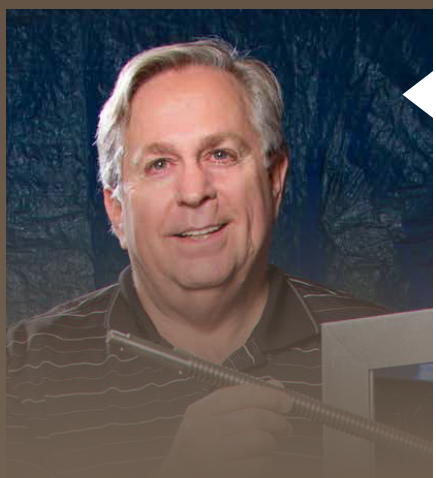
Sandia National Laboratories

COMMERCIALIZING TECHNOLOGIES & CREATING JOBS

“NMSBA reduced my manufacturing costs by 20% and made it possible to build everything here in Albuquerque. We are in the process of negotiating our first million dollars in sales as a result of NMSBA.”



Bill Watts
Owner
Data Center Transitions

“The high-tech environment at Sandia is ripe for innovation and game-changing technologies. The ESTT program allowed us to launch Sandstone and develop cutting-edge medical products based on technology we originally developed for Sandia’s biodefense missions.”

Greg Sommer
Co-founder and CEO
Sandstone Diagnostics

“Our location in the SS&TP plays a vital role in our ability to leverage the deep domain expertise of Sandia. Our proximity to the Labs has facilitated teaming with them on Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) efforts that develop cutting-edge technology in the areas of precision pointing and inertial measurement.”

Dan Gillings
President
Applied Technology Associates

Sandia National Laboratories manages three economic development programs that are leveraging the people, technologies, and facilities of the Labs to commercialize technologies and create jobs.

NMSBA
Los Alamos National Laboratory
Sandia National Laboratories
Solving New Mexico's Small Business Challenges

The New Mexico Small Business Assistance (NMSBA) Program assists for-profit small businesses in New Mexico with access to experts at Sandia and Los Alamos national laboratories. These experts help businesses gain knowledge and solve challenges utilizing the labs' cutting-edge technologies. The assistance is provided at no cost.

ESTT
Entrepreneurial Separation to Transfer Technology

Entrepreneurial Separation to Transfer Technology (ESTT) is a valuable tool which allows Sandia to transfer technology to the private sector by permitting Sandia employees to leave the Labs to start up new technology companies or help expand existing companies. Entrepreneurs are guaranteed reinstatement by Sandia if they choose to return to the Labs.

SANDIA SCIENCE & TECHNOLOGY PARK
where technology works

The Sandia Science & Technology Park (SS&TP) is a 300+ acre master-planned technology community. Affiliated with Sandia and adjacent to Kirtland Air Force Base, companies have easy access to world-class facilities, technologies, scientists, and engineers. From startups to Fortune 500 companies, the SS&TP is where technology works.

Look for this symbol to see which startup and multinational companies are utilizing Sandia intellectualproperty

Sandia is required by the U.S. Department of Energy (DOE) to transfer technology for the U.S. public good. We maximize the return on taxpayer investments when new and improved products based on Sandia research are available in the marketplace.

NMSBA
Los Alamos National Laboratory
Sandia National Laboratories

New Mexico Small Business Assistance

NMSBAprogram.org

Animated Talking Toys

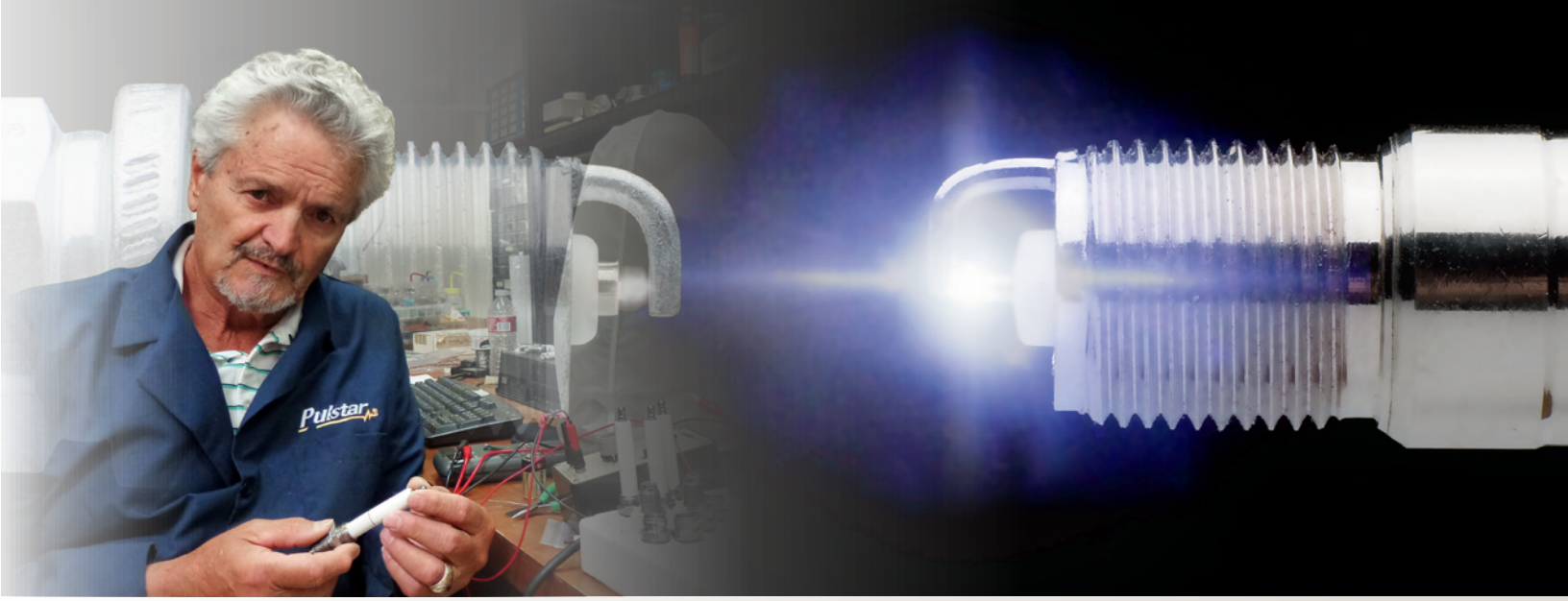
Heilbron Associates had acquired rights to a fiber optic technology which allowed for the creation of animated talking character dolls, but it had mass market manufacturing problems. Assistance from Sandia helped the company come up with a new technology that brings static toys "to life." These enhanced dolls, plush toys, and hard plastic toys now include animated speech and eye-blinking features. Heilbron was able to patent this technology and license it for toys which feature characters from comics, movies, cartoons, and TV shows.

Commercial Security Systems

Armed Response Team has grown to become the largest locally owned security company in New Mexico. They've gotten to where they are in part due to innovative technologies, particularly those used to secure outdoor sites. Sandia helped them analyze and stay ahead of rapidly evolving security products so they could quickly bring workable solutions to market. By offering a reliable video analytic camera system, they've been able to reduce theft, add hundreds of clients, and increase their number of employees to 33.

Damage Control Mouthguards

Albuquerque Delicate Dentistry has been able to more effectively market their Damage Control Mouthguards after Sandia helped them scientifically test mouthguard designs and materials. Revenues increased five-fold with orders coming in from around the globe after they were able to position their mouthguards as being the best designed, and best fitting, with the best breathability. Increased sales led to the hiring of two new employees. Now, after a second NMSBA project, they are in the process of obtaining a patent for a revolutionary new, even more shock absorbent mouthguard they will manufacture from material including a new additive.



Pulsed Power Spark Plugs

Enerpulse Technologies has utilized NMSBA several times. The now publicly traded company (OTCQX: ENPT) credits assistance from Sandia with helping them grow. With their second NMSBA project in 2003, Enerpulse received technical assistance with building and testing a pulsed power spark plug prototype that produces plasma to aid combustion. This led to the company securing $4 million in venture capital funding. To date, they've sold over one million of their spark plugs, which replace conventional plugs and make the combustion process more efficient. Enerpulse has 24 employees at their manufacturing and headquarters facility in Albuquerque and has raised over $25 million in capital.

Mobile Maintenance Stands

Steady Yeddy provides workers with safe, hands-free, ergonomic support in difficult working conditions. Sandia tested Steady Yeddy's ergonomic mobile maintenance stands. This assistance made a safer OSHA-compliant product for use in inspection, maintenance, and repair of buildings and vehicles possible. Testing by a national laboratory conferred credibility, which is important to customers, insurers, and manufacturers. Customers include universities, school bus maintainers, automotive mechanics, homeowners, and sheriff departments.

Server Lifting Device

Data Center Transitions manufactures the MASS Lift, a novel lifting device that moves large computer server cabinets. The product's power system was redesigned with help from Sandia to eliminate potential interference with computer electronics in the server cabinets it was moving. The new system allowed the company to reduce costs by 20%, keep MASS Lift production in Albuquerque, attract new funding opportunities, and sell additional units to Microsoft and Facebook.

Swivel Knife Blade

Leather Wranglers credits help from Sandia with the company's survival and growth. The Labs used a scanning electron microscope to help Leather Wranglers isolate issues with the metal alloy used in their Swivel Knife Blade, the company's number one product, and Lab personnel came up with an alternative. Since working with Sandia and using the new blade alloy, sales have doubled and four new products are being offered.

ESTT

Entrepreneurial Separation to Transfer Technology

Printed Circuit Reliability

Tim Estes co-founded Conductor Analysis Technologies, Inc. (CAT), which offers products and services providing quantitative data on printed circuit manufacturing capability, quality, and reliability. After 20 years, the company is still based on technology developed at Sandia by Estes and at Bell Laboratories by his partner, Ron Rhodes, and has grown from two to seven employees. CAT serves organizations in defense, aerospace, and commercial markets, and includes Sandia among its customers.

Hyperspectral Imaging

Howland Jones started his own company, HyperImage Solutions, in 2013 to transfer hyperspectral image analysis software developed at Sandia to the private sector. Hyperspectral imaging is being used in research and quality control for the food, agricultural, and pharmaceutical industries. So far, six companies have licensed the software or are in the process of licensing it. Jones is assisting these companies with applying the software to their diverse spectroscopic applications.

Small Electromechanical Switches

Todd Christenson founded HT MicroAnalytical (HT Micro) in 2003 in order to apply his specialized expertise in high aspect ratio microfabrication (HARM) technology gained while at Sandia to the creation of the world's smallest electromechanical switches. In 2013 HT Micro doubled its workforce when it moved into their new $2 million, 18,000-square-foot manufacturing facility that can produce about 20 million parts a year, made possible by a partnership with Rosenberger, Inc., a global leader in connector solutions. With customers around the world, HT Micro brings revenue to New Mexico with sales of its small, high density switches and connectors used in medical devices, munitions-fuzing, and mobile-technology applications.

Lasik Treatment Products

Dan Neal founded WaveFront Sciences to create products based on wavefront sensing metrology. The company, which grew from three employees to over 50, is now part of Abbott Medical Optics, a division of Abbott Laboratories (NYSE: ABT). It's still in Albuquerque, and Neal has remained as a research fellow. This technology is being used to improve the vision of millions of patients. The iDesign Advanced WaveScan System is the latest in the company's ophthalmic product line, used for Lasik treatment in Europe and Japan. It simultaneously measures the detailed structure of the eye, from the shape of the cornea all the way through the retina, and is used in treatment planning for laser refractive surgery. A diagnostic version, the iDesign DX, has been available in the U.S. since 2013.

Medical Testing Products

Greg Sommer co-founded Sandstone Diagnostics in 2012 to manufacture and sell instruments and disposable test kits for medical testing applications based on Sandia's SpinDx™ technology, which Sommer helped invent. With investors on board and a second National Institutes of Health (NIH) Small Business Innovation Research (SBIR) research grant, the company is growing and has eight employees in a new 2,500-square-foot facility near Sandia/California. Sandstone's first product, an over-the-counter male fertility test kit, will begin FDA trials in early 2015.

VCSEL Technology

Tom Brennan and Rob Bryan started MicroOptical Devices (MODE) in 1995 to commercialize vertical-cavity surface emitting laser (VCSEL) technology they helped develop at Sandia. The company raised funds from out-of-state venture capital firms, built a fab to expand their manufacturing capability, and eventually was acquired by EMCORE Corporation for over $32 million. EMCORE, which at the time had no presence in New Mexico, has gone on to build two fabs in the SS&TP and offer hundreds of high-paying jobs.

SANDIA SCIENCE & TECHNOLOGY PARK

Sandia Science & Technology Park

SSTP.org

Aerospace and Defense

Raytheon Company (NYSE: RTN), with 2013 sales of $24 billion and 63,000 employees, specializes in defense, security, and civil markets worldwide. Raytheon's Albuquerque location occupies approximately 103,000 square feet, and the company invested more than $2 million in the last year to improve the facilities. The site, which provides expertise worldwide in the fields of high powered microwave, radiation effects testing, and telemetry solutions, continues to hire locally for various engineering jobs. Sandia is an ongoing customer.

Laser Laboratory

AEgis Technologies is working to develop commercially relevant sensors and instrumentation used for high energy laser beam characterization, based on technology developed with funding from U.S. Department of Defense (DoD) organizations. Over $4 million in DoD funding so far has allowed AEgis' Advanced Technologies Group to build the Laser Laboratory in the SS&TP. About 25 of AEgis' 330 employees are in Albuquerque. The company has also received assistance from Sandia through NMSBA.

Space and Terrestrial Solar Power

EMCORE Corporation (NASDAQ: EMKR) established its photovoltaics business at the SS&TP in 1998 through a technology transfer of multi-junction solar cell technology from Sandia. EMCORE has successfully utilized technology licenses, NMSBA, and ESTT to help it grow, and in 2006 moved its headquarters from New Jersey to the SS&TP. EMCORE Photovoltaics employs approximately 300 people at the SS&TP in the design and manufacture of products for both space and terrestrial solar power applications. In 2013, EMCORE completed a 2-megawatt solar power array project next to their 165,000-square-foot facilities which supplies approximately 10% of its energy requirements.

Engineering, Manufacturing, and Product Development

TEAM Technologies works on a variety of projects for government customers and Sandia. It has commercialized the Labs' Stingray anti-improvised explosive device (IED) water disruptor, and used NMSBA several times to explore various technologies. The engineering, manufacturing, and product development company, which has annual revenues of about $10 million, helps other companies on the path to technology commercialization. On top of its government and commercial projects, TEAM uses part of its 40,000-square-foot facility as an innovation center and incubator supporting small businesses. The facility includes a state-of-the-art machine shop; electronics manufacturing; electrical, mechanical, and controls engineering labs; metrology and inspection; and office space.

Natural Pharmaceuticals

MediNatura in Albuquerque is a homeopathic pharmaceutical company that develops, manufactures, and sells medications based on natural substances. It is the company that acquired Heel Inc., which has been a fixture in the SS&TP for over 10 years. The Albuquerque factory has about 30 employees working in their manufacturing and warehouse facilities. MediNatura products are available through physicians and licensed health care practitioners, pharmacies, retailers, and natural product stores.

Aerospace Technology

Applied Technology Associates (ATA) builds custom products and provides services spanning ground, air, and space applications for government and commercial customers. ATA, which serves aerospace primes and international customers, continues to have a significant impact on economic development in New Mexico with over 340 employees and revenue of approximately $53 million in 2013. Customers in New Mexico include Sandia, Air Force Research Laboratory, and White Sands Missile Range. ATA also received assistance from Sandia through NMSBA.

Semiconductor Equipment

Air Products Electronic Delivery Systems manufactures capital equipment, particularly gas and chemical delivery systems, for the semiconductor industry. It is part of Air Products (NYSE: APD), a company with more than 21,000 employees in over 50 countries. In fiscal 2013, Air Products had sales of $10.2 billion. The Albuquerque location, with about 90 employees, manufactures equipment for critical slurry delivery applicants and automated wafer carrier cleaning equipment, as well as leading the industry in quartzware and parts cleaning equipment.

ECONOMIC IMPACT

NMSBA
Los Alamos National Laboratory
Sandia National Laboratories

3,510

Jobs Created and Retained
Direct 2000 – 2012

ESTT
Entrepreneurial Separation to Transfer Technology

379

Jobs Created
Direct 1994 – 2012

SANDIA SCIENCE & TECHNOLOGY PARK

6,264

Jobs Created
Direct plus Indirect
1998 – 2013

Sandia National Laboratories

COMMERCIALIZING TECHNOLOGIES & CREATING JOBS

To learn more about Sandia's economic development programs, please contact us at:

partnerships@sandia.gov
www.sandia.gov/partnerships

To learn more about licensing and technology transfer at Sandia, please contact us at:

ip@sandia.gov
https://ip.sandia.gov

U.S. DEPARTMENT OF ENERGY | NNSA National Nuclear Security Administration

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