PERSPECTIVES **2023** ANNUAL REPORT



TECHNICAL ASSISTANCE PROVIDED BY LABS

JOBS CREATED AND RETAINED

BUSINESSES ASSISTED

NEW MEXICO COUNTIES SUPPORTED

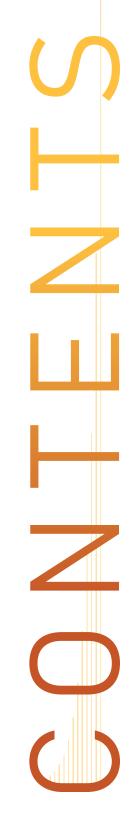
Cumulative numbers since the inception of NMSBA in 2000.

OPENING REMARKS
PROGRAM INFORMATION
SUCCESS STORIES
Assessing the Impact of Ultrasonic Filtration on New Mexico Beer Quality Leveraged Project
Dash2 Labs
Emerging Technologies Ventures10
Muhlala Turbine12
National Water Services14
Ophthalmic System Leveraged Project16
Remote Well Solutions18
SALA Los Alamos Event Center20
SEED International22
SensorComm Technologies24
PROGRAM METRICS
LEVERAGED PROJECTS
INDIVIDUAL PROJECTS
BEN LUJÁN AWARD
ACKNOWLEDGEMENTS
2022 INNOVATION CELEBRATION

On the cover:

Brian Mego, Dylan Mego, Anna Francis, and Ryan Mego of the Francis Ranch with Mike Lisk of Remote Well Solutions standing by a fully automated, solar-powered RWS Water Distribution Pumping Plant.

Read more about Remote Well Solutions, the Honorable Speaker Ben Luján Award winner, on pages 19 and 36.





"NMSBA is a one-of-a-kind opportunity for business throughout the state to tap into the knowledge and expertise of our federal research laboratories. Since its inception, the initiative has assisted over 3,000 businesses in all 33 New Mexico counties, boosting job creation in areas as diverse as engineering, aerospace, agriculture, and printing."

> Mark Roper Acting Cabinet Secretary Economic Development Department State of New Mexico



"Once again, this year's NMSBA annual report showcases the incredible innovation and growth potential that comes from our national laboratories and New Mexico businesses working together. NMSBA is key to the success of so many valuable growth opportunities across our state."

Stephanie Schardin Clarke Cabinet Secretary Taxation and Revenue Department State of New Mexico

Since 2000, the NMSBA Program has helped 12,199 jobs to be created and retained across the state's 33 counties.



DEAR GOVERNOR LUJAN GRISHAM AND NEW MEXICO STATE LEGISLATORS,

We are pleased to present the 2023 Annual Report for the New Mexico Small Business Assistance Program. This report highlights a few of the hundreds of successful projects from 2023 and provides metrics for the performance of NMSBA, for the past year and since its inception in 2000.

During 2023, a total of 241 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 \$4.49 million of national laboratory expertise and resources to help small businesses in 21 counties overcome technical challenges and grow.

The success stories in this report demonstrate the impact NMSBA has on small businesses from a wide range of industries across the state. Here are a few examples from some of the featured success stories:

- After improving its user interface for various critical infrastructure applications, a company won a \$1.13 million contract with the U.S. Navy, as well as receiving grants and funding from other sources. They also hired three employees.
- A comparison of groundbreaking ultrasonic filtration and conventional centrifugal methods has helped a group of New Mexico breweries evaluate the new technology's effectiveness on particle removal, taste, and increasing shelf life. Early results are promising.
- Access to wind tunnel testing helped a company enhance its wind turbine design, greatly increasing energy output. With their validated technology, they have entered talks with the Morongo Tribe, Los Angeles Department of Water of Power, and City of Lancaster.

Remote Well Solutions received the Honorable Speaker Ben Luján Award for Small Business Excellence for demonstrating the most economic impact. The company will be hiring more employees as its patented, fully automated, solar-powered water systems for livestock is being deployed on Navajo tribal ranches. Several million dollars have been allocated for these systems which transform the lives of ranchers in remote areas by increasing the productivity of their land as inefficient windmills are replaced and the need to haul water is ended.

For over 20 years, 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 \$85.1 million in technical assistance to 3,340 businesses, enabling 12,199 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,

Candice Siebenthal Los Alamos National Laboratory

David Kistin Sandia National Laboratories

During 2023, NMSBA helped 241 small businesses across the state reach business goals, develop their products for commercial use, and increase profitability. NMSBA makes a statewide impact by:

- Providing New Mexico small businesses access to 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

PROGRAM INFORMATION overview

In 2000, the New Mexico 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 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 business. NMSBA services are provided at no cost to participating small businesses in the form of lab staff hours valued at up to \$40,000 per calendar year for businesses located in rural counties and \$20,000 for businesses located in urban counties (Bernalillo and Santa Fe Counties). 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

In 2023, New Mexico's businesses leveraged NMSBA to access Los Alamos and Sandia national laboratories' capabilities and expertise. NMSBA helps businesses tackle the hardest challenges, whatever their stage of development. As a result of work with NMSBA, businesses gained customers, entered new markets, received investment, and created new jobs. In 2024, the NMSBA Program will emphasize serving rural New Mexican businesses and accelerating the development of New Mexico's target industries. The program will continue to support the state's growing technology industries and networks to stimulate start-ups, accelerate business growth, and address regional community-led development challenges.

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.



CONTRACT PARTNERS

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 Business and Technology Management Program

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 and pathways.

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.

BERNALILLO SANTA FE TAOS COUNTIES SANDOVAL

BRE

EST. 1988

Bert Boyce of Santa Fe Brewing standing in front of the centrifuge currently used for beer clarification.

ASSESSING THE IMPACT OF ULTRASONIC FILTRATION ON NEW MEXICO BEER QUALITY LEVERAGED PROJECT

Santa Fe Brewing Company has been at the forefront of New Mexico's craft beer scene since its founding in 1988, prioritizing quality and innovation from the start. In this project, Santa Fe Brewing Company collaborated with Beer Creek Brewing Company, Ex Novo Brewing Company, La Cumbre Brewing Company, and Taos Mesa Brewing to lead a leveraged project that tapped into local filtration and chemical expertise provided by the NMSBA Program. Supported by Jim Coons and Brett Blackwell from Los Alamos National Laboratory, the project evaluated the effect of particle removal technologies on the composition of seven select beers produced by the participating brewers.

The project compared the effectiveness of ultrasonic filtration, a groundbreaking technology developed by Coons and his team, with conventional centrifugation.

Ultrasonic filtration traps quality-threatening particles from unclarified beer using silent ultrasonic waves, much like traditional filtration, only without the membrane. Unclarified beer continuously flows up into a standing wave in the vertically oriented chamber, causing particles to aggregate and quickly settle. Concentrated particles are removed from the bottom of the chamber, while clarified beer flows from the top.

In the beer tests, ultrasonic filtration effectively removed large particles like yeast that could alter flavor and reduce the beer's shelf life, while leaving behind more of the smaller, flavor-building particles than the centrifuge method.

While ongoing, the project's early success signifies a bright future for New Mexico's breweries, thanks to their dedication to innovation and support from NMSBA.

Meet the Principal Investigator

Jim Coons Los Alamos National Laboratory

"It is a privilege to work with an institution as distinguished as Los Alamos on such a groundbreaking project and this would never have been possible without funding and organization from NMSBA."

Bert Boyce Brewmaster Santa Fe Brewing Company Inc.



John Hernandez of Dash2 Labs working at Q Station—a co-working space which enables networking between small deep-tech firms, government, and academia.

1

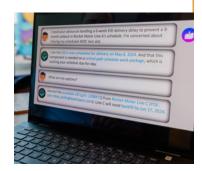
COUNTY

.

.

.

DASH2 LABS



"Collaborating with UNM via the NMSBA Program enabled Dash2 Labs to streamline industry evaluations and fine-tune technical requirements, which is crucial for small firms yet often time consuming and resource intensive."

John Hernandez CEO Dash2 Labs Inc. Dash2 Labs developed DASH, a secure AI-based software platform that streamlines operational decision-making. The platform offers a simple-to-use text-based interface that empowers workforces with centralized and real-time access to enterprise information, reduces institutional knowledge loss, and solves complex operational problems on demand, saving workforces 30% of their time.

Dash2 Labs needed more resources to perform an efficient industry assessment for DASH applications. The company planned to use this information to refine technical requirements further and effectively target specific industry niches. So they sought assistance from NMSBA, which connected them with Steve Walsh, a renowned professor and project developer at the University of New Mexico.

Dash2 Labs tapped into UNM's resources, engaging students and researchers to tackle complex challenges in technology commercialization. This collaboration provided real-world examples for students, fostering invaluable learning experiences.

Walsh and a group of students helped Dash2 Labs leverage their technological strengths to identify emerging trends and increase customer reach, resulting in improved products. They also crafted a clear description of Dash2 Labs' technology, analyzing its benefits and aligning it with market demands, which served as a foundation for enhancing product design.

The collaboration also resulted in tangible outcomes, including hiring two new employees, signaling the company's expansion and success. As Dash2 Labs continues to grow, it stands at the forefront of small business entrepreneurship and is poised to redefine the innovation landscape. Meet the Principal Investigator

Steve Walsh University of New Mexico

9

NMSBA PERSPECTIVES 2023 ANNUAL REPORT

The Emerging Technology Ventures team is standing by their autonomous air and ground platforms with edge analytics to inspect critical assets.

NM Press

111

COUNTY

WBOT

32

EMERGING TECHNOLOGIES VENTURES



"The NMSBA Program has been an essential element in supporting our company's product growth and ability to enter new markets including Defense and Aerospace."

Cliff Hudson

CEO Emerging Technology Ventures Inc. Growing populations put a tremendous strain on infrastructure. Critical infrastructure maintenance involves preserving reliable and safe essential systems and facilities vital to society and the economy.

Emerging Technology Ventures specializes in the research, design, development, integration, and sustainability of advanced autonomous datadriven services, ensuring cutting-edge solutions for their clients. A major area of focus is critical infrastructure maintenance.

Emerging Technology Ventures partnered with Sandia National Laboratories on a project through NMSBA to improve its web-based user interface and user experience design for assessing off-nominal events in various critical infrastructure applications. Under the guidance of Sandia Engineer Ashley Mayle, the team utilized a multifaceted approach to improve user experiences and simplify data visualization.

Mayle analyzed data from Internet of Things/IoT sensors and Autodesk models that Emerging Technology Ventures provided. The objective of the analysis was to find effective ways to integrate and present this data within Autodesk Construction Cloud. Mayle then provided consultancy services to refine the Application Programming Interface, or API, for the cloud-based user interface in Autodesk Construction Cloud. After completing the initial tasks, Emerging Technology Ventures was consulted for the UI design based on the insights gathered.

The project's impact and results include selection for a \$1.3 million contract with the U.S. Navy, receiving a \$7,500 STEP Grant from the New Mexico International Trade Office, securing \$20,000 from the New Mexico Manufacturing Extension Partnership for Cybersecurity Maturity Model certification, and hiring three new employees. Meet the Principal Investigator

Ashley Mayle Sandia National Laboratories

NMSBA PERSPECTIVES 2023 ANNUAL REPORT | 11

LOS ALAMOS COUNTY

Johann Steinlechner of Muhlala and Professor Fangjun Shu position the Muhlala wind turbine model in the NMSU wind tunnel facility for testing. 45%

MUHLALA TURBINE



"As a small business, it's important to get organizations involved that have the technology and skills to help solve complex technical problems. I encourage everybody to use NMSBA. It's a game changer."

Johann Steinlechner Owner Muhlala Turbine LLC Wind turbines have helped meet the rising demand for renewable energy. Muhlala Turbine is working to improve turbines for a more sustainable future.

While attempting to advance its technology, the company faced the challenge of maximizing the energy output of its patented Heppolt wind turbine that was prototyped in New Mexico.

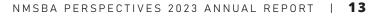
Muhlala reached out to the NMSBA Program and was connected with Kristin Morehead of the Arrowhead Center at New Mexico State University. Morehead connected NMSU Associate Professor of Engineering, Fangjun Shu, with Muhlala.

The team used NMSU's wind tunnel facility to better understand velocity field measurements on the wind turbine using a particle image velocimetry system. Tiny reflective particles were introduced into the airflow, illuminated by lasers, and captured by high-speed cameras. The airflow patterns surrounding the turbine blades were mapped by analyzing the displacement of particles over time. This provided crucial insights. Through meticulous analysis of the data, Muhlala fine-tuned the extraction of energy, ensuring optimal performance.

Muhala's enhanced turbine model has increased energy extraction by 10,000% to 14,000% per square mile compared to existing wind farms, depending on topography, resulting in higher energy output and lower costs.

As a result of the NMSBA collaboration, Muhlala Turbine validated its technology and is negotiating with the Morongo Tribe, Los Angeles Department of Water and Power, and City of Lancaster for new wind turbine projects. The company is also pursuing funding opportunities from federal grants, contracts, and private equity. Meet the Principal Investigator

Kristin Morehead New Mexico State University



The dedicated team at FreshPure Waters stands proudly beside their innovative water purification system.

freshpute

freshpure

-

freshpure



"New Mexico businesses have a phenomenal opportunity to work with NMSBA, a partnership between the New Mexico national labs, New Mexico MEP, and universities. I encourage all companies to reach out and see how they can help you grow!"

Chris Donnelly President National Water Services dba FreshPure Waters

NATIONAL WATER SERVICES

FreshPure Waters was founded to replace single-use plastic water bottles by providing consumers with a more eco-friendly refillable bulk water option. Its system specializes in high-pH alkaline, reverse osmosis, and deionized water, all in one machine. However, the rapidly growing demand for its purified water systems outpaced its production capabilities.

The NMSBA Program paired the company with Wesley Eccles and Jeff Abrams, directors at New Mexico Manufacturing Extension Partnership, to lead the initiative to optimize production, improve system maintenance, and expand market reach.

The collaboration began by developing a new design layout to increase the capacity of a larger facility currently under construction in Santa Fe. It became clear that an enterprise resource planning system would be invaluable. This software integrates various business functions into a single system, improving efficiency, enhancing decision-making, and streamlining processes. New Mexico MEP evaluated over 80 systems to find the best fit for FreshPure Waters' needs.

While this evaluation was underway, FreshPure Waters acquired another water purifying company, bringing in an existing enterprise resource planning system. Leveraging the research already conducted, the company fully utilized this system to broaden its operational scope, streamline business processes, and facilitate scalable growth.

The collaboration produced important results that helped FreshPure Waters achieve its objectives. New Mexico MEP further provided lean manufacturing training to the company's workforce, enhancing existing systems. These collaborative projects identified opportunities to optimize cell design, prioritize equipment improvements, and review best practices to align with FreshPure Waters' growth goals. Meet the Principal Investigators

Jeff Abrams & Wesley Eccles

New Mexico Manufacturing Extension Partnership



Scintellite team members Justin Robison, Steve Farrer, and TD Raymond with an early PAT prototype used to capture patient motion data for the leveraged project.

COUNTIES

٢

(U)

..............

OPHTHALMIC SYSTEM LEVERAGED PROJECT



"Joshua Lane and the dream team of engineers he recruited were 'all in' to solve our problem. The collaboration was excellent and highly productive. Thank you NMSBA and Sandia!"

TD Raymond

Chief Technology Officer Scintellite LLC Scintellite specializes in designing and manufacturing advanced medical equipment for eye-related procedures and treatments.

Scintellite joined forces with Apex Machining LLC, Contrast Inc., Deuce LLC, and Integral Corporation to participate in a Leveraged Project through the NMSBA Program. The companies were paired with researcher Joshua Lane from Sandia National Laboratories to improve an ophthalmic patient alignment system.

PAT, the Partially Automated Technician, designed by Scintellite, reduces the burden on skilled technicians during comprehensive eye exams by interacting directly with patients. PAT aligns itself to the patient's eyes and tracks them while verbally guiding patients through the automated measurement process. Because it does not constrain the patient's head, PAT's patient alignment stage must deliver a wider range of 3D motion, higher speed, and greater precision than traditional optometric instruments.

The Sandia team of mechanical, optical, and robotics engineers led by Lane performed an analysis of the current PAT design. They identified issues that could affect system alignment and functionality. The team analyzed available patient motion data to extrapolate motion control requirements. They then modeled motion-related optical mount subsystems for robustness and manufacturability, and trained Scintellite engineers on how to select motion control components that will meet existing and future system requirements.

The project advanced the PAT technology, which won the New Mexico State University Arrowhead Center pitch competition. It also resulted in a pre-seed investment of \$50,000. PAT is now well on its way to having a real impact on ophthalmic care.

Ryan Mego, Anna Francis, Dylan Mego, and Brian Mego of the Francis Ranch, with Mike Lisk of Remote Well Solutions standing near a livestock watering trough being fed by an RWS Water Distribution Management System.

(Puddled water outside the trough is due to a heavy rainstorm.)

聯

REMOTE WELL SOLUTIONS



"The path from an idea to a prototype and functioning system is very challenging. The NMSBA Program is the launchpad from idea to reality. Such technical assistance and guidance are resources of unmeasurable value."

Mike Lisk Owner Remote Well Solutions LLC Lacking livestock water distribution systems, Navajo Nation ranchers have relied on costly, inefficient windmills and water hauling. Windmills are expensive to maintain and inherently waste millions of gallons of water by continuously pumping without a mechanism to stop flow.

Recognizing the urgent need for improved water access, Remote Well Solutions embarked on a groundbreaking collaboration with Systems Engineer Brian Dwyer from Sandia National Laboratories through the NMSBA Program.

Remote Well Solutions was awarded patents for a new, fully automated water distribution management system using solar panels to power highefficiency pumps that draw water from existing wells. The microprocessor controlled system uses a network of pipes, valves and pressure sensors to regulate distribution of water to strategically positioned storage tanks and livestock watering stations. System installations dramatically expand land use, increasing livestock carrying capacity per ranch.

Collaboration with Sandia involved consulting on system design, evaluating water quality, and exploring point-of-use water treatment options. The system's sturdy construction and weatherproofing ensure durability in harsh environments. The project report detailed system design specifications, water quality assessment results, and treatment recommendations.

In 2023, a \$502,000 pilot project installed these water systems on four Navajo tribal ranches. It created jobs, identified new water sources suitable for livestock, and is expected to pave the way for several million dollars worth of installations. Depending on the number of installation contracts in 2024, Remote Well Solutions expects to hire 25 to 40 new employees.

Meet the Principal Investigator

Brian Dwyer Sandia National Laboratories

Read more about Remote Well Solutions, the Honorable Speaker Ben Luján Award winner, on page 36.

LOS ALAMOS COUNTY

SALA

.....

os Alamos Event Center

SALA employees demonstrating the use of virtual reality headsets for 360-degree visualization; immersive benefits are accessible at SALA even without virtual reality headsets.

SALA LOS ALAMOS EVENT CENTER



"Our project will be a key part of the future SALA operation, helping creators and developers to adapt their work for presentation and exhibit in the SALA immersive venue."

Allan Saenz

Owner SALA Los Alamos Event Center SALA Los Alamos Event Center is a community-driven hub that hosts diverse events and screenings. SALA offers innovative opportunities for education and entertainment. The company transformed a former movie theater into a thriving 'living room' for all Los Alamos people, echoing the venue's Spanish name's meaning. Recently, SALA sought a partnership with Los Alamos National Laboratory through the NMSBA Program to further its mission.

Dave Modl, a visualization scientist at Los Alamos, utilized his expertise to explore the potential of an immersive theater conversion, enhancing technological understanding and identifying key modifications to SALA's Phase 2 Plan.

There is a growing demand for immersive learning and entertainment experiences that engage individuals through touch, interaction, and active participation. This direct audience involvement fosters deeper comprehension, retention, and meaningful connections with the material.

Modl's insights were essential in determining the tools and features needed to construct an immersive user interface. He helped set the stage for the future implementation of application performance interfaces that would enable seamless integration of components within the facility. This will allow developers to create custom functionalities and interactive experiences at SALA and foster efficient communication between content management systems, audiovisual equipment, and user interfaces.

This collaboration has enhanced SALA's understanding of immersive technology and laid the foundation for the venue's transition into the next phases of its development. The goal is to help local creators and developers optimize their work for presentation in a fresh and engaging way. Meet the Principal Investigator

Dave Modl Los Alamos National Laboratory

NMSBA PERSPECTIVES 2023 ANNUAL REPORT | 21

James Caughren and Sharon-Joy Palmer-Caughren of SEED International with their granddaughter Jadyn Polland selling microgreens grown in their food growing modules at a farmer's market. Palmer-Caughren is holding a photo of partners at Glass-Steel Inc., an engineering and fabrication company.

COUNTY

MIGH

SEED

SEED INTERNATIONAL



"This breakthrough in Controlled Environment Agribusiness proves the validity and reliability of the company's working prototype model for growing food for humans and livestock. Collaboration with an extraordinary NMSBA team made this project a success."

Sharon-Joy Palmer-Caughren CEO SEED International Inc. SEED International is optimizing a system of high-tech food-growing module prototypes. The company aims to provide fresh produce to rural communities and give underprivileged youth training in plant science and agribusiness to help them earn income. The goal is to empower youth to learn how to have a self-supporting and sustainable lifestyle for themselves and their families.

However, SEED International's existing technology had to be further refined to ensure commercial viability and scalability. The company sought the expertise of Sanna Sevanto, a Los Alamos National Laboratory scientist, to help optimize this technology through the NMSBA Program.

The standalone growing modules were equipped with sensors to measure environmental variables. Built-in control systems regulated these variables to ensure the plants are grown under the best possible conditions. However, these control systems made adjustments challenging. This resulted in inefficiencies and hindered overall productivity.

Los Alamos Technologist Samantha Peterson collaborated with Sevanto to select and program a new microcontroller-based environmental sensing and moderating system.

She used an open-source MicroPython program to code the microcontroller. It gathers real-time data from integrated sensors to monitor the modules' air temperature, humidity, and soil moisture levels. This enables precise control, automatically activating a relay switch to efficiently regulate connected appliances for heating, cooling, or irrigation as needed.

The collaboration led to a smaller, more streamlined prototype named Lil' Mighty SEED which simplified fabrication, assembly, and commercialization. The company anticipates increasing distribution and creating jobs for disadvantaged youth. Meet the Principal Investigators

Sanna Sevanto & Samantha Kimberly Peterson Los Alamos National Laboratory



The SensorComm team displays Alpowered, IoT-driven electronics for their multi-gas sensor platform.

ALD T

-8-

0

BERNALILLO COUNTY

SENSORCOMM TECHNOLOGIES



"NMSBA's process and the team at Sandia provided expertise that is enabling access to new markets and helping fuel SensorComm's growth."

Kamil Agi

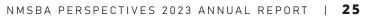
President-CEO SensorComm Technologies Inc. SensorComm Technologies specializes in creating advanced emission monitoring solutions using a multi-gas sensor platform. The technology provides real-time data to help clients transition to cleaner energy and make educated choices regarding energy usage, emissions management, and environmental impact.

However, electrical noise from the substrate or surrounding material can interfere with the signals captured by the multi-gas sensor platform. This interference can cause measurements to be inaccurate, making it difficult to differentiate between signals generated by actual emissions and background noise. As a result, the reliability of the data collected can be compromised.

To address this challenge, SensorComm Technologies turned to Sean Bishop and Dan Lowry, staff scientists at Sandia National Laboratories, through the NMSBA Program. Leveraging their expertise in ceramics, Bishop and Lowry engineered a new sensor system outlined by SensorComm Technologies. They fine-tuned the production of uniform, highly insulating, dense substrates, using advanced ceramics in a commercially scalable tape casting process. They succeeded in creating an expected lower electrical noise sensor platform. The Sandia team accelerated the development of new sensors, resulting in better material properties and paved the way for a scalable manufacturing process.

Sandia's noise reduction and manufacturing recipe helped SensorComm secure substantial funding, new customers, and plans for workforce expansion. Bishop's guidance and Sandia's resources also helped SensorComm Technologies provide a path to fulfill U.S. manufacturing requirements and access new markets. Meet the Principal Investigator

Sean Bishop Sandia National Laboratories



PROGRAM METRICS

2023

VALUE OF PROGRAM ASSISTANCE

In 2023 the state of New Mexico, along with Los Alamos National Laboratory and Sandia National Laboratories, invested **\$4.49 million**, helping **241 small businesses** in **21 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 2023, and cumulative value from 2000 to 2023.

LOS ALAMOS*	SANDIA	TOTAL**
-------------	--------	---------

NUMBER OF SMALL BUSINESSES SERVED

2023	110	133	241
Rural	55	46	100
Urban	55	87	141
2000 - 2023**	1,224	2,524	3,340
Rural	813	1,463	2,039
Urban	411	1,061	1,301

* Los Alamos began participating in NMSBA in 2007.
** Some companies are served by both laboratories.
Note – In 2019, Santa Fe County moved from being a rural county to an urban county.

VALUE OF ASSISTANCE PROVIDED

2023	\$2,192,893	\$2,299,963	\$4,492,856
Rural	\$1,385,021	\$1,040,071	\$2,425,092
Urban	\$807,872 \$1,259,892 \$ 2,		\$2,067,764
2000 - 2023	\$34,392,030	\$50,706,806	\$85,098,836
Rural	\$27,438,049	\$34,274,757	\$61,712,806
Urban	\$6,953,981	\$16,432,049	\$23,386,030







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 2022 economic impact client survey revealed that:

67% DEVELOPED A NEW PRODUCT OR TECHNOLOGY

61% IMPROVED OVERALL OPERATIONS

70% EXPANDED OR IMPROVED A PRODUCT OR SERVICE

65% BECAME MORE COMPETITIVE IN THE MARKETPLACE

71% IMPROVED THE EXPERTISE OR CAPABILITIES OF EMPLOYEES

ACCOUNTABILITY & ECONOMIC IMPACT

NMSBA, enabled by 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 & Polling, Inc., and economic analysis provided by Robert Grassberger, PhD Economist.

Cumulative Economic Impact for Businesses from NMSBA Projects (2000-2022*)

SMALL BUSINESS JOBS CREATED AND RETAINED	12,199
AVERAGE REPORTED SALARY (2022)	\$69,730
INCREASE IN REVENUE	\$538,754,733
DECREASE IN OPERATING COSTS	\$321,511,300
INVESTMENT IN NM GOODS / SERVICES	\$196,570,583
NEW FUNDING / FINANCING RECEIVED	\$297,336,730
DETILDN ON INVESTMENT (DOI)**	

RETURN ON INVESTMENT (ROI)**

For every \$1.00 of tax credit invested, the state receives a return of \$1.77.

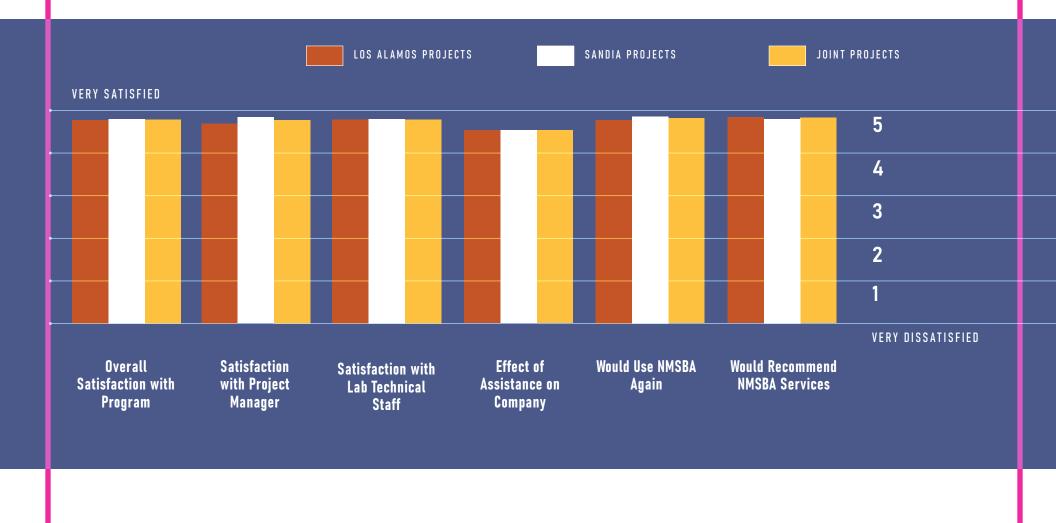
*Economic surveys are performed six months to one year after project completion. **ROI is based on salaries of jobs created and retained.

Ę

CUSTOMER SATISFACTION

Each year, NMSBA surveys the participating businesses to learn about their satisfaction with the Program. In 2023, 87% of the businesses responded to the survey.

2023



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 NMSBA Program across the state.

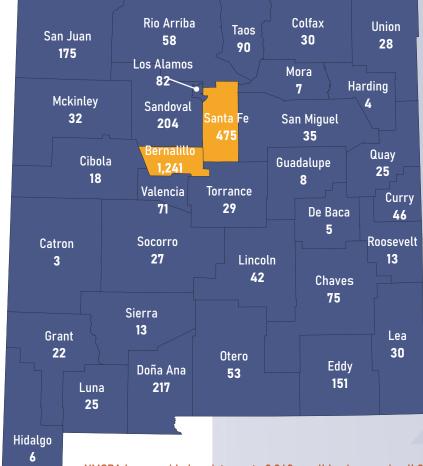
NMSBA RURAL COUNTIES NMSBA URBAN COUNTIES

LABORATORY CAPABILITIES UTILIZED [2023]

Manufacturing	
Engineering	
Advanced Modeling and Simulation	12.8%
Business Development	11.6%
Biological and Medical	
Earth and Environmental Sciences	8.3%
Materials Science	7.9%
Math and Computer Science	4.6%
Micro-Nano Technology	4.1%
Chemistry	2.9%
Energy	

INDUSTRIES OF SMALL BUSINESSES SERVED [2023]

Manufacturing	45.7%
Professional, Scientific, and Technical Services	31.6%
Agriculture and Natural Resources	9.5%
Oil & Gas, Utilities, and Mining	3.7%
Retail and Wholesale Trade	3.7%
Education Services and Health Care	2.5%
Other Services (except Public Administration)	1.7%
Media and Hospitality	0.8%
Real Estate, Finance, Insurance, and Management Services	0.8%



NMSBA has provided assistance to 3,340 small businesses in all 33 New Mexico counties during the life of the Program from 2000-2023.

LEVERAGED PROJECTS

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 projects.

		COUNTIES Served	FUNDING
LOS ALAMOS Assessing the Impact of Ultrasonic Filtration on New Mexico Beer Quality	Ultrasonic Filtration tests were performed on 7 un clarified beers and the preliminary results indicate UF was effective for removing large particles like yeast that cause flavor instability but retaining smaller particles like proteins that contribute to mouthfeel in 6 of the 7 samples. These results show that UF is a promising technology for beer clarification and has the potential to produce a high quality, stable beer with a flavor closer to that expected by the Brewmaster. BUSINESS PARTICIPANTS Beer Creek Brewing Company Ex Novo Brewing La Cumbre Brewing Company Santa Fe Brewing Company Inc. Taos Mesa Brewing	Bernalillo Sandoval Santa Fe Taos	\$119,200
LOS ALAMOS Ayurveda and the Microbiome	The Lab was able to provide assistance to evaluate the interactions between the human gut microbiome and various herbal supplements of interest to Siddha Labs. The Lab obtained the necessary approval for human-related studies and performed microbiology testing. BUSINESS PARTICIPANTS Arogya Apothecary LLC Fish Theory Design LLC Siddha Labs The Arogya Center	Bernalillo Santa Fe	\$78,900
LOS ALAMOS Cell Culture	The Lab provided technical support for developing a chemically defined cell culture media using real-time data collection, as specified in the companies' application. This process included conducting a series of lab experiments, gathering and analyzing the resulting data, and then communicating the findings to the requestor. A comprehensive 30-page summary report detailing the outcomes of this project ws provided. BUSINESS PARTICIPANTS Alpha Arietis LLC Daedalus Technology Group LLC Enchanted Land Properties LLC Science Business Software Inc. Western BioTech LLC	Bernalillo Sandoval	\$132,700

		COUNTIES Served	FUNDING
SANDIA Distributed Hydrogen	The Labs assessed safety risks for a hydrogen fuel system, considering concerns regulators might have. They analyzed potential leaks during transport and long-term material weakening due to hydrogen exposure. The Labs used proprietary and open-source software to simulate hydrogen buildup in a transport trailer under various situations. They also evaluated venting designs to minimize dangerous hydrogen accumulation. Documentation of findings was provided to the companies. BUSINESS PARTICIPANTS A-1 Machine Inc. BayoTech Inc. Industrial Mechanical Inc. Merrion Oil & Gas Corporation	Bernalillo San Juan	\$122,000
LOS ALAMOS Evaluating Anti- Microbial Properties	The Lab has explored the design of biological expression methods for 28 P, an anti-microbial peptide that has shown exceptional broad activity against both gram positive and negative pathogens, with the goal of potentially lowering the cost of peptide production over chemical synthesis. Promising candidate expression systems have been selected and acquired. The Lab has designed all expression sequences and vector plasmids, and codon optimized them using online tools. Plasmids were then transformed and amplified in E. coli. Cell lines and DNA constructs are in hand, and samples of the expression systems that are currently analyzed were produced. BUSINESS PARTICIPANTS BioFlyte Inc. Black Garden Law Innate Immunity LLC IpTekk LLC The NSE Inc.	Bernalillo Santa Fe	\$85,000
SANDIA Finding Weapons of Mass Destruction	The Labs helped model, fabricate, and test a durable and efficient ion source. This type of ion source has many potential uses, including in medical imaging for cancer treatment, nuclear fusion research, oil exploration, and most importantly, in safeguarding borders by quickly detecting weapons of mass destruction without slowing down trade The project's outcomes were provided in the form of prototype models, data, and documentation. BUSINESS PARTICIPANTS Aquila Inc. Gold Standard Radiation Detection Inc. Integrative Sourcing LLC Korwest Unmanned Systems of America LLC	Bernalillo	\$100,000
SANDIA High Laser Induced Damage Threshold Materials	The Labs helped the companies with fabricating nanostructures on durable materials that can handle powerful lasers following provided designs and super computer simulations. The Labs also performed low-power optical testing of the nanostructures to verify effective light manipulation was being achieved. Results were provided during the course of the work. BUSINESS PARTICIPANTS CNC Machining InSync Inc. Sandia Electro-Optics Corporation / Unique Services Voss Scientific LLC	Bernalillo	\$79,500

		COUNTIES Served	FUNDING
LOS ALAMOS Impacts of Biochar on Plant Growth in an Agrivoltaics Setting	Using automated environmental measurement systems and plant physiological evaluations, the Lab tested the effects of different doses of biochar-compost mixtures on growth of tomatoes, chili peppers and leafy greens, as well as soil temperature and soil water retention. Soil biochemical properties in two soil types and in an agrivoltaics setting in field conditions were tested as well as the interaction of biochar with soil microbial amendments in improving plant growth and drought tolerance in the greenhouse. BUSINESS PARTICIPANTS Gonzo Farms LLC The Old Chinese Gardens LLC The Trollworks LLC	Grant Santa Fe	\$59,100
LOS ALAMOS Implications of Forest Thinning Strategies in the Sangre de Cristo Mountains	The Lab assessed the impact of thinning on carbon and fire risk for the ponderosa pine forests in the Sangre de Cristo Mountain using Functionally Assembled Terrestrial Ecosystem Simulators. Results showed that, under a light thinning scenario, the aboveground vegetation carbon was not substantially reduced by 2060. In fact, about 56% of the thinned sites are projected to have more carbon than the scenario without thinning. Under the scenario of intensive thinning, the model projected a higher loss of carbon; however, ~48% of the sites have high aboveground carbon. The Lab's results showed that thinning could promote forest health under climate stress due to reduced water loss. Using the Santa Fe watershed as a model system, the thinning was shown to reduce the fire spread rate due to a reduced fire fuel load. BUSINESS PARTICIPANTS Barela Timber Management Company Old Wood LLC Sangre de Cristo Mountain Initiative	San Miguel Taos	\$82,400
SANDIA Ophthalmic System	A team of mechanical, optical, and robotics engineers improved the design of PAT, the Partially Automated Technican, a patient alignment system for comprehensive eye exams by analyzing available patient motion data to extrapolate motion control requirements. PAT must initially align to the unconstrained patient and then compensate for the patient's 3D motion as the exam proceeds. The team modeled the motion-related optical mount subsystems for robustness and manufacturability, and trained the companies in the selection of motion control components that meet the existing and future system requirements. BUSINESS PARTICIPANTS Apex Machining LLC Contrast Inc. Deuce LLC Integral Corporation Scintellite LLC	Bernalillo Sandoval	\$120,000
SANDIA Organic Soil Restoration	The Labs provided technical support to the companies for a project testing organic fertilizers' impact on soil restoration and greenhouse gas reduction. Researchers conducted field trials, measuring gas emissions, soil carbon levels, crop yield, and soil water retention. The goal was to compare organic and synthetic nitrogen fertilizers' effects. A final report was produced summarizing the project's findings. BUSINESS PARTICIPANTS Drought Adaptation Industries Rancho Alma Linda Tucumcari Bio-Energy Company	Quay	\$81,300

		COUNTIES Served	FUNDING
LOS ALAMOS Rapid Laser-Based Detection of COVID in Saliva	The Lab prepared bio samples containing filter papers for the companies to scan and analyze. Biosamples were two types of surrogate COVID viruses applied to the filter papers. The papers were baked at high temperature to heat kill the viruses. Non-infectious samples were sent to the companies for further analysis by their instrument. The companies are developing an instrument to diagnose infectious agents from raw/unprocessed samples by laser detection and applied machine learning algorithms. BUSINESS PARTICIPANTS Creative LIBS Solutions LLC Photon Medi-Lytics	Sandoval	\$79,000
LOS ALAMOS Underwater Mobility for UAV	The Lab used its unique expertise in design and engineering to assist the companies with understanding the aerodynamic performance of their current and subsequent improved design to further their ability to create a viable hybrid unmanned aerial/underwater vehicle prototype. The Lab performed computational fluid dynamics simulations and particle image velocimetry experiments on a prototype of the vehicle. The Lab quantified the vehicle's aerodynamic performance for a range of velocity values and angles of attack and advised the small businesses on wing design improvements to increase lift. The final deliverable included simulation results of the flow over both the original and improved designs and experiments in the laminar flow regime for both designs. BUSINESS PARTICIPANTS Absolute Concept Designs Cyborg FPV LLC Xairgen LLC	Bernalillo Sandoval	\$98,500
SANDIA Wearable Mesh Network	The Labs provided technical assistance with building a special wearable device that can create a secure network for its users, even without cell service or internet access. The focus included enhancing device reliability, extending communication range, optimizing sensor operations, maximizing network capacity, and ensuring well-structured software code. The deliverable consisted of findings and recommendations. BUSINESS PARTICIPANTS Keeler Ranches Roper Solutions Inc. fka Reap LLC	Dona Ana Hildalgo	\$80,000

INDIVIDUAL PROJECTS 🗔

BERNALILLO

AirSolve LLC AlbuGierke Environmental Solutions LLC Apple Canyon Gourmet Inc. AWS Bio-Pharma Technologies **Baker Adaptive Optics** BeeCleanSpot LLC dba Bee Clean BennuBio Inc. BoodleBodv Captiva Group Inc. / Albuquerque Printing Century Sign Builders **Continental Machining Company** CVI Laser II C Dark Sea Industries LLC Dash2 Labs Inc. Design & Spec Assemblies LLC Donaldson Engineering Inc. Eden Radioisotopes LLC Enchantment Snack Brands LLC dba Vigil's Beef Jerky Energy Analyst LLC Enthentica Inc. Equisec EV Charging Solutions LLC Filtravate Inc. Finches LLC Gilz LLC Goodman Technologies LLC Gratings Inc. Guardian Devices LLC Hawk Spider Energy Corporation Hoonify Technologies Inc.

IC-Safety LLC

Inspyrd Products Corporation Inspyrd R and D Corporation Integrated OffGrid LLC dba GridFlow Joseph Yelk Kinesio Holding Corporation LAD Engineering LLC Lavender Road Handcrafted Luxurv LLC LifeScience Testing and Analysis LLC Lojo Engineering Los Poblanos Historic Inn & Organic Farm MARPAC Inc. Memzyme LLC Mesa Alta Research I I C MNT SmartSolutions mPower Technology Inc. My Bakery LLC dba Pastian's Bakery Enterprises NeoSan Labs Inc. NobHill Therapeutics **OBTC Warehouse LLC** dba Old Barrel Tea Company - ABQ 0C0 Biomedical Optisource R&D LLC OptiSource LLC PainScan Enterprises Inc. Pajarito Powder LLC ParadOxy LLC Paramount Custom Cabinets Inc. PillCall Inc. Positive Energy Solar aka Positive

Energy Inc.

Precision Solar Technologies Corporation Radian Engineering LLC Radiant Technologies Inc. Radiation Detection Solutions LLC (RDS)

Radigan Engineering LLC Reprotox Biotech LLC Resilient Solutions 21 LLC (RS21) Riccobene Masonry Co. Inc. dba Hard Scape Systems RingIR Inc. Roadrunner 3D LLC Sandia Pet Products LLC / V. F. Pet Products LLC Segura Enterprises LLC

Segura Enterprises LLC SensorComm Technologies Inc. Shirley's Dream Inc. Silicon Carbide Nanosheets Technology LLC Solar Thermal Power Systems LLC Southwest Composite Works / Southwest Composite Works / Southwest Pattern Works Inc. Steel Jupiter LLC Submaterial LLC Submaterial LLC Suyat Enterprises LLC dba Healing Gifts Herbs Theta Plate Inc. TPL Inc. Trail 9 Outdoors LLC (TRL-9)

Trail 9 Outdoors LLC (TRL-9 Unhinged Brewing Unirac Inc. United Projects Inc. Vamco LLC VisionQuest Biomedical Inc. Vital Grow Inc. Wavefront Dynamics Inc. World Exhibition Center LLC

CIBOLA

C & E Concrete Inc. Chavez Plumbing and Supply LLP

COLFAX

Angel Fire Real Estate LLC Angel Fire Resort Operations LLC

DOÑA ANA

Artifacts Unlimited Industries Backyard Farms Callie Baby Bottle Chavira's LLC Freeze Dried Products LLC Indie LLC dba Bender Innovative Solutions Mesilla Valley Organics Mutchnick Organ Mountain Solar & Electric RB Designs LLC Sunnoo Inc. Worthington Farms LLC

EDDY

Intrepid Potash - New Mexico LLC

GRANT

Syzygy Inc.

LINCOLN

Noisy Water Winery Stroud National Agency Inc.

LOS ALAMOS

Jona Manufacturing Services Inc. Muhlala Turbine LLC Odysseus Technologies Inc. Pajarito Cloud Computing LLC Richard Sayre Consulting LLC SALA Los Alamos Trenza Inc. UbiQD Inc.

MCKINLEY

Navajo Spirit Southwestern Wear

OTERO

Emerging Technology Ventures Inc. Got Wood NM LLC Remote Well Solutions LLC

QUAY

Energy Related Devices Inc.

RIO ARRIBA

Canton Custom Instruments LLC Freshies of New Mexico LLC ORC Tech LLC Velarde Vines

ROOSEVELT

Enchantment Vineyards LLC

SAN JUAN

ABC Canvas Inc. Affordable Blinds LLC AG Engineering Agape Aztec Wellness Aztech Power and Energy LLC **Black Exploration** Brady Trading LLC Haul Kings LLC Hauling Accessories LLC Jack's Plastic Welding Inc. McCulloch Minerals Power and Control Solutions Inc. Real Green Building Systems (RGBS) Simply Solid LLC Teresa Lackey dba Valley Mills

SAN MIGUEL

MxRam LLC San Miguel Sun Dwellings Seed + Stone LLC

SANDOVAL

Advanced Optical Technologies Inc. (AOT) Deluxe Design Inc. DHF Technical Products LLC IRP Technology LLC Larry's Tires & Power Saw Shop MemoryWell Mezel Mods NTx Inc. (Nature's Toolbox) O'flo.co Q Biotech Corp. Seed International Inc.

SANTA FE

Active Assurance Inc. Apogee Spirulina Beck & Bulow Buffalo LLC Better Music Boxes Both & Apparel Broken Arrow Glass Recycling LLC Fault Tolerant Technology LLC Hollowpoint LLC dba Wicked Edge Sharpeners iBeam Materials Inc. Keystone Restoration Ecology Inc. LatticeX Leaf & Hive LLC

Legacy Sustainable Development dba Transcendence LLC Lithified Technologies US LLC

National Water Services LLC dba Fresh Pure Waters NeuroGeneces LLC Reverse Engineer Lab LLC San Cristobal Development Social TecKnowledgy LLC dba Fidelity EHR

STAR Cryoelectronics LLC The RainCatcher Inc. Tummi Yummi dba Tall Goods LLC Western Ecology LLC.

TAOS

Diamond Sow Garden <mark>Solar Thermal Cladding LLC dba Taos</mark> <mark>Solar Resources Inc.</mark>

TORRANCE

KemKey LLC Rescue Tactics and Training LLC

VALENCIA

AC Disposal Services Inc. Bright Holdings LLC Pro-Fab Inc. Sisneros Bros. Mfg. LLC

HONORABLE BEN SPEAKER BEN LUJÁN AWARD for Small Business Excellence

Ryan Mego, Anna Francis, Dylan Mego, and Brian Mego of the Francis Ranch with Mike Lisk of Remote Well Solutions standing near a new livestock water trough being filled from a storage tank at the top of the ridge that is part of an RWS Water Distribution Management System.

(Puddled water outside the trough is due to a heavy rainstorm.)



Remote Well Solutions won the 2023 Honorable Speaker Ben Luján Award for Small Business Excellence for demonstrating the most economic impact. The company's solar-powered, fully automated water distribution management system is solving a longstanding problem.

In New Mexico, much of the ranch land is underutilized due to the lack of water distribution infrastructure. High-maintenance windmills pump well water, filling a livestock drinker at the windmill base, but cannot distribute water across the land. Often, unreliable windmills break, forcing ranchers to replenish tanks by trucking water long distances.

An economic impact study prepared by the Arrowhead Center at New Mexico State University shows that installing off-grid water pumping, control, distribution, and monitoring systems on Navajo Tribal Cattle Ranches in New Mexico would triple the number of cattle that can be carried on each ranch, thereby tripling annual ranch revenue. Installing the reliable new systems also creates local jobs, conserves water, and results in more efficient forage utilization by livestock.

As a rancher and engineer, Remote Well Solutions Owner Mike Lisk understands the water distribution challenge, and after years of persistence, his practical solution is now patented.

The partnership between the company and Sandia National Laboratories through the NMSBA program resulted in a finished design which has been installed on multiple Navajo ranches. Lisk has seen the difference these systems make to people who can now stop hauling water hundreds of miles every week.

Several million dollars has been allocated for more installations in 2024, and the Navajo Nation is pursuing a \$25 million U.S. Department of Agriculture Regional Conservation Partnership Program grant to increase utilization of these systems on its lands.

Laguna Pueblo is also considering installing the water distribution systems. Future systems could be adapted to distribute potable water to rural homes lacking water service.

Read more about Remote Well Solutions and its NMSBA project on page 19.

THANK YOU

...to all the small businesses for participating in NMSBA and creating jobs and economic wealth for New Mexicans.

...to all the Los Alamos and Sandia national laboratories principal investigators who applied their expertise and knowledge to help New Mexico small businesses solve their technical challenges.

...to the Office of the Governor, New Mexico Legislature, New Mexico Economic Development Department, and New Mexico Department of Taxation and Revenue for their continued support of the Laboratory Partnership with Small Business Tax Credit Act and NMSBA.

ACKNOWLEDGEMENTS

Thank you to the **Advisory Council** for their leadership, advice, and guidance in support of NMSBA.

Grace Brill Market Intelligence Solutions LLC

James Carney Sandia National Laboratories

Dana Derego Catron Arrowhead Center New Mexico State University

T.J. Cook Ingenuity Venture Fund

Kim DeFriend Los Alamos National Laboratory

Felicia DePaula New Mexico Economic Development Department

Adriene Gallegos New Mexico Small Business Development Center Network

Alex Greenberg New Mexico Economic Development Department Office of Science & Technology

Karl Halpert Private Label Select Ltd. John Heaton City of Carlsbad

Cliff Hudson Emerging Technology Ventures Inc.

Thomas Jensen Entrepreneur

Ron Manginell Sandia National Laboratories

Duncan McBranch Los Alamos National Laboratory

Vanessa Roanhorse Roanhorse Consulting

Dan Sanchez (ex officio) U.S. Department of Energy NNSA Sandia Field Office

Francine Sommer Oculus Media Inc.

Michael Vickers New Mexico Biotechnology & Biomedical Association Thank you to the **Contract Project Representatives** for their evaluations and input on leveraged project proposals.

Christos Christodoulou University of New Mexico

Kristin Morehead New Mexico State University

Frank Reinow New Mexico Tech

Jennifer Sinsabaugh New Mexico Manufacturing Extension Partnership

Steve Walsh University of New Mexico

Thank you to the Emeritus Advisory Council Members for their continued championing of NMSBA.

Nyika Allen, Todd Bisio, Barbara Brazil, Jim Brockmann, John Chavez, Jerome Garcia, David Griscom, Charles Hanley, Steven Hernadez, Gil Herrera, David Janecky, James Manatt, Kevin McMahon, David Meurer, Mary Monson, Donald Quintana, Kim Sanchez Rael, Michael Roach, Robert Sachs, Myrriah Tomar, Eva Woods Thank you to the **Government Relations Representatives** for their support of NMSBA.

Danny Milo Sandia National Laboratories

Valerie Salim-Meza Sandia National Laboratories

David Trujillo Los Alamos National Laboratory

And a final thank you to the staff who work every day to ensure the success of NMSBA.

Sharon Evans Sandia National Laboratories

Jeffrey Hall New Mexico Manufacturing Extension Partnership Los Alamos National Laboratory

Judy Hendricks Sandia National Laboratories

David Kistin Sandia National Laboratories

John Martinez Sandia National Laboratories Genaro Montoya Sandia National Laboratories

Lucas Reiglesperger New Mexico Manufacturing Extension Partnership Los Alamos National Laboratory

Jeanette Trujillo-Rondeau Los Alamos National Laboratory

Candice Siebenthal Los Alamos National Laboratory

Judi-Anne Romero Los Alamos National Laboratory Linda von Boetticher Sandia National Laboratories

Julia Wise Los Alamos National Laboratory

Megan Zipperian New Mexico Manufacturing Extension Partnership Los Alamos National Laboratory



REMEMBERING JEFF HALL

NMSBA colleagues celebrate the life of Jeff and his contributions to the Program.

Perspectives Annual Report Team

Sandia National Laboratories

David Kistin Manager

Genaro Montoya Program Leader

Sharon Evans Financial Administrator

Linda von Boetticher Annual Report Project Manager

Eric Lundin Designer

Ellen Cline Editor

Bret Latter Photographer

Los Alamos National Laboratory

Candice Siebenthal Commercialization Manager

Julia Wise Program Lead

Xen Stanhope Finance

Dharmesh Patel Writer

Sarah Jacobs Photographer

Ignacio Perez Photographer

David Woodfin Photographer

NMSBA PERSPECTIVES 2023 ANNUAL REPORT | 39





Solving New Mexico's Small Business Challenges

2022 INNOVATION CELEBRATION

On September 13, 2023, NMSBA hosted the annual Innovation Celebration to recognize the 10 companies featured in the Perspectives 2022 Annual Report at the Lobo Rainforest in Albuquerque. The event was sponsored by New Mexico MEP. In addition to honoring NMSBA participants, the event provided 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.

2022 SUCCESS STORIES

- Blue Eye Soft
- Emergency Response Leveraged
 Project
- Goodman Technologies
- High Laser Induced Damage Threshold Metasurface Phase Retarder Leveraged Project

- Integrated Deposition Solutions
- Predicting siRNA Leveraged Project
- Siddha Labs
- Syzygy
- Trollworks
- Worthington Farms

2022 BEN LUJÁN AWARD WINNER

The Predicting siRNA Leveraged Project won the Honorable Speaker Ben Luján Award for Small Business Excellence for demonstrating the most economic impact. Mercury Bio, Richard Sayre Consulting, Mountain Vector Energy, and Pajarito Cloud Computing collaborated with Los Alamos National Laboratory on the project focused on advancing highly targeted delivery of drugs to specific cells. Solving New Mexico's Small Business Challenges





Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is managed by Triad National Security, LLC, for the National Nuclear Security Administration of the U.S. Department of Energy under contract 89233218CNA000001.



Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.





Julia Wise, Program Lead

P.O. Box 1663, C333 Los Alamos, NM 87545 (505) 665-5827 jlwise@lanl.gov

Genaro Montoya, Program Leader

P.O. Box 5800 MS 1495 Albuquerque, NM 87185-1495 (505) 284-0625 gmontoy@sandia.gov

NMSBAprogram.org