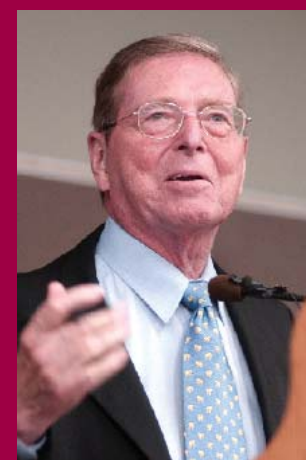


# ARROWHEAD CENTER

LEADING ECONOMIC DEVELOPMENT FOR NEW MEXICO STATE UNIVERSITY



## *THE CHANGING FACE OF ECONOMIC DEVELOPMENT*



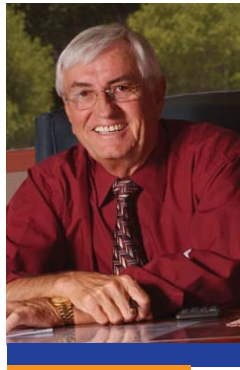
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## EXECUTIVE REPORT



NEW MEXICO STATE UNIVERSITY

## MESSAGE FROM THE PRESIDENT



Earlier this year we were excited to report the activities and successes of Arrowhead Center far exceeded our expectations. A few short months later we continue to defy those expectations at an accelerated rate. Two federal funding initiatives are underway to bring \$5 million over the next five years; a \$200,000 contract with PSL will allow for continued business and strategic planning for NMSU's Unmanned Aerial Vehicle (UAV) initiative; groundwork is being set to establish a new social entrepreneurship program; increasing demands for services have allowed us to significantly increase both professional and student staff; two State Senators visited our facilities and continued their pledge to support Arrowhead; and the first economic development seminar series was launched at New Mexico State University (NMSU).

These accomplishments are only a few of the exciting activities going on at Arrowhead - and we are looking forward to expanding our services even further next year. Read on and join us in celebrating our story.

Garrey Carruthers, President  
Arrowhead Center, Inc.

## SOCIAL ENTREPRENEURSHIP

BRINGING BUSINESS STRATEGIES TO THE NON-PROFIT WORLD

Social entrepreneurship, or an entrepreneurial approach to social problems, is the latest phenomenon in the development world. Yet, Arrowhead Center already provides assistance to social organizations, many of them non-profits, who seek business advice to develop or sustain their business.

Arrowhead Center provided business assistance to Rivers Academy, a local non-profit school that accommodates first through twelfth grade students who are challenged academically and/or socially because of learning disabilities, academic disorders, or their special needs. The school was on the verge of shutting its doors and looked to Arrowhead Center for strategic direction.

After a semester of consulting and developing a sustainable financial plan, Rivers Academy is now providing an

education to more students than ever.. This is just one example of how Arrowhead Center is reaching out to apply business strategies to social needs.

At the 2007 New Mexico Legislative Session, Arrowhead Center's priority is to obtain \$50,000 in funding to begin a Social Entrepreneurship Program to help more organizations like Rivers Academy.

WHAT IS A SOCIAL ENTREPRENEUR?  
so-cial en-tre-pre-neur  
n. , 1. society's change agent: pioneer  
of innovations that benefit humanity.

## BOARD OF DIRECTORS 2006

### ARROWHEAD CENTER

Steve Anaya, Regent, New Mexico State University (NMSU)  
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Jeffrey Brandon, NMSU Dean, Health & Social Services  
Lowell Catlett, NMSU Dean, Agriculture & Home Economics  
Garrey Carruthers, NMSU Vice President for Economic Development and NMSU Dean, Business  
Steve Castillo, NMSU Dean, Engineering  
Vimal Chaitanya, NMSU Vice President for Research, Graduate Studies, and International Programs  
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Steve Vierck, President & CEO, Mesilla Valley Economic Development Alliance  
Bruce Kite, NMSU General Counsel (Ex-Officio)

## FINAL THOUGHTS FROM THE CEO . . .



As we look forward, there is much room for optimism as well as caution. We continue to engage more students in more projects than forecast. The Innoventure technology based business plan competition, after struggling for a few years grew from 17 schools to 35 this year. The Director of NM Mesa, Toney Begay, wants to work with us to take the competition state wide, into Native American Schools, and even MESA USA. In a similar vein, we were certified as qualified consultants by an industry trade group to assist public television stations in small markets develop their business plans. Having a permanent Vice President for Research and with input from the consultants who developed the University Master Plan, there is renewed enthusiasm and interest in the Arrowhead Research Park.

Instead of managing 40 to 50 projects with MBA students over the course of the year, we will have nearly double that amount, straining physical and human resources. The sheer number of MBA students coming through the Arrowhead Center will require that we engage ever more faculty members from different departments in the College of Business and across campus in our activities. Collaborations with Engineering already are beginning to show a return, and we expect to forge new ties with the College of Health and Social Services through a dedicated program of Social Entrepreneurship, the College of Education in exploring the feasibility of a charter school for Technology Entrepreneurship, the College of Arts and Sciences in commercializing technology from the life sciences and disseminating information from the arts and humanities through new channels, and on-going collaboration with the College of Agriculture and Economics particularly through the newly established School of Hospitality and Tourism Management. The future is bright.

Kevin Boberg, Director and CEO  
Arrowhead Center, Inc.

## THINK LIKE AN ENTREPRENEUR BE AN ENTREPRENEUR



This Fall, New Mexico MESA, NMSU Physical Science Laboratory, the NMSU College of Engineering, and Arrowhead Center have teamed up to hold the Fifth Annual Innoventure Competition.

This competition engages middle and high school students to think about applying business concepts to innovations in engineering and science.

In one year, this competition has grown from 18 schools in Southern New Mexico to 35 schools across the state.

In consideration of the X Prize Cup, this year's Innoventure theme is space commercialization with an emphasis on "Space Toys." Students are encouraged to think about future possibilities of entertainment in space, develop a product prototype, and write a business plan.

Arrowhead Center will help each team think like entrepreneurs by assisting with business plan development, marketing strategies, intellectual property commercialization, and business model development.

The final competition will be held on January 19, 2007.



Dawn Hommer, Project Manager for Arrowhead Center, assists students from Vista Middle School on their Innoventure Business Plan.

## ARROWHEAD ON THE WEB

Arrowhead Center has a new and improved website!  
Come find out more about Arrowhead, how you can be involved, and latest news and events.

[www.arrowheadcenter.org](http://www.arrowheadcenter.org)

## ARROWHEAD RESEARCH PARK NEW BEGINNINGS

A business-friendly administration, the encouragement of a local economic development group and rumors of a new interstate exit ramp could conspire to breathe life into a 17-year-old research park owned by New Mexico State University.

The Arrowhead Research Park, a 257-acre patch of land at the junction of interstates 25 and 10 at the south end of the Las Cruces campus, was founded in 1989. But to date, it has only two buildings; one is a business incubator owned by the university and the other is the park's only corporate tenant, General Dynamics.

Kevin Boberg, CEO Arrowhead Center Inc., says the university aims to change that using recommendations from the Master Plan Consultants for the university.

"They said, 'You've got a tremendous asset that deserves to be marked by more than one or two buildings and a lot of sand,'" said Boberg, who is also an associate dean and chair of economic development at NMSU's business school. "They told the president and the regents we needed to start paying more attention to it."

Boberg said the university administration has never been friendlier toward developing the project.

Furthermore, he said, the state is considering plans to build an interstate interchange right at the park's apex. "Easier access will make it a lot easier to attract business here," he said.

Current business school dean and former N.M. governor Garrey Carruthers signed the state law in 1988 making nonprofit, university-owned, business parks possible. The idea was to encourage business activity near universities that could provide employment and internship experience for students.

But NMSU was slow to make use of it.

"It sat there for many years with not a lot of results to show, in comparison with some of the leading research parks around the country," said MVEDA president Steve Vierck, who is also on the board of the Arrowhead Center, which also oversees NMSU's efforts to commercialize university-developed technology. "When (Carruthers) became dean, he said we've got to make some use out of this land."

Vierck says businesses, including a few that aim to make use of the planned Southwest Regional Spaceport north of town, seeking to relocate or expand in Las Cruces have recently faced a dearth of space.

NMSU is planning to build a 40,000-square-foot building for its business incubator, the Genesis Center, which currently occupies a smaller building on the park. The center houses some 30 businesses, most based on NMSU technology.

The university will also likely build a flexible building to house offices and research and development for tenant companies.

"Whether it's commercial space industry or business and industry in general, our community needs some spec space," he said.

"In five years, we're expecting the park to look totally different from what you see now," Vierck said.

Article Courtesy of James Webb, Journal Staff Writer

## ARROWHEAD'S FEDERAL FUNDING INITIATIVE AN UPDATE

After nearly a year of tireless effort from New Mexico's Congressional Delegation, Arrowhead Center received \$1 million dollars from the Small Business Administration (SBA). The funds were received in October 2006, and will be used to support the Entrepreneurship & Small Business Program. The funding will allow Arrowhead to enhance the scope of its business research program, accelerate its business incubation efforts, perform policy analyses and economic studies to help small business make more informed decisions, and provide entrepreneurial mentoring and training.

Currently, Arrowhead is working with the Department of Energy (DOE) to obtain \$2 million in federal appropriations. These funds are expected to be awarded in January 2007. This funding will be used to meet agency requirements, and where possible, expand Arrowhead's operational structure, further develop research capabilities, and provide outreach to extension services across the state.

## SENATOR BINGAMAN VISITS ARROWHEAD

### BINGAMAN AND CARRUTHERS DISCUSS JOB CREATION IN NEW MEXICO

Senator Jeff Bingaman said New Mexico State University's Arrowhead Center Inc. is having a positive impact on job creation in southern New Mexico.

"All the initiatives going on at the Arrowhead Center are very impressive," Bingaman said. "I was pleased to secure \$1 million for the center so it can reach out to even more entrepreneurs who will create good jobs right here in Dona Ana County."

Bingaman along with Senator Pete Domenici (R-N.M.) worked to secure the funding in the fiscal year 2006 Commerce, Justice, Science Appropriations Bill, which was approved by Congress in November 2005.

Garrey Carruthers, Vice President for Economic Development and Dean of the College of Business, shared several highlights with Bingaman. They included creating 150 business plans and/or market feasibility studies; working on numerous policy analyses; having more than 175 students involved in directed-learning experiences; partnering with the Technology Transfer Division at Los Alamos National Laboratories;

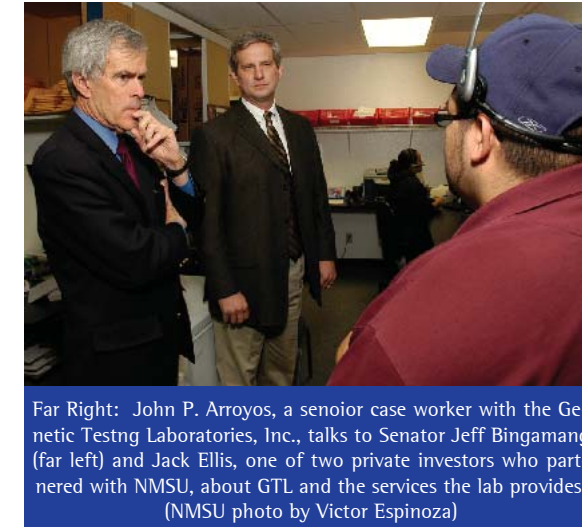
continuing K-12 student education and outreach; spinning off high-tech businesses; and technology development and licensing successes.

Bingaman also toured the Genetic Testing Laboratories Inc., which is housed at the Arrowhead Research Park. GTL is a for-profit genetic testing lab spun out from the university almost a year ago.

"GTL is obviously a success story in itself," he said. "It's just starting out with great prospects for the future. I'm very encouraged and I think it bodes well for economic development in this part of the state."

"I am most appreciative of the support Senator Jeff Bingaman has given NMSU and the Arrowhead Center," Carruthers said. "He has been an early and consistent champion for the Center. One of the very positive aspects of doing economic development work in New Mexico is the support of our congressional delegation."

Article Courtesy of Jeany Llorente-Ontiveros



Far Right: John P. Arroyos, a senior case worker with the Genetic Testing Laboratories, Inc., talks to Senator Jeff Bingaman (far left) and Jack Ellis, one of two private investors who partnered with NMSU, about GTL and the services the lab provides. (NMSU photo by Victor Espinoza)

"New Mexico State University's Arrowhead Center, Inc. is having a positive impact on job creation in southern New Mexico."  
- Senator Jeff Bingaman (D-N.M.)

## NEW FACES AT ARROWHEAD

In response to growing demands for services, Arrowhead has hired two new professional staff members, and eighteen graduate and undergraduate students.

Sara Pirayesh, a Graduate Assistant at Arrowhead Center for two years, was hired as a full time staff member in June 2006. Sara is now the Business Research and Entrepreneurship lead under the SBA Entrepreneurship and Small Business Program. She is a board member for the High Tech Consortium of Southern New Mexico and has experience in venture capital. She is a graduate of NMSU, earning her Bachelor's and Master's degrees in business.

Pamela Wood is the Business Incubation and Research Park Development lead under the SBA Entrepreneurship and Small Business Program. Before joining Arrowhead, she was the Assistant Director of the NMSU Office of Grants and Contracts and a Contract Administrator for the Office of the Vice Provost for Research. She also spent four years in local real estate development. She has a Bachelor of Economics from Spring Hill College in Alabama.

New Students at Arrowhead include: Luis Avila-Rodriguez, Ashwini Ayanam, Kenneth Beatty, Daniel Issacs, Bharath Katragadda, Yughandhar Katuru, James Landfair, Alex Measure, Huong Phan, Miguel Pizarro, Aadarsh Prasad, Jaelyn Quintana, Julie Quintana, Stephanie Robison, Robert Sacknoff, Veeral Solanki, and Allsion Travis.

# The Changing Face of Economic Development SEMINAR SERIES



The Garrey E. & Katherine T. Carruthers Chair in Economic Development was established in 2004 with a generous contribution from the donors. In endowing the Chair, the Carruthers stated: "I think it's extremely important if you have some success in your life as a result of having received fine education at a university, that you return some of that to the university. Katherine and I have been fortunate in business and I have to attribute part of that fortune to the fact that I attended New Mexico State University." Associated with the Arrowhead Center at NMSU, the Chair will help foster partnerships with New Mexico Laboratories and other institutions of higher learning, create jobs, enhance student education, recruit and retain faculty and connect ideas with capital.

Throughout the 2006-2007 academic year, the Seminar Series will bring in nationally recognized business people to address issues and opportunities in the Changing Face of Economic Development.



## REVITALIZING AMERICA'S BRAINPOWER THROUGH EDUCATION SENATOR PETE DOMENICI KICKS OFF THE CARRUTHERS SEMINAR SERIES



Citing the National Academies of Sciences' Augustine Report, Sen. Pete Domenici, R-N.M., on August 30 brought forth the worries of the national academy of scientists to a packed New Mexico State University classroom.

"Their biggest concern is that we are failing to educate sufficient brainpower to keep America competitive," said Domenici, the inaugural speaker of the Garrey E. and Katherine T. Carruthers Speaker Series in Economic Development. "It worries me immensely and it should worry you, too."

Domenici, who once taught eighth grade arithmetic, said the study concluded the only way the United States can remain competitive is to dramatically increase the country's investment in the teaching of and education in the physical sciences.

"The authors of the study wrote that we have done little or nothing for the physical sciences," he said.

Several recommendations from the report included doubling the National Science Foundation and the Department of Energy's science department over the next 10 years, and re-educating 175,000 teachers a year in math and science.

There are 20 recommendations in the Augustine Report, the foundation of Domenici's Protecting America's Competitive Edge (PACE) Act.

Congress is slow in the process of getting appropriation bills done, "but we will get it done and will fund about 85 to 90 percent of the Augustine report recommendations," said Domenici. "And I believe that this achievement can be construed as not a modest success but a very important and sizeable success for the young people of our country. The world needs America as a player, as a participant. We are not able to do that if we are bankrupt in terms of our economic power. Let's make sure that we understand that education is the cornerstone of all of this. Innovation comes from education. Without education and innovative breakthroughs in science and technology we don't have a chance of being a lead competitor in the world."

According to Domenici, New Mexico with its national labs and innovative universities, in particular NMSU, is well on its way to becoming a leader in maintaining a well-educated and highly-skilled workforce.

"NMSU had developed programs to improve the quality of science and math education through its College of Education and College of Engineering," Domenici said in a news release. "Drawing on the talents of both the colleges is crucial, and NMSU is showing real leadership in this area."

As the opening speaker of the seminar series, Domenici will be joined by six other nationally recognized business professionals. During the fall and spring semesters, speakers will address issues in relation to the "The Changing Face of Economic Development." The seminar series is being conducted through the Garrey E. and Katherine T. Carruthers Chair in Economic Development. The chair was created by a \$500,000 gift from College of Business Dean Garrey E. Carruthers and his wife, Katherine. The chair received a \$1 million match from the state.

"We wanted to make this commitment to the university and in particular to economic development," Garrey Carruthers said. "New Mexico really needs economic development because we want you all to stay here and we want you to have good jobs." "The Carruthers and Domenici have given to the state in their private and professional lives. Among their numerous contributions to the university and the state, none are greater than to education," said Kevin Boberg, the first holder of the Garrey E. and Katherine T. Carruthers Chair in Economic Development. "Their tireless efforts to enhance education and, thus, provide opportunities to current and future generations of New Mexicans are an example we all can follow. It is this message we are and will continue to spread through seminar series over the years."

Article Courtesy of Jeany Llorente-Ontiveros

## MARK YOUR CALENDARS FOR OUR NEXT SPEAKERS

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| <p><b>September 14, 2006</b></p>  <p><b>JOHN CORDOVA</b><br/>SPORTS MARKETING<br/>John Cordova has been in the sports industry for over twenty years. Career highlights include the Commissioner's Office of Major League Baseball, sports marketing for Miller Brewing Company and then the Milwaukee Brewers Baseball Club.</p> | <p><b>October 12, 2006</b></p>  <p><b>EMMA JEAN CERVANTES</b><br/>FAMILY &amp; ENTREPRENEURSHIP<br/>Ms. Cervantes has been a community leader in southern New Mexico for over 3 decades and is owner of several businesses in La Mesa. She was active in the founding of Memorial Medical Foundation, First Step Center, Khard Cancer Center and Mesilla Valley Hospice.</p> | <p><b>November 30, 2006</b></p>  <p><b>J. MARIO MOLINA, MD</b><br/>MEDICINE &amp; HEALTHCARE<br/>Dr. Joseph Molina is President and CEO of Molina Healthcare, as well as Chairman of its Board. He serves on the boards of the Association of Health Insurance Plans, the Aquarium of the Pacific and Homeboy Industries, and is a national trustee of the Boys and Girls Clubs of America.</p> |
| <p><b>February 8, 2007</b></p>  <p><b>THOMAS DONOHUE</b><br/>AMERICAN SUCCESS STORIES<br/>Thomas Donohue is President and CEO of the U.S. Chamber of Commerce. Since assuming this position in 1997, he has built the organization into a lobbying and political force with expanded influence across the globe.</p>              | <p><b>March 29, 2007</b></p>  <p><b>JULIE DILL</b><br/>FINANCE &amp; ENERGY<br/>As Duke Energy's Investor Relations and Chief Communications Officer, Julie Dill is responsible for monitoring changes and trends in investment markets, as well as developing key relationships and communications with retail and institutional investors.</p>                             | <p><b>April 12, 2007</b></p>  <p><b>DR. GLORIA RODRIGUEZ</b><br/>SOCIAL ENTREPRENEURSHIP<br/>Dr. Gloria Rodriguez has received tremendous recognition for her work as founder of AVANCE, a nonprofit organization that helps low-income parents prepare their pre-school aged children for school in the hopes of reducing the high dropout rate among Latinos.</p>                             |