhancement of regional networking activities** that include sponsorship and board representation for Coronado Ventures Forum, the Safari Club, the New Mexico Biotech and Biomedical and Information Technology Associations and others. Such networking is a key element to entrepreneurial growth in the region.
- **Eleven seed venture capital firms** have established regional offices and invested \$194M in **12 emerging NM technology firms**. **IBD was actively involved in recruiting these venture capital firms to the state** and continues to promote LANL technology to these local investors and through IBD's investment contacts in San Diego, Silicon Valley, and elsewhere.



Investment Results—A Growing High-Tech Economy

Examples of successful Laboratory spinoffs and other clients assisted by IBD include the following:

- **Amtech**—founded in 1984 by a Lab employee, uses LANL-developed technology for RF tagging of vehicles. Amtech filed an Initial Public Offering in 1989 for \$120M.
- **APJeT**—founded in 2003 by two Lab employees on ELOA, applies atmospheric-pressure plasma technologies licensed from LANL to the cleaning and decontamination of silicon wafers, textiles, and other materials.
- **BioReason**—founded in 1998 by the first LANL employee to take ELOA, applies bioinformatics to the drug discovery process. The company has grown to about 30 employees.
- **Center for Adaptive Systems Applications (CASA)**—founded in 1995 by five LANL employees, grew to about 40 employees before acquisition by HNC Computing in 2000 for a \$24M stock transfer.
- **HYTEC**—founded in 1996 by two Lab employees, uses LANL-licensed imaging and measurement technology. The company currently has about 40 employees and generates about \$10M in annual revenues.
- **Indigo Medical**—founded in 1992, bases prostate treatment on a LANL technology. The company was acquired by Johnson & Johnson in 1996 for \$140M.
- **Innovative Web Applications**—founded in 2000 by three LANL employees on ELOA, provides advanced Web search tools for industry and government applications.
- **Interferometrics**—founded in 1998, uses LANL-licensed technology for non-invasive acoustic inspection, employs six people, and is expanding into new products with new venture funding.
- **Isotag**—founded in 1995, uses invisible molecular markers to thwart product counterfeiting based on a LANL-developed technology. The company employs 50 people and opened its new R&D center in Los Alamos Research Park in 2003.
- **QTL Biosystems**—founded in 1999 by two Lab researchers under ELOA, uses LANL-licensed technologies and has received over \$10M in financing from DARPA and other investors. QTL employs 22 people.
- **Radion Technologies**—founded in 2003 by three LANL employees on ELOA, uses LANL-developed radiation dispersion modeling software for a wide range of applications. Radion is located in the Los Alamos Research Park.
- **Spectra Stable Isotopes**—a New Jersey company, leased the mothballed LANL Isotopes of Carbon, Oxygen, Nitrogen (ICON) facility from the Department of Energy and the Los Alamos Commerce and Development Corporation, restarting U.S. production of stable isotopes for medical diagnostic applications in 2002.

Other Regional Success Stories

Los Alamos Research Park

The Laboratory actively assisted Los Alamos Commerce and Development Corporation in the planning and launch of the Los Alamos Research Park project in 2001. The facility houses important strategic partners to the Laboratory, such as Motorola and the University of California. It is also home to LANL's Superconductivity Technology Center co-located with several industry partners and a Synergy Center, in which several LANL small spin-off companies such as Isotag and Radion Technologies reside. The Laboratory was recognized as the "2001 Laboratory of the Year" by the Federal Laboratory Consortium midwestern region for its Research Park project support.



Los Alamos Research Park

Library Without Walls

In 2000, LANL established the Library Without Walls, a user facility that provides access to the LANL library for online research in scientific databases such as SciSearch, BIOSIS, and Inspec, and publicly available Laboratory publications. Currently six New Mexico institutions benefit from access including the Air Force Research Laboratory, Sandia National Laboratories, Santa Fe Institute, New Mexico State University, New Mexico Tech, and the University of New Mexico.

InfoMesa

Northern New Mexico has become a focal point for information technology development and application of complexity science to business as chronicled by *Wired* magazine in 2000. The Laboratory has played a major role in the creation and growth of this important technology cluster since the formation of LANL's Center for Non-Linear Studies (CNLS) in 1982. In subsequent years, LANL has contributed to the formation of such prominent "informatics" organizations as the Santa Fe Institute, formed in 1984 by former Lab Fellow George Cowan, the Prediction Company, in 1991, the National Center for Genome Resources, in 1994, and the Center for Adaptive Systems Applications, in 1995.

These pioneer organizations have managed to spawn multiple-generations of informatics companies including CASA, the most successful, Complexica, and Strategic Analytics. Over 25 "InfoMesa" technology firms evolved from LANL and the aforementioned spinoffs to date. In 2001, the annual "International InfoMesa Summit" was launched, sponsored by the New Mexico congressional delegation and regional informatics companies, and supported by Los Alamos and Sandia National Laboratories and the Santa Fe Institute. The annual event promotes "high altitude thinking"—promoting the application of informatics and complexity science to the needs of business.



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