

2016

ANNUAL REPORT PERSPECTIVES



\$53.3M

Technical Assistance Provided by Labs

2,648

Businesses Assisted

5,734

Jobs Created and Retained

33

New Mexico Counties Supported

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We recognize the importance of supporting New Mexico's small business entrepreneurs. That's why we work alongside the New Mexico Small Business Assistance Program to help bridge the gaps in the marketplace—from innovation and initial funding, to economic sustainability. We congratulate NMSBA on another successful year in which the technical expertise of the national laboratories has benefitted companies statewide.

Matt B. Geisel
Cabinet Secretary
Economic Development Department
State of New Mexico



NMSBA is a valuable economic development program and an enormous benefit to small businesses across New Mexico. Nurturing our homegrown talent and technologies is crucial to growing New Mexico's economy.

John Monforte
Acting Cabinet Secretary
New Mexico Taxation and Revenue Department
State of New Mexico

Dear Governor Martinez and New Mexico State Legislators,

We are pleased to present the 2016 Annual Report for the New Mexico Small Business Assistance (NMSBA) Program. This report highlights just a few of the hundreds of successful projects from 2016 and quantifies the overall performance of NMSBA, both for the past year and since its inception in 2000.

During 2016, a total of 365 small New Mexico businesses participated in NMSBA. Thanks to the *Laboratory Partnership with Small Business Tax Credit Act*, the State of New Mexico, along with Los Alamos National Laboratory and Sandia National Laboratories, invested \$4.8 million of national laboratory expertise and resources to help small businesses in 29 counties overcome technical challenges and grow.

The success stories in this report demonstrate the impact of NMSBA on small businesses from various industries around the state. Here are just a few points from some of the featured stories:

- ▶ Research into the software market helped a Sandoval County website company offer more customized software products, allowing them to hire new employees and increase revenue.
- ▶ An Albuquerque biopharmaceutical company was able to gain access to specialized imaging equipment and expertise, giving them insight into the next steps needed in their research and advancing their intellectual property portfolio.
- ▶ A Los Alamos County company, landowners in Melrose, and an Albuquerque company used analysis of a Vertical-Axis Wind Turbine design to demonstrate production of competitive power leading to the establishment of two new companies to commercialize the technology.
- ▶ Assistance with their inventory management system helped a growing Lincoln County winery plan their new wine-production facility where additional skilled workers will be employed.

NMSBA has helped New Mexico's small businesses create jobs, increase revenues, decrease operating costs, and attract new funding opportunities.

One project received the "Honorable Speaker Ben Luján Award for Small Business Excellence" for demonstrating the most economic impact. Old Wood, an environmentally conscious manufacturer of wood flooring in San Miguel County, was able to begin a new firewood division due to lean manufacturing assistance which streamlined production flow, facilitating company growth, new hires, and savings due to more efficient processes.

NMSBA has helped New Mexico's small businesses create jobs, increase revenues, decrease operating costs, and attract new funding opportunities. Since 2000, the two national laboratories have provided \$53.3 million in technical assistance to 2,648 businesses, enabling 5,734 jobs to be created and retained across the state's 33 counties.

Your continued support of NMSBA, which promotes collaboration between our national laboratories and small business community, leads to economic development throughout our great state. Thank you!

Sincerely,



Micheline Devaurs
Los Alamos National Laboratory



Jackie Kerby Moore
Sandia National Laboratories

PROGRAM INFORMATION

OVERVIEW

In 2000, the New Mexico State Legislature created the *Laboratory Partnership with Small Business Tax Credit Act* for the purpose of “bringing the technology and expertise of the national laboratories to small businesses in New Mexico to promote economic development in the state, with an emphasis on rural areas.” As a result, Sandia National Laboratories established the New Mexico Small Business Assistance (NMSBA) Program to provide technical support to small businesses throughout the state. Los Alamos National Laboratory began participating in NMSBA in 2007. Jointly, the labs are committed to solving small businesses’ critical challenges with national laboratory expertise and resources; influencing New Mexico business development by building capacity, capabilities, and competencies; and acting as an advocate for small businesses through an entrepreneurial culture.

While each company utilizes NMSBA in a different way, all use it as a means to maintain or grow their businesses. NMSBA services are provided at no cost to the participating small businesses in the form of lab staff hours valued at up to \$20,000 per calendar year for businesses located in rural counties and \$10,000 for businesses located in urban counties (currently just Bernalillo County). The total amount of assistance is capped at \$2.4 million annually for each laboratory. NMSBA may not provide assistance that is available in the private sector, and no equipment or cash can be given to a participating company.

FUTURE DIRECTION

As NMSBA moves into the future, it will continue to support the growth and diversification of the New Mexico economy. Ongoing goals for NMSBA include broadening the types of businesses receiving assistance, increasing the range of technical expertise offered by the national laboratories, and expanding NMSBA’s coverage in underserved rural counties.

In addition, NMSBA continues to look for new opportunities and avenues to partner with New Mexico universities and leverage the capabilities of other business support programs to mature technologies. NMSBA believes developing technology to a stage where a prototype or demonstration of a real-world application is possible helps move new and improved products and services to market.

During 2016, NMSBA helped 365 small businesses across the state reach business goals, develop their products for commercial use, and increase profitability.

NMSBA makes a statewide impact by:

- ▶ Enabling New Mexico small businesses to access cutting-edge technology
- ▶ Increasing New Mexico small businesses’ technical sophistication and capabilities
- ▶ Sharing knowledge and resources between laboratory personnel and small businesses to address issues and develop real-world applications

TYPES OF SMALL BUSINESS ASSISTANCE

Individual Projects

Individual NMSBA projects involve a single New Mexico for-profit small business. Projects address business-specific challenges that can be solved with national laboratory expertise and resources. Technical assistance challenges are wide ranging; however, the majority include testing, design consultation, and access to special equipment or facilities. Requests for individual projects are accepted year-round until funding is exhausted.

Leveraged Projects

Leveraged NMSBA projects allow a group of small businesses that share technical challenges to collectively request assistance. Leveraged projects address issues that are too large or complex to solve through an individual project. Proposals for projects are reviewed semi-annually by the NMSBA Advisory Council.

Contract Projects

Legislation allows NMSBA to contract with entities that have the capability to provide small business assistance services not available in the private sector. For the benefit of New Mexico's small businesses, NMSBA has contracts for specific services with the New Mexico Manufacturing Extension Partnership and the state's three research universities.

The New Mexico Manufacturing Extension Partnership provides training and assessments in the areas of quality and lean manufacturing principles.

The Arrowhead Center at New Mexico State University evaluates small business capabilities and technologies using subject matter experts throughout the university.

The New Mexico Tech Department of Management interfaces with a variety of disciplines taught at the university to help accurately assess the current competitive position of small business technologies.

The University of New Mexico Management of Technology program at the Anderson School of Management evaluates the commercial potential of small business technologies and identifies commercialization challenges.

The University of New Mexico School of Engineering addresses technical challenges faced by small businesses in computer science and chemical, biological, electrical, computer, civil, nuclear, and mechanical engineering.



ALISSA CHAVEZ

OWNER
ASSILA

ASSILA

NMSBA connected me with engineers whose extensive experience and knowledge made the difference in bringing my baby Hot Seat to market.

Alissa Chavez

*Owner
Assila, LLC*

Oprah Winfrey reversed the spelling of her first name and called her production company Harpo; Alissa Chavez did the same, naming her company Assila. As a teenager in Albuquerque, Alissa came up with the concept for the Hot Seat and entered it into her high school's science fair. She went on to patent her idea for a device designed to warn parents/guardians that they are leaving an infant alone inside a car.

Alissa was horrified that on average 40 children die every year from accidentally being left inside a hot car. Although she successfully built a prototype Hot Seat, Alissa did not have the resources to test and streamline the wireless device that sends notifications via a cell phone app for mass production. Alissa turned to help from NMSBA, and was connected with engineers at the University of New Mexico's COSMIAC Research Center.

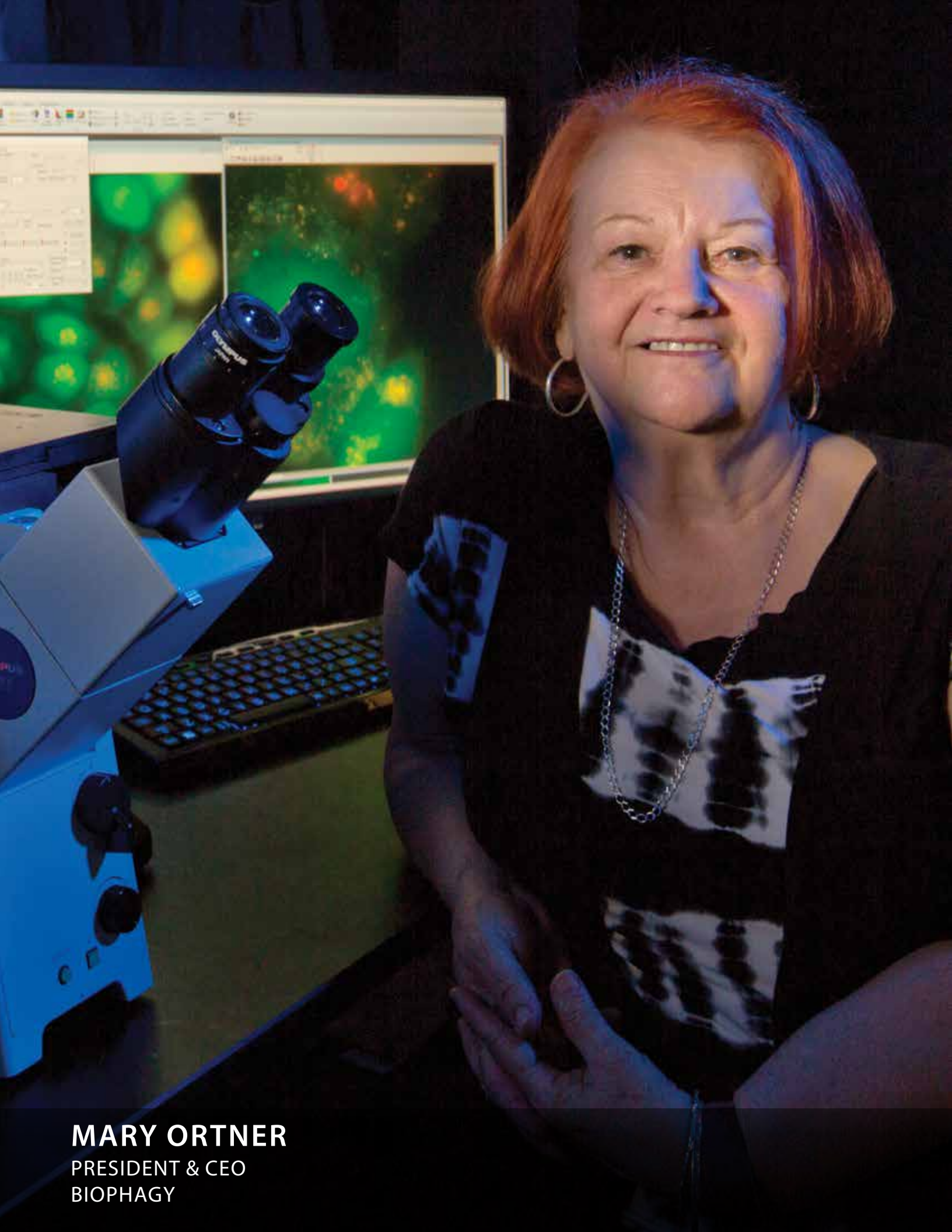
Working with Alissa, engineers Brian Zufelt and Craig Kief reduced the size of the device's circuit board, increased its battery life, designed and wrote driver functions for the basic electronic components, tested it, and created a new schematic designed to facilitate mass production.

As a result of this technical assistance, Alissa is realizing her dream of manufacturing the Hot Seat. She has received 500 pre-orders and has hired a contract application developer and a web designer. NMSBA helped reduce her cost of development by \$10,000, and then she was able to negotiate contracts with two Albuquerque-based manufacturers.

*Meet the
PRINCIPAL INVESTIGATORS*

*Craig Kief and Brian Zufelt
University of New Mexico*





MARY ORTNER
PRESIDENT & CEO
BIOPHAGY

BIOPHAGY

With the support of NMSBA, Biophagy is developing its patented combinations of potent autophagy drugs as a defense against resistant strains of tuberculosis.

Mary Ortner
President & CEO
Biophagy, Inc.

Biophagy, an Albuquerque biopharmaceutical company, is developing drugs that modulate autophagy — a ubiquitous process whereby cells eliminate infectious organisms and unwanted, denatured materials. Implicated in the body's overall physiological health, autophagy's decline exacerbates several diseases including tuberculosis, diabetes, Alzheimer's, and Parkinson's, as well as aging symptomology.

To design better drugs, Biophagy needed an understanding of how autophagy is selectively stimulated; however, the company lacked the necessary highly specialized equipment and expertise. Mary Ortner, Biophagy's president, reached out to NMSBA which linked her to Jeri Timlin of Sandia National Laboratories to help discover the binding sites associated with autophagy stimulants.

Timlin understood Sandia Labs' unique ability to move this research forward using highly specialized, hyperspectral confocal imaging to demonstrate autophagy drug binding sites. Typically used for basic research, in this case these imaging applications clearly had the potential to help patients in an applied research setting.

The binding patterns discovered by Sandia Labs helped Biophagy to understand and identify discrete autophagic mechanisms and to select several molecules for its ongoing research into drug resistant tuberculosis. Biophagy considers this work a stepping-stone towards amassing a larger portfolio of intellectual property which will be attractive to future investors and help the company become a world leader in bringing autophagy modulators to the marketplace.

Meet the
PRINCIPAL INVESTIGATORS

Jerilyn Timlin, Meghan Dailey (postdoc), and Bryan Carson
Sandia National Laboratories





JAY BONNER
DIRECTOR
BONNER DESIGN CONSULTANCY

MICHAEL BARON
PRESIDENT
AERBLOCK ENTERPRISES

CELLULAR LIGHTWEIGHT CONCRETE LEVERAGED PROJECT

*Through NMSBA,
we have confirmed that
New Mexico is blessed
with natural pozzolanic
materials that can help
us manufacture CLC in
northern New Mexico.*

Michael Baron
President
AerBlock Enterprises, LLC



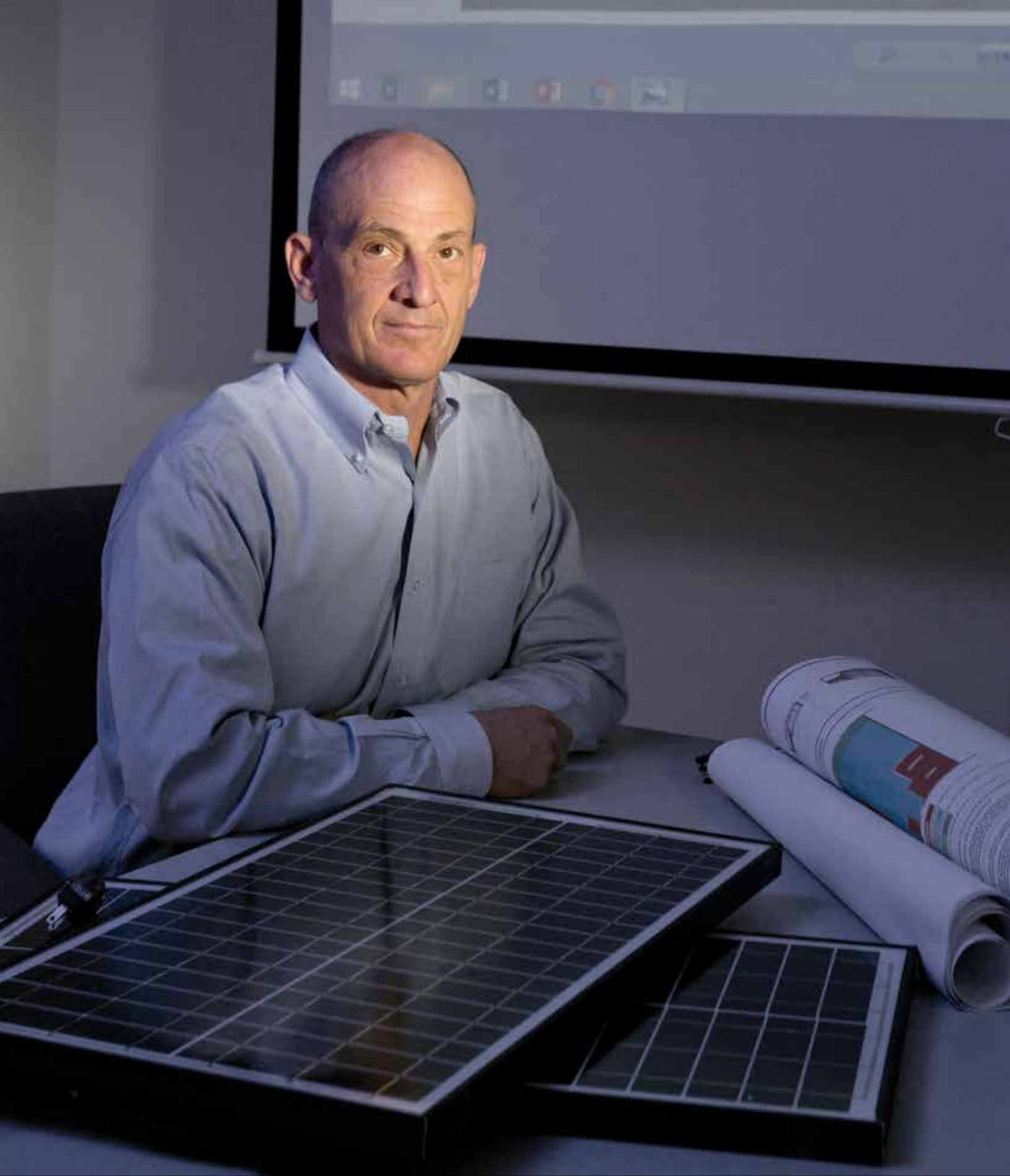
AerBlock Enterprises, owned by Michael Baron, and Bonner Design Consultancy, owned by Jay Bonner, along with LUCA Industries USA, which Baron and Bonner jointly operate, have joined forces to manufacture cellular lightweight concrete, better known as CLC, in northern New Mexico.

Throughout Europe, aerated autoclaved concrete (AAC) has been used as a versatile material with applications that range from cast ornamentation and panels/blocks to complete buildings. This building material does not burn, mold, or rot; possesses excellent thermal- and sound-insulation properties; and can withstand seismic activity. Baron and Bonner are working with a proprietary CLC technology similar to AAC, but far more versatile and much less expensive. This technology is an ideal green construction material as it is self-insulating, non-flammable, seismically strong for its weight, and has a low carbon footprint.

Baron and Bonner's goal is to manufacture their CLC with locally available resources. The partners turned to NMSBA, and together with Giday Wolde Gabriel of Los Alamos National Laboratory evaluated samples of abundant locally sourced material for its pozzolanic potential. His investigations of the physical, chemical, and mineralogical properties of the samples, and compressive strength testing of manufactured blocks, confirmed that these local materials have excellent characteristics for CLC mix-designs.

With data in hand, Baron and Bonner are intending to scale-up their CLC production in a new facility to manufacture insulation panels, wall units, and lightweight architectural ornaments. By manufacturing their affordable green building products in a production facility using local resources and employees, the entire region will reap economic benefits.

Meet the
PRINCIPAL INVESTIGATOR
Giday Wolde Gabriel
Los Alamos National Laboratory



PETER PAGE

PRESIDENT & PARTNER
AMENERGY

CRITICAL UTILITY BASE LEVERAGED PROJECT

I am blown away that more businesses don't take advantage of NMSBA.

Their access to the national laboratories means that you can bring any problem forward and they will solve it.

Peter Page
President & Partner
AMENERGY, Inc.



Designed to be about one-half the size of an intermodal shipping container, Critical Utility Base (CUB) units are customized to provide customers access to transportable utilities, such as electricity, potable water, wastewater treatment, and liquid fuels. Such units can provide power/utilities at any remote location. Applications include forward operating bases, disaster relief centers, or remote communities in domestic and international locations. CUB, Inc. makes these units in conjunction with Amethyst Electric, Inc., and AMENERGY.

CUB's main unit, known as the CUB-E (electricity), took too much time to set up manually. The small businesses did not have the in-house expertise to engineer an automated deployment/retraction rack for the unit's solar panels, so they turned to NMSBA which connected them with engineer Kenneth Armijo of Sandia National Laboratories.

Armijo and his team developed finite element analysis and control models to automate the racking system. This effort involved engineering the pivot points, rack motors and controls, and other components associated with deployment functionality, while also stabilizing the container's structure. They modified the rack's container, taking into consideration weather and environmental issues. They also addressed thermal management solutions to ensure that internal container electronics and energy storage remained within optimal temperature limits.

The end result was a CUB-E with fully automated deployment and retraction. This automation deploys CUB-E's 30 solar panels within minutes—no other technology on the market can do this. The business partners have since hired two engineers and are negotiating with MCT Industries, Inc. to build a marketable prototype of their CUB-E.

Meet the
PRINCIPAL INVESTIGATOR
Kenneth Armijo
Sandia National Laboratories



BETH MILLER
OWNER
IGS DESIGNS

IGS DESIGNS

NMSBA found the perfect person who understood and met my needs. Entrepreneurs often have a fear of the unknown, and NMSBA is there to help allay many of those fears.

Beth Miller
Owner
iGs Designs



In 2002, Beth Miller established iGs Designs to help Christian authors with publication design and layout. The Valencia County business slowly gravitated toward Miller's childhood love of sewing. Today, it offers tools, patterns, and lessons for anyone interested in the craft.

In 2014, Miller purchased an embroidery machine. She was disappointed with it because thread would often knot under the needle. After performing some research, Miller engineered a handcrafted tool with an expanding and contracting thread guide to ensure thread flows effortlessly through the machine. Named Pins n' Threads – on the go, the tool holds four spools of thread and uses a swiveling pincushion that self-sharpens the pins.

Although Miller's tool worked really well, she wanted to make sure it was durable and adaptable to various types of sewing machines, so she contacted NMSBA, which connected her with Pierrette Gorman at Sandia National Laboratories. An engineer, Gorman also happens to be a seamstress, so the two connected immediately. Gorman evaluated and tested the tool for durability, portability, adaptability to various types of sewing and embroidery machines, and overall ease of use.

Sandia Labs' report gave Miller the confidence she needed to sell her tool and perhaps someday mass-produce it. The tool is now available at the iGs website, where more than 450 have sold. Miller recently sold 100 tools to a vendor in Oklahoma City. She has also hired staff to help with assembling, and is selling the tool to vendors as close as Texas and as far away as Canada.

Meet the
PRINCIPAL INVESTIGATOR

Pierrette Gorman
Sandia National Laboratories

NOISY WATER WINERY
WINE - CHEESE - APPAREL - GIFTS
HOME OF THE RELLENO BROTHERS



WINE and CHEESE TAST

Online
waterwine

JASPER RIDDLE
PRESIDENT & WINEMAKER
NOISY WATER WINERY

NOISY WATER WINERY

NMSBA provided an unbiased perspective that streamlined my business processes so that my winery could grow.

Jasper Riddle
President & Winemaker
Noisy Water Winery

Founded in 2009, Noisy Water Winery is based in Ruidoso. This winery is home to two lines of 100% New Mexico wine: The Relleno Brothers and Noisy Water Winery. Since 2014, Noisy Water Winery has received 62 medals at international wine competitions alone.

Facing company growth, Jasper Riddle realized that his winery suffered from numerous operational flaws, key among them were problems associated with inventory management practices. Riddle met Frank Reinow of the New Mexico Tech Department of Management who introduced him to NMSBA.

Frank Reinow, along with Subhasish Mazumdar of the Department of Computer Science and a team of students, provided the winery with an extensive analysis of their inventory management practices and opportunities for improvement. Specific efforts involved developing a conceptual design, system requirements, and recommendations for a new inventory management system that can be scaled as the business continues to grow.

Noisy Water Winery is building a new wine-production facility in Ruidoso. This new facility will incorporate systems designed to streamline, monitor, and manage inventory and will apply the guidance provided by the New Mexico Tech team. This approach will ultimately help the winery manage current wine production and costs, and plan future production based on accurate and accessible data. The winery expects to hire between five and ten skilled employees to begin work in the new facility.



Meet the
PRINCIPAL INVESTIGATORS

Subhasish Mazumdar and Frank Reinow
New Mexico Tech

PROGRAM METRICS

VALUE OF PROGRAM ASSISTANCE IN 2016

In 2016 the State of New Mexico, along with Los Alamos National Laboratory and Sandia National Laboratories, invested **\$4.8M** helping **365** small businesses in **29** counties to solve technical challenges. The following table contains the number of small businesses that received assistance from NMSBA, dollar value of the assistance for calendar year 2016, and cumulative value from 2000 to 2016.

	Los Alamos*	Sandia Labs	Total
Number of Small Businesses Served			
2016	171	198	365**
Rural	121	104	221**
Urban	50	94	144**
2000 - 2016	804	2096	2,648**
Rural	595	1289	1,709**
Urban	209	807	939**
Value of Assistance Provided			
2016	\$2,400,000	\$2,399,867	\$ 4,799,867
Rural	\$1,962,759	\$1,617,618	\$ 3,580,377
Urban	\$ 437,241	\$ 782,249	\$ 1,219,490
2000 - 2016	\$19,272,195	\$34,037,794	\$53,309,989
Rural	\$17,120,475	\$25,716,283	\$42,836,758
Urban	\$ 2,151,720	\$ 8,321,511	\$10,473,231

*Los Alamos began participating in NMSBA in 2007. **Some companies are served by both laboratories.

ACCOUNTABILITY & ECONOMIC IMPACT

NMSBA, enabled by the Laboratory Partnership with the *Laboratory Partnership with Small Business Tax Credit Act*, is accountable to the State of New Mexico for its expenditures. NMSBA measures its economic impact through client surveys conducted by Research and Polling, Inc., and economic analysis provided by Robert Grassberger, PhD Economist.

ECONOMIC IMPACT FOR BUSINESSES FROM NMSBA PROJECTS	2000-2015*
Small Business Jobs Created and Retained	5,734
Average Reported Salary in 2015	\$41,872
Increase in Revenue	\$272,316,966
Decrease in Operating Costs	\$142,422,965
Investment in NM Goods / Services	\$108,874,381
New Funding / Financing Received	\$110,710,519
Return on Investment**	For every \$1.00 of tax credit invested, the State receives a return of \$1.26.
Matching Investment	For every \$1.00 of tax credit invested, the labs provide a matching investment of \$.80.

* Surveys are performed six months to one year after project completion.

** ROI is based on salaries of jobs created and retained.

BENEFITS TO NEW MEXICO SMALL BUSINESSES

New Mexico small businesses achieved positive results after receiving technical assistance from NMSBA. Feedback from companies that participated in the 2015 economic impact client survey revealed that:



NMSBA identifies the areas of technical expertise that the national laboratories and their contractors utilized in NMSBA technical assistance projects, as well as the industry sector for the participating companies. The counties in which the small businesses are located are tracked to gain a better understanding of the reach of the program across the state.

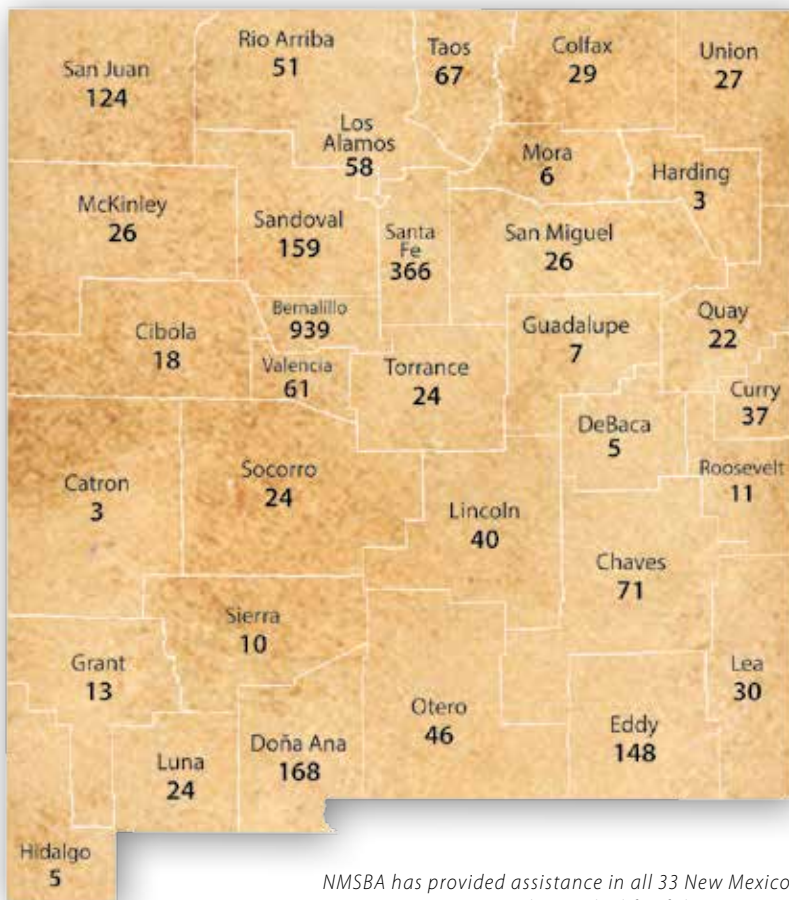
LABORATORY CAPABILITIES UTILIZED IN 2016

Engineering	27.3%
Manufacturing.....	17.8%
Energy	8.5%
Biological and Medical	7.9%
Materials Science	7.1%
Earth and Environmental Sciences	6.3%
Chemistry	6.0%
Business Development.....	5.2%
Math and Computer Science.....	4.6%
Advanced Modeling and Simulation.....	4.4%
Micro-Nano Technology.....	3.8%
Astronomy and Physics	1.1%

INDUSTRIES OF SMALL BUSINESSES SERVED IN 2016

Professional, Scientific, and Technical Services.....	36.9%
Manufacturing.....	34.8%
Agriculture and Natural Resources	7.4%
Retail and Wholesale Trade.....	5.5%
Education Services and Health Care	5.2%
Other Services (except Public Administration)	4.4%
Oil & Gas, Utilities, and Mining.....	3.6%
Real Estate, Finance, Insurance, and Management Services.....	1.4%
Media and Hospitality.....	0.8%

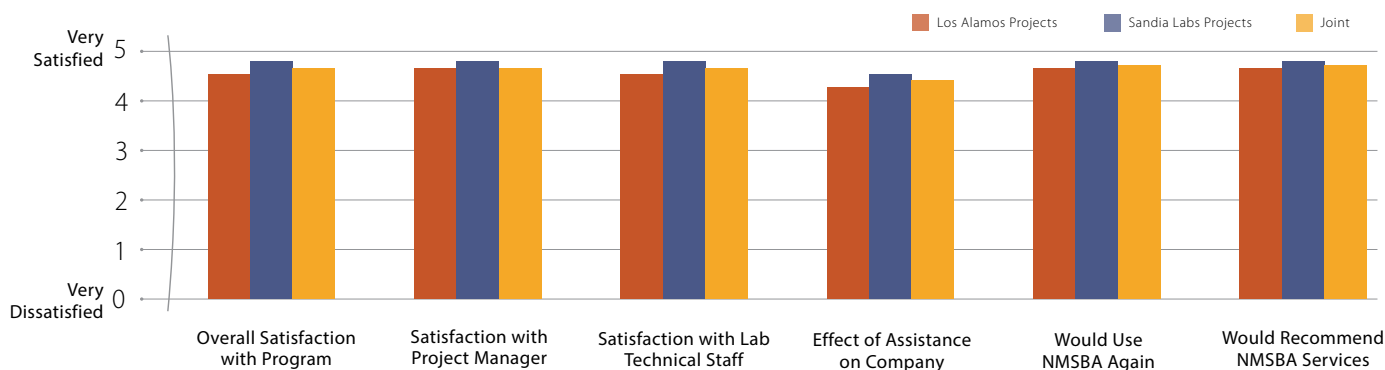
BUSINESSES ASSISTED BY COUNTY 2000-2016



NMSBA has provided assistance in all 33 New Mexico counties during the life of the program.

CUSTOMER SATISFACTION IN 2016

Each year, NMSBA surveys the participating businesses to learn about their satisfaction with the program. In 2016, 79% of the businesses responded to the survey.





DAVID OLD
PRESIDENT & CEO
OLD WOOD

SHILOH OLD
VP, INTERNATIONAL OPERATIONS
OLD WOOD

OLD WOOD

Without the support of NMSBA, we would have had a much more difficult time scaling up our business to meet the growing demands of our expanding, high-volume customer base.

Shiloh Old
VP, International Operations
Old Wood, LLC



Old Wood's beginnings harken back to the 1930s, when Tom Old, a veteran of WWII and the Korean Conflict, ran a small sawmill at the Viveash Ranch northeast of Santa Fe. When Tom was tragically killed in a plane crash, his son David acquired the family ranch with lots of cows and trees. In the mid-1990s, David established Old Wood, a company dedicated to environmentally conscious manufacturing of residential, commercial, and industrial wood flooring.

In 2014, David and his son Shiloh leased two large facilities at the Northern New Mexico Wood Business Park. This acquisition inspired a new idea—providing piñon firewood to clients around the world. Anticipating 20% per year growth in this new business, the Olds realized they needed help with such expansion, so they reached out to NMSBA. Ron Burke of the New Mexico Manufacturing Extension Partnership (New Mexico MEP) was selected by NMSBA to provide assistance.

Burke implemented a comprehensive approach to lean manufacturing. He performed a value-stream map of the business, provided a new plant layout to accommodate exponential growth, and streamlined production flow—from purchasing firewood from local property owners and preparing the wood for sale to storing orders within minimal space.

Old Wood's firewood division started in 2016, has already grown to 35 employees, and hopes to double in 2017. Because of New Mexico MEP's lean manufacturing efforts, Old Wood has also saved thousands of dollars in just one firewood season by ensuring all processes are as efficient as possible.

Meet the
PRINCIPAL INVESTIGATOR
Ron Burke
New Mexico Manufacturing Extension Partnership



STEVE SCHROEDER

PRESIDENT & CEO
REAL TIME SOLUTIONS

REAL TIME SOLUTIONS

Many small businesses just don't have the resources to grow or expand into something completely new—NMSBA has connections to experts who can help such businesses successfully make forward moves.

Steve Schroeder
President & CEO
Real Time Solutions, LLC

A former employee of Sandia National Laboratories, Steve Schroeder founded Real Time Solutions in 2000 to offer website development. Over the years, his company has expanded into offering content-management solutions to both government and industry.

The company's as-needed model meant a fluctuating profit margin, so the company was interested in applying their skills and knowledge to develop customized software products for their customer base. However, Real Time Solutions lacked the expertise to analyze adoption of their software applications. Schroeder contacted NMSBA, which connected him with Steve Walsh of the University of New Mexico Management of Technology (UNM MOT) program at the Anderson School of Management.

Walsh and his students provided the latest trends in software as a service (SaaS) and defined the nature and technology drives within the software industry. The students also used predictive analytics to analyze the current trends for SaaS infrastructure, particularly for businesses seeking to base their products on such infrastructure. They then used these trends and data to develop new business-model options and addressed how such options would likely evolve.

As a result of UNM MOT's report, Real Time Solutions has dedicated part of its company to developing and marketing products for the software market. The company has hired three software developers for this expansion. Although revenue numbers for this rollout year are modest (\$500,000 in sales), Schroeder expects revenues of \$4 million in product alone during the next year, with sales throughout New Mexico, Colorado, Arizona, and Texas.



Meet the
PRINCIPAL INVESTIGATORS

Steve Walsh and students Namrata Nepal, Vidya Satyanarayana, and Alex Greenberg (not pictured)
University of New Mexico



MARIEL VARGAS

CEO
TIMER GLOVE

TIMER GLOVE

*NMSBA connected me
with Griselda Martínez,
who gave me a brain
to pick, an ear to listen,
and a push in the
right direction.*

Mariel Vargas
CEO
Timer Glove



Anyone who works out knows that there is no easy way to keep track of exercise statistics, including the rest time between exercise sets. Based in Las Cruces, Mariel Vargas and her group of entrepreneurs hit upon the idea of creating Timer Glove, a device embedded in a workout glove designed to track exercise data and turn it into valuable information for weightlifting enthusiasts.

After developing a prototype of the device, Timer Glove's team faced challenges in further advancing the interface of the glove with the code. Vargas turned to NMSBA, which connected her with Griselda Martínez of the Arrowhead Center at New Mexico State University (NMSU). Martínez became Vargas' mentor and connected her with Jay Misra and his team of students at NMSU's Computer Science department.

NMSU's team helped improve the device to better achieve the tasks of counting repetitions and tracking rest times, followed by testing and demonstrations. The miniaturization of the key components including the added features was also accomplished.

In 2016, the Timer Glove team participated in Aggie Shark Tank, an event where private investors invest in technology ventures. Timer Glove received an investment of \$50,000 based on the product's maturity level following the work performed by NMSU and the Arrowhead Center. Timer Glove secured an additional \$15,000 from University of New Mexico's business plan competition in 2017. Vargas and her team are currently developing an app with more product features to continue Timer Glove's growth.

Meet the
PRINCIPAL INVESTIGATOR
Griselda Martínez
New Mexico State University



TERRY CHRISTESSON

OWNER
TEEPEE C, INC.

JOHANN STEINLECHNER

OWNER & FOUNDER
HEPPOLT WIND

VERTICAL-AXIS WIND TURBINE LEVERAGED PROJECT

NMSBA and the national laboratories are the best way to go for small businesses, particularly for those that have complex technical problems. Without such support, many of these problems just don't get fixed.

Johann Steinlechner
Owner & Founder
Heppolt Wind, LLC

One promising route to producing electricity is through harnessing wind power. The majority of wind turbines have blades that spin horizontally, but an alternative design known as Vertical-Axis Wind Turbine (VAWT) uses a rotor that spins around a vertical axis. The key issue with VAWTs is lower efficiency caused by additional drag generated during rotation.

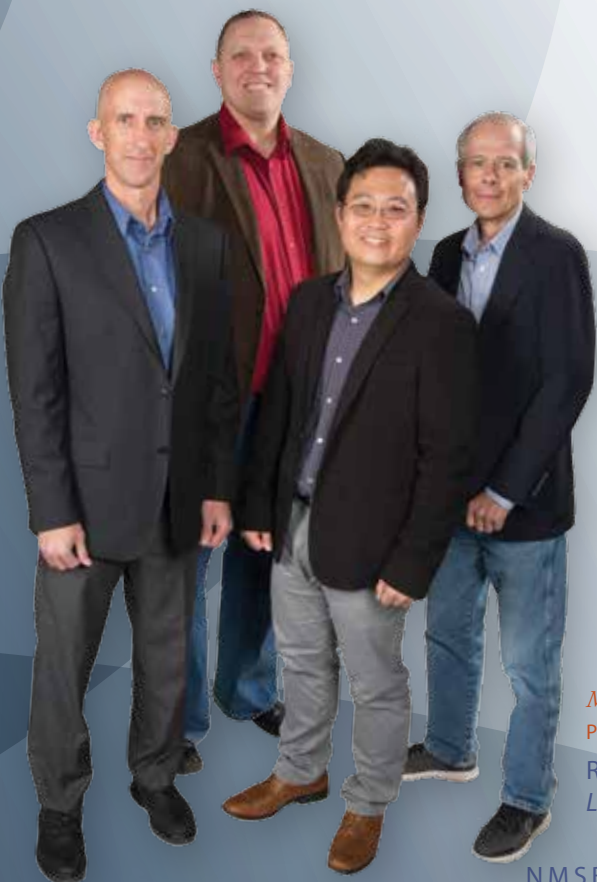
To address this issue, Heppolt Wind, based in Los Alamos County, established a consortium with several landowners in Melrose, and Native Star Energy, LLC of Albuquerque to develop and build a VAWT capable of achieving efficiencies equal to conventional wind turbines.

The companies lacked the expertise and computing power to analyze their VAWT design, so they reached out to NMSBA, which connected them with G. Loren Toole and Rod Linn at Los Alamos National Laboratory. The Los Alamos team modeled the VAWT using HIGRAD, an application run on the Laboratory's supercomputer. The results of the analysis gave the collaborators the confidence to build a full-scale prototype VAWT which was subjected to rigorous testing for the purpose of determining a turbine power curve, a key requirement for the wind power industry. The end result demonstrated that this VAWT design produced rated power at an inlet wind speed of approximately 15 meters/second.

Demonstrating that the VAWT design produces competitive power compared to conventional turbines prompted the establishment of a consortium to commercialize the technology. Two new companies, Llano Estacado Green, Inc. and Renovar Energy, Inc. were established and charged with the mission to further develop, test, and ultimately manufacture the turbines.

Meet the
PRINCIPAL INVESTIGATORS

Rod Linn, Matthew Nelson, Eunmo Koo, and G. Loren Toole
Los Alamos National Laboratory



LEVERAGED PROJECTS

PROJECT	DESCRIPTION	BUSINESS PARTICIPANTS	COUNTIES	FUNDING
Sandia Labs Battery Health	The Labs combined and tested existing technologies which provided embedded battery management for health monitoring. Additionally, the team consulted on appropriate ways to monitor the battery condition and history data to determine the battery health, and provided relevant support in developing these methods.	American Lithium Energy Corporation; Bye UAS, Inc. dba Silent Falcon UAS Technologies, Inc.; Emerging Technology Ventures, Inc.; Motion Picture Marine, Inc. aka Perfect Horizon; North Alabama Robotic Systems, Inc. (NARS)	Bernalillo Otero	\$80,000
Sandia Labs Big Data	The Labs provided technical consulting and mentoring for data analytics, studying three urban resilience questions through "uses cases." This required the ability to collect, organize, and conflate data across multiple data sources, and advance data trend analysis to discover data insights. An urban resilience geospatial analytic platform was developed.	Cultivating Coders, LLC; High Water Mark; Lautman Economic Architecture, LLC; Resilient Solutions 21, LLC; The Wall Builder Project; Why Water NM, LLC	Bernalillo Sandoval	\$69,000
Sandia Labs Biochar	The Labs provided technical consulting to help demonstrate the performance of biochar for mine waste water reclamation.	Alan Kuhn Associates, LLC; Duran Bokich Enterprises, LLC; Gila Tree Thinners; Gila Wood Products, LLC; Restoration Technologies	Bernalillo Grant Sierra	\$89,000
Los Alamos BioSensor Optimization	The Lab developed a protocol for reproducible negative and positive differential current signals using KCl and K3/4Fe(CN) solutions, developed a protocol for immobilization of capturing antibodies on working electrodes, and partially developed a protocol for detection of <i>E. coli</i> .	Bio-Detector, LLC; HelioTropic Energy, LLC; Sigma Medical Technologies, LLC	Bernalillo	\$28,000
Sandia Labs Carbon Fraud	The Labs provided technical consulting with the objective of evaluating the logic and protocols previously developed regarding "Chain of Title," and identifying a taggant(s) that would facilitate tracking the humate material from mining to final application.	Enchantment Organics, LLC; Horsemens Feed and Supply; Lone Tree Partners, LLC; Platinum Star IP Partners, LLC	Bernalillo Sandoval	\$59,000
Los Alamos CLC	The Lab evaluated various samples of abundant local resources as potential raw materials for the production of cellular lightweight concrete (CLC). The physical, chemical, and mineralogical properties of these samples were determined and preliminary results suggested that these local materials have excellent characteristics as Portland cement substitutes for lightweight concrete production.	Aerblock Enterprises, LLC; Bonner Design Consultancy; Luca Industries USA, LLC	Santa Fe	\$57,000
Los Alamos Critical Materials and Process Data	The Lab assembled an apparatus to measure surface reflectance of molten powder metals.	ASiQ, LLC; Bogue Machine Company; Glenn Wikle; Martin Piltch, PhD Consultant; Sigma Labs, Inc. dba B6 Sigma, Inc. fka Beyond6 Sigma	Bernalillo Santa Fe	\$75,000
Sandia Labs CUB	The Labs provided technical consulting with high level design on portions of the Critical Utility Base-Electricity (CUB-E) racking system for rapid deployment. Work was performed in addressing design and operational issues. The work also provided technical insight to address thermal management challenges that affect the life and performance of the system. The Labs developed computational fluid dynamic models for engineering the pivot points, rack motorization, deployment functionality, and leg stabilization; designed ISO container modifications with weatherization / environmental considerations as well as remote deployment capabilities, and thermal management for internal container electronics and energy storage.	AMENERGY, Inc.; Amethyst Electric, Inc.; CUB, Inc.; Page Consulting dba Southwest Solar Products, Inc.	Sandoval Santa Fe	\$61,000
Sandia Labs DuraTrack	The Labs performed analysis, based on models provided by the company, to understand wind loading effects on solar panels mounted on the DuraTrack solar tracker. This analysis included vibration and aerodynamic analysis. The Labs analyzed wind tunnel results provided by the company for the solar arrays and provided technical recommendations. The team also performed field tests to verify the vibration and aerodynamic analysis.	ABQ Manufacturing, Inc. fka Quality Powder Coating, Inc.; Array Technologies, Inc.; Enchanted Machine Works, LLC; Knockout Mtl Wrx, LLC; Mallory Metal Products; Marco Steel & Aluminum, Inc.; Precision Tool & Distribution; Supply One	Bernalillo Dona Ana Sandoval	\$100,000

Los Alamos National Laboratory and Sandia National Laboratories provide technical assistance for both individual and leveraged NMSBA projects. The following is a listing of this year's leveraged, or group, projects.

PROJECT	DESCRIPTION	BUSINESS PARTICIPANTS	COUNTIES	FUNDING
Los Alamos Electrochemical Gas Analyzer	The Lab ascertained the feasibility of using a LANL sensor technology as the basis for a new type of high performance, diagnostic automotive analyzer. The team also consulted on the design of an improved heater circuit and tested the hardware and software developed. Two exhaust sensor probes were built for engine testing, and the data acquired during sensor testing was analyzed.	ATS Mobile Diagnostics; Automotive Test Solutions, Inc.; Thoma Industrial Technology Services & Applied Scientific Solution; VI Control Systems	Bernalillo Los Alamos	\$46,000
Los Alamos Geothermal Tracer Test	The Lab analyzed the flow connections between the geothermal injection and production wells; gained insights into the degree of connectivity between the deeper geothermal system and the shallow alluvial/valley fill system; conducted field deployment and sampling; conducted results analysis and interpretation of samples; evaluated the potential for continued testing in 2017; and provided predictions and recommendations for follow-up 2017 testing.	Geo-Science Solutions, LLC; Jhus Canyon Construction, LLC; Lightning Dock Geothermal, HI-01, LLC; Michelle Henrie, LLC dba MHenrie Land Water Law	Hidalgo Santa Fe	\$76,000
Los Alamos Guar Gum	The Lab evaluated design expression vectors that enable genetic transformation of prairie cordgrass. Briefly, RNA-seq data will be generated from stem tissue and mapped to an improved genome to identify promoter/terminator (p/t) pairs. These p/t pairs will be cloned into an Agrobacterium expression vector containing a green fluorescent protein (GFP) reporter. If regeneration is successful, transformation will be attempted. Positive transgene expression (GFP reporter for proof of concept) will be validated by Western Blot and/or in vivo visualization in stem tissue sections.	Eldorado Biofuels, LLC; Mar Oil & Gas Corporation; Mountain Vector Energy; White Tree Ventures; Yates Industries, LLC	Eddy Sandoval Santa Fe	\$94,000
Sandia Labs High Velocity Impact	The Labs worked to revise existing models to better capture key physics of interest, and then used these revised models to provide data for testing within the proprietary code framework. The team also provided computational results for a range of impact scenarios.	Little Prairie Services; Surreal Studios	Santa Fe	\$29,000
Los Alamos LAMMPS-KOKKOS	The Lab provided and ran benchmarks representing different problems in material science to test the effect of computer architecture, especially GPUs, on computational run time; provided code that can run a given problem using different executables for Large-scale Atomic/Molecular Massively Parallel Simulator (LAMMPS) and calculate the most efficient system; and acted as technical advisors on other benchmark problems as required.	CreativeC, LLC; Manufacturing Technologies, Inc.; Materials Design, Inc.	Bernalillo Colfax Los Alamos	\$47,000
Sandia Labs Metals from Biosolids	The Labs performed qualitative and quantitative analyses of Biosolid feedstocks supplied by ReGen to possibly identify useful and precious metals in the samples. These feedstocks were pre-treated by washing and drying of solids to remove oil and water, pyrolysis of the solids to remove their fuel components, and size-based separation (sieving). Useful and precious metals were identified and quantified in the resulting solids, as well as in the by-products of the pre-treatment steps.	Diver Solar, LLC; JT Maintenance; ReGen Technology fka SoilCo, LLC	Bernalillo	\$30,000
Los Alamos Microwave Biostimulation	The Lab characterized the microwave source and power distribution on the bioreactors and performed ~50 algal growth experiments monitoring the impact of microwaves on algal growth.	BioStim, Inc.; Fiore Industries, Inc.; Innovative Organic Solutions Intl., Inc.; Technical Management Solutions, Inc.	Bernalillo Los Alamos Santa Fe	\$57,000
Sandia Labs Nanoporous Materials	The Labs provided technical consulting on the development of nanoporous carbon and silicon materials to develop improved anodes for electrochemical energy storage devices, i.e. batteries. The objective was to collaboratively optimize these materials for Li- and/or Mg-ion intercalation to improve specific energy capacity compared to the current state-of-the-art Li-ion batteries.	American Lithium Energy Corporation; Paideia, LLC; Qynergy Corporation; Space Sciences Corporation	Bernalillo Otero Socorro Valencia	\$59,000

LEVERAGED PROJECTS (CONTINUED)

	PROJECT	DESCRIPTION	BUSINESS PARTICIPANTS	COUNTIES	FUNDING
Sandia Labs	Nitrate/ Phosphate	The Labs provided technical consulting for the design and operation of an anaerobic digester for management of nitrate and phosphate waste streams. Specifically, a model was created to simulate the anaerobic digester system.	Clarity Consulting, LLC; KD Consulting; New Solutions Energy Corporation; Tropical Institute for Sustainable Agriculture and Renewable Energy (TISARE)	Bernalillo Dona Ana Santa Fe	\$69,000
Los Alamos	Novel Therapeutics	The Lab provided statistical analysis of the Pulsed Electromagnetic Field (PEMF) device safety study data to assist in the design of a potential PEMF efficacy study, and provided feedback on New Mexico Augurs' visualization of both real-time and historical vital sign data from the UNM neurosurgery intensive care unit.	New Mexico Augurs; Rio Grande Neurosciences	Bernalillo Santa Fe	\$28,000
Los Alamos	Optical Blood Pressure	The Lab conducted a proof of concept and feasibility study of a proposed strategy for continuous, noninvasive measurement of blood pressure, using an optical instrument.	Balanced Physical Therapy and Wellness; Center for Reproductive Medicine of New Mexico; Diego Gonzales; Duke City Urgent Care; Full Circle Healing Family Practice; GoPrivateMD; Infectious Diseases and Internal Medicine Associates, P.C.; Medici Technologies, LLC; Sanchez Dental Associates, Ltd. P.A.; Southwest Neurosurgical Associates	Bernalillo Santa Fe	\$94,000
Sandia Labs	Optimize Pattern Recognition	The Labs completed upgrades to speed up the embedded software of the polarized radar. Scanning time was reduced by a factor of 50 and the signal to noise ratio was increased by an estimated factor of 10.	APPI, Inc.; Indelible Enterprises, LLC; McLemore Enterprises, LLC; R3 Technologies, LLC; Roberson Construction Company, Inc.; The MacAleese Companies, Inc., dba Safe Zone Systems; Wind Mountain Research Associates	Bernalillo Dona Ana	\$90,000
Sandia Labs	Passive Solar	The Labs provided design consultation on a safer, more efficient and profitable modular prototype water tank combining the attributes of former models. The team leveraged the most efficient design features from previous designs, applied full-fractal technology, and Computational Fluid Dynamics (CFD) with a goal to increase design efficiency by 50% or more. The Labs provided a deliverable in the form of a report, containing experimental data, module manufacturing specifications, fabrication guidelines and recommendations.	Bioponic World Vegetables, Nutrients & Bio-Products, LLC; Bioponic World, LLC; Energy Conversion Corporation; San Miguel Sun Dwellings; Terraplen Architects & Planners	Santa Fe	\$79,000
Los Alamos	Post-Surgical Recovery Clothing	The Lab assisted two companies seeking to develop a Class I medical device to aid the healing process for women who have undergone open chest/sternotomy surgery for critical cardio-pulmonary conditions. The project helped the companies to determine the biocompatibility of fabrics proposed to be used for development of the device. The team performed a cytotoxicity assay and inflammatory gene expression assay to determine the biocompatibility of the fabric; it was found that one particular sample was very effective and compatible with in vitro cell experiment.	Advanced Arts Design Development dba aadd; Westbund West	Bernalillo	\$19,000
Sandia Labs	Pulsed Laser Arrays	The Labs conducted characterization, modeling, and simulation of high power pulsed Vertical Cavity Surface Emitting Laser (VCSEL) arrays for use in Laser Imaging Detection and Ranging (LIDAR) applications. Trilumina fabricated and assembled test laser arrays representative of their high power pulsed arrays and provided preliminary device performance data.	Alpha-Omega Power Technologies, LLC; Betatron Electronics; Dynamic Photonics, Inc.; Ideum, Inc.; Theta Plate, Inc.; TriLumina Corporation	Bernalillo Sandoval	\$69,000

PROJECT	DESCRIPTION	BUSINESS PARTICIPANTS	COUNTIES	FUNDING
Sandia Labs Satellite Shielding	The Labs provided technical consulting in three general areas. First, they assisted company representatives in replicating selected results using their own Space Environment Information System (SPENVIS) accounts. Second, they introduced the company to inventors of a NASA technology that is directly related to the Labs' prior modeling work. As a result the company has licensed several related NASA technologies for commercial development. Third, they collaborated with company representatives regarding a candidate commercial product proposed by the company, and assisted with the SPENVIS modeling capabilities necessary to develop this product for identified and notional customers.	LoadPath, LLC; SpaceBooster, LLC	Bernalillo	\$20,000
Los Alamos Singlet Oxygen	The Lab provided alternative material selection and the corresponding cost and associated fabrication and manufacturing techniques; plasma cell geometric design improvements; and numerical modeling using computational fluid dynamic techniques to verify current hydraulics; as well as looking at influences due to changes in the geometry. They also conducted baseline testing to document and quantify the production of ozone, designed and manufactured cold plasma ozone generators and compared them to an off-the-shelf, mass-produced ozone generator.	Link Summers, LLC; Smart Water Systems, LLC	Taos	\$37,000
Los Alamos Solid State Lighting	The Lab identified non-radiative processes and lifetimes for carrier relaxation in CuInS2 quantum dots (CIS QDs) in order to improve their photoluminescence quantum yields; provided structural information by transmission electron microscopy on the various synthetic approaches to characterize sample quality, size dispersion, and crystallinity; and identified processes that contribute to the photostability or photodegradation of CIS QDs.	Central Park Square, LLC; Meow Wolf; Stephen Auger Studio, LLC; UbiQD, LLC	Los Alamos Santa Fe	\$75,000
Los Alamos VAWT	The Lab conducted testing and analysis to determine an overall envelope of turbine performance, relative to electrical power, rotor speed, airflow and related features; explored various potential design features; created a Vertical-Axis Wind Turbine (VAWT) power curve, and provided analysis on deflectors for one design case.	Heppolt Wind, LLC; Native Star Energy, LLC; Southwest Heritage, Inc.; TeePee C, Inc.	Bernalillo Curry Los Alamos	\$66,000
Los Alamos Watershed Restoration	The Lab collected baseline water sample data from springs and streams to provide background water chemistry data for monitoring the effectiveness of watershed restoration actions. They also identified sources of water and sources of nitrate within watersheds for better understanding of the watershed geochemistry.	Earth Analytic, Inc.; Global Conservation Assistance; Keystone Restoration Ecology; Zeedyk Ecological Consulting, LLC	Bernalillo Santa Fe	\$66,000
Sandia Labs Wireless Water Mgt	The Labs completed the migration of modem software functionality and added two additional protocols, Generic and Distributed Network Protocol (DNP3), to the new hardware platform. Also, the Labs completed the hardware interface design, provided hardware interface schematics, for the new hardware prototype and provided consultation on fabrication issues. A system test plan was produced and the Labs worked with the group on integration and test efforts.	Anglim's Western Metal Works, Inc.; EnFrente, Inc.; IC Tech Incorporated; Left Turn, Inc.; Salero Contracting; Toltec Enterprises, Inc.	Bernalillo Sandoval	\$50,000

INDIVIDUAL PROJECTS

Bernalillo

3D Glass Solutions
Acme Rigging
Actoprobe, LLC
AEgis Technologies Group, Inc.
AJ Maes, LLC
dba Sandia Labs Marble
Alternative Industry Resources (AIR)
Division of Sandia Labs Development, Inc.
Applied Technology Associates (ATA) / A-Tech Corporation / ATA Sensors
Armour Pavement, Inc.
As Girls Grow
Assila, LLC
AWS Bio-Pharma Technologies
Bayotech, Inc.
Biophagy, Inc.
Black Mesa Coffee Company, Inc.
Bosco Tech
Brain Body Science, LLC
BrightCores, Inc.
CANiv Tech, Inc.
CDS Lighting Studios, Inc.
Century Sign Builders
Certified Packing & Crating, Inc.
DermaTec, LLC
Desert Paper & Envelope Company, Inc.
Diversified Tooling Corporation
Earth Czar, LLC
Electronic Technical Services
Energy Analyst, LLC
Essence de Cafe
Excel Manufacturing
Fires Instrumentation Research, LLC
Green Theme Technologies, LLC
Guardian Sensors, Inc.
fka Sentient Business Systems, Inc.

Innobright Technologies, Inc.
Integrated Machining Company
Integrated Property Services dba Goodman Realty Group
IX Power Clean Water, Inc.
Jaguar Precision Machine Corporation
Kennedy Trimmell Company
Lotus Leaf Coatings, Inc.
M & M Futures, LLC
Machining Solutions, LLC
Management Sciences, Inc.
Midtown Metal
Mimi Green
Moore Hydrology, LLC
mPower Technology, Inc.
MVD Express
NanDei McAnally Enterprises, LLC
OGB Architectural Millwork, Inc.
OptiSource, LLC
Orion International Technologies, Inc.
PanMuse, LLC
Precision Grinding, Inc. (PGI)
Pressure Analysis Company
Radiant Technologies, Inc.
RadPhysics Services, LLC
Robocasting
Sandia Labs Biotech
Sandia Labs Electro-Optics Corporation
Shimon's Knishery & Bakery
Skyndex
Southwest Ceramic Lighting
Southwest Heritage Mill
Southwest Wind Dynamics
Stride, Inc.
Summit Industries, LLC
Sun Country Industries
SuperString, LLC
TEAM Technologies, Inc.
fka TEAM Specialty Products
Team, LLC
dba Tri-Tech Machine Tool Company

Toltec Enterprises, Inc.
Total Impulse, LLC
TruEnergy Solutions
Unified Safety Group, LLC
Vamco, LLC
VanDevender Enterprises, LLC
Velocity Ventures, LLC
Veritran, Inc.
VisionQuest, LLC
Voss Scientific
VTM, LLC
dba Elemental Clay
Zeigler Geologic Consulting, LLC

Chaves

Liquid Rod Pumps Company, LLC

Cibola

bioLime Innovations, LLC
Brazo Strong Construction
C & E Concrete, Inc.

Colfax

Cimarron Real Mountain Jerky

Curry

Airwest
Lay Land and Cattle Company dba Lay Wind Farm
Marvin Estes Farms
Petricor

Dona Ana

EcoSeal, LLC
FlashAg
GBS Environmental, LLC
KaizenRhino Solutions International Consultancy
Southern New Mexico Speedway
Timer Glove
TYMMBER Outdoor, Inc.

Eddy

New Era Physical Therapy
Taddy Healthcare Services, LLC

Grant

Kate Brown Enterprises, LLC
dba Fundamentalist
Flowerchild Productions

Guadalupe

Thompson Cattle Company

Harding

Ute Creek Cattle Company

Lincoln

Noisy Water Winery

Los Alamos

High Mesa Technology
HyPwr, LLC
MIMICRI, LLC
Porcupine Holding
Sci Tac, LLC
SFION Corporation
Silverpeak Consultants
Tibbar Plasma Technologies, Inc.

Luna

Luna Precision
Welding, LLC

McKinley

Navajo Spirit
Southwestern Wear

Mora

Cattlexpressions
Mora Valley
Woodworking, LLC

Quay

Copeland and Sons, LLC
Front Line
Equipment Company
Gary Gunn

Rio Arriba

Espanola Transit Mix, LLC
Frost Farm
OmPlay Shop, Inc.
Presidio Machine
& Engineering, LLC
Southwest PPE Services,
a division of Mountain
Air Cleaners

San Juan

Alpha Bioscience
Company, LP
Animas Medical
Supply, LLC
Antelope Sales
and Services
C & B Trucking, LLC
Clay-Groomer
Machine Shop, Inc.
Cooper Construction
Services
Cooper Fire Protection
Services
Four Corners
Community Bank
Four Corners
Orthodontics and Dental
FS Enterprises
Glenhasbah
Renewable Energy
Technologies, Inc.
Henry Production, Inc. (HPI)
ICE
Jack's Plastic and
Welding, Inc.
Look Cool
NextGas, LLC
One Source Service
PESCO, Inc.
Quick Carriers
dba Hauling Accessories
R & T Holdings, LLC
Real Green Building
Systems (RGSB)
San Juan Closet Works
Tethering Ideas
Thales Energy
Trotting On Innovations
Worthy, Inc.

San Miguel

Montibon Provenance
International, Inc.
Old Wood, LLC
Randy Huston Ranch

Sandoval

#OneCan
Alderete Investments, Inc.
dba Gluten Free
Gourmet Foods
AlgoTech NM
Arjuna Resources, LLC
Bladewerx, LLC
ECOterra, LLC
Hydroscience
Associates, Inc.
Insight Lighting
Inspyrd Products
Corporation
Jemez Hot Springs
fka Giggling Springs /
Giggling Star, LLC
KEWA Resources, Ltd.
Raptor Products, Inc.
Real Time Solutions
Research and
Development, LLC
Rescue Tactics and
Training, LLC
Village Workers, LLC
Wawatowa Timber
Industries
WEN Engineering

Santa Fe

1N1 Materials
Acoustic Biosystems
ARVRUS, LLC
Assisi Animal Health
Atmocean, Inc.
Aurora Life
Technologies, LLC
Big Sky Learning
Cimarron International, LLC
Cintamani Tonics
Cold Thumb Agriculture
Divine Beauty
El Milagro Herbs
Enlivened Food, LLC

Environmental
Standards, Inc.
Extraordinary
Structures, LLC
FarmPod, LLC
Forever Energy
Consulting, LLC
HoneyMoon Brewery
iBeam Materials, Inc.
Idea Tree Live
IR Dynamics, LLC
Kitware, Inc.
La Puerta Originals
Los Alamos Visualization
Assoc., LLC (LAVA)
Mesa Photonics, LLC
Monika Kaden
Fine Arts, LLC
New Mexico Algae
Production, LLC
NTxBio, LLC
OpenEye Scientific
Software, Inc.
Pajarito Scientific
Corporation (PSC)
Pleasanton Ridge
Research
Positive Energy Solar
aka Positive Energy, Inc.
Rader Awning &
Upholstering, Inc.
Radiation Detection
Solutions, LLC
Resonant Body
San Cristobal
Development
Santa Fe Probiotics
Santa Fe Spirits
SAVSU Technologies
SolarLogic, LLC
Solstar Energy
Devices, LLC
Spartina
Biotechnologies, LLC
Sustainable Resources, Inc.
Twist Resist
Upcycle Santa Fe, LLC

Sierra

St Cloud Mining

Socorro

EFX Energy
Technologies, LLC
Lyratron
Solaro Energy, Inc.

Taos

Beyond Laundry, LLC
Enchanted Circle Pottery
George R. Dreher
Jaguar Holdings, LLC
Musicode Innovations
Plenish Skincare
Private Label
Select, Ltd. Company

Torrance

Romero's Heating
and Cooling
Take a Swing, LLC

Union

Hutcherson Family, LP

Valencia

ABO VIEJO Investment, LLC
Blue Skies Consulting
Clean Weld
Hummeze
iGs Designs
NanDei McAnally
Designs, LLC
Sisneros Bros. Mfg., LLC
Wall Colmonoy

INNOVATION CELEBRATIONS

Projects from 2016 that achieved outstanding innovations through NMSBA are being honored throughout 2017.

One project received the “Honorable Speaker Ben Luján Award for Small Business Excellence” for demonstrating the most economic impact. Old Wood, an environmentally conscious manufacturer of wood flooring in San Miguel County, was able to begin a new firewood division due to lean manufacturing assistance which streamlined production flow, facilitating company growth, new hires, and savings due to more efficient processes.

In addition to honoring NMSBA participants, the events provide an opportunity for small businesses, local economic development representatives, elected officials, and community leaders to network and learn what NMSBA offers to help businesses grow.



OLD WOOD

ACKNOWLEDGEMENTS

- ▶ Thank you to all the small businesses for participating in NMSBA and creating jobs and economic wealth for New Mexicans.
- ▶ Thank you to all Los Alamos and Sandia National Laboratories' Principal Investigators who applied their expertise and knowledge to help New Mexico small businesses solve their technical challenges.
- ▶ Thank you to the Governor's office and the New Mexico State Legislature for supporting the *Laboratory Partnership with Small Business Tax Credit Act*.
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Solving New Mexico's Small Business Challenges



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