

**Funding Proposal to Arizona Commerce Authority**  
**Grant for Advanced Venture Acceleration for Tier Two Companies**  
*Creating Jobs, Wealth, and Prosperity*

**Request**

In keeping with the mission of the Arizona Commerce Authority 'To grow and strengthen Arizona's economy and facilitate the creation of quality jobs for its citizens by supporting and attracting businesses in targeted, high-value base sectors throughout the state' Northern Arizona University (NAU) requests of the Arizona Commerce Authority a \$1.0 million job creation grant to support and accelerate the growth of high value jobs through an expanded venture acceleration program. This program will be housed in a planned approximately 25,000 s.f. tier two business accelerator facility at Innovation Mesa developed in collaboration and partnership with the Northern Arizona Center for Entrepreneurship and Technology (NACET) and City of Flagstaff (COF). This grant will be leveraged with funding provided by the EDA, City of Flagstaff, and Northern Arizona University. The purpose of the Tier Two facility is to provide the cutting edge laboratory, manufacturing, workshop space, and venture acceleration services required to continue the robust job creation and expansion of the companies that have been incubated by Northern Arizona University and NACET. Also this project will build upon the successful business incubation programs and services provided by Northern Arizona University and the existing partnership that Northern Arizona University holds with NACET and the COF.

**Northern Arizona University – Economic Driver for Arizona**

In addition to creating the sophisticated and highly trained work force of the future Northern Arizona University boasts a number of organizations driving economic activity and making a substantial and important economic impact in Arizona. Included is the nationally known W.A. Franke College of Business, the NAU Center for Business Outreach, the NAU Office of Economic Development, NAU Center for American Indian Economic Development, Arizona Hospitality Research & Resource Center, NAU Center for American Indian Economic Development, NAU EDA University Center, and the NAU Rural Policy Institute. <http://franke.nau.edu/business-outreach/>

These NAU organizations are innovators and drivers of excellence in business incubation and acceleration, entrepreneurial education and training, business outreach, business service and engagement, direct job creation, technology transfer, and business retention and expansion. In addition, the growing world class research at NAU is providing direct economic impact with job creation, intellectual property, technology transfer, business incubation, and development of sophisticated high level workforce demanded by industry.

Northern Arizona University is also engaged in direct economic development as a partner and manager of the regional economic development organization the 'Economic Collaborative of Northern Arizona (ECoNA). [www.econa-az.com](http://www.econa-az.com)

Business incubation and advanced venture acceleration are critical components for Northern Arizona's economy to grow and prosper. Northern Arizona has developed a robust and growing knowledge based economy in the biosciences, technology, science based companies, software, advanced manufacturing, astronomical sciences, education, and medical services. Fostering growth and expansion in the knowledge based companies will allow the region's economy to compete nationally and globally.

Northern Arizona University (NAU) has been engaged in business and venture incubation in Northern Arizona through a partnership with the Northern Arizona Center for Entrepreneurship and Technology (NACET) and the City of Flagstaff. The partnership has created significant success in the past five years. A study conducted by the NAU Franke College of Business showed that client companies at NACET created 165 new jobs in 2009 and 2010 with an average wage of \$75,000. Furthermore, through November of 2011, NACET clients have raised over \$68 million in funding and clients spent \$17 million which had a regional economic impact of \$29 million just for 2011.

NAU has created new programs and offerings to encourage, educate, and fund students to become entrepreneurs and start businesses while at the University. These programs include our student business incubator 'LaunchBox', Extreme Entrepreneur Tour, and NAU Start-up Weekend.

NAU research scientists along with partners at TGEN North have created intellectual property and discoveries that have been turned into new companies such as Pathogene and Protein Genomics. NAU faculty and students have created new companies that are currently in business incubation and will soon be ready for the venture acceleration as they become tier two companies. In addition the work of NAU in economic development and the NAU collaboration with the regional economic development organization Economic Collaborative of Northern Arizona (ECoNA) is bringing new start-up technology and bioscience companies to the region that will want and need access to venture acceleration facilities and programs.

### **Accelerating New Ventures**

A problem for business start-ups, entrepreneurs, and existing companies in Northern Arizona region and for most of Arizona for that matter is a lack of venture acceleration programs, facilities and programs. Recently Northern Arizona experienced the loss of a growing tier two digital pathology company, a tier two renewable energy company, and a growing tier two superconductivity company to other states and regions because they could not find appropriate two-tier space or venture acceleration services in Northern Arizona. Without the venture

acceleration programs and facilities the region and State's ability to grow and create jobs is slowed and in some cases stymied. Recognizing that venture acceleration is a critical step to expanding the current success in job creation Northern Arizona University is proposing to expand its current venture acceleration work. Rather than build a separate facility NAU is proposing a partnership with NACET and the COF to operate a venture acceleration program in the new facility named the Innovation Mesa project. NAU will house its expanded venture acceleration and ongoing business incubation work in the facility. This venture acceleration facility will be an important step forward for Northern Arizona and Northern Arizona University in accelerating job creation. NAU venture acceleration program accelerates the growth and sustainability of the tier two start-ups through:

1. Access to the technical expertise, mentoring, and consulting of NAU business and engineering faculty, NAU economic development practitioners, research faculty, MBA and engineering graduate students, interns, engineering, marketing, finance, and laboratory equipment.
2. Intellectual property and technology transfer developed by NAU and cooperating universities such as ASU, UA, MIT, Stanford, and many more.
3. Connections to local, state, and national business incubation resources.
4. Assistance and access to capital in the form of grants from the EDA, NSF, NIH, Department of Commerce, SBIR grants, and many more.
5. Access to capital from angel and venture investors.
6. Mentoring from a network of professionals such as patent attorneys, CPA's, experienced entrepreneurs, engineers, as well as sales and marketing professionals.
7. Laboratory, production, and manufacturing space with advanced technology and equipment.
8. Incubation coaching and oversight.

### **Innovation at Work**

The Innovation Mesa project will provide "soft landing" space for tier two companies developed by NAU faculty and students, Tier 2 companies and graduates exiting NACET's incubation program, and allow new start-up companies wishing to enter to business incubation to have space in the NACET. This project is intended to create over 300 jobs and \$20 million in private investment within the first three years of operation. The addition of wet and dry laboratories in Innovation Mesa is critical to expand and grow existing companies in the region. Currently no private laboratory space is available or anticipated to be built. This project will allow Northern Arizona to retain local businesses that may have otherwise left the region to seek these types of venture acceleration programs, services and facilities. Specifically, this project and the NAU advanced venture acceleration program will benefit these groups:

1. High technology and bioscience startups will result from technology transfer and commercialization of research conducted by NAU faculty and students.

2. Local entrepreneurs will become more competitive in the global market through the technical and business advice from NAU Venture Acceleration Program, NACET staff and their statewide mentors group.
3. Existing firms and new firms will locate in Northern Arizona to take advantage of the Innovation Mesa's facilities and to be near growing industry clusters. However, this facility is unlikely to compete with existing commercial facilities due to small lease areas, non-traditional finance terms, and access to lab space not available in the current commercial real estate market.
4. Native American culturally specific businesses will be encouraged to expand their service areas through guidance from and access to NAU and NACET staff, business leaders, and programs.

### **Community Involvement**

Innovation Mesa project is a shared vision with state, local, and private entities. This collaborative partnership involves the City of Flagstaff, Northern Arizona University, Economic Collaborative of Northern Arizona, Northern Arizona Council of Governments, and the Northern Arizona Center for Entrepreneurship and Technology. This collaborative partnership has already shown a proven ability to work together to advance the economic needs of the region.

### **NAU and NACET Partnership**

In addition to the community collaboration Northern Arizona University and NACET have a long standing partnership in business incubation, technology transfer, entrepreneur education, and mentorship. In October 2011 Arizona Gov. Jan Brewer made a \$1 million state investment in a NAU and NACET northern Arizona business incubator partnership furthered and supported research-intensive ventures and small business opportunities in the region, ultimately leading to more local high-wage jobs. The Northern Arizona University/Northern Arizona Center for Emerging Technologies partnership was established four years ago to support the creation of successful science- and technology-based companies in northern Arizona. The Governor's funding was used to advance the center's existing projects, increase the number of new projects, cultivate spin-off opportunities, provide research opportunities to undergraduates and mentor graduate researchers in start-up business efforts in a true "grow your own" talent initiative.

This advanced venture acceleration program will expand the partnership. NACET and NAU will leverage and expand the resources for venture acceleration. NAU will hold a seat on the Executive Board of NACET. Northern Arizona University and NACET already have a significant statewide business incubation and economic impact with the potential to significantly increase the impact with advanced venture acceleration. NAU and NACET will co-market and co-brand the venture acceleration program in Arizona. NACET currently manages the incubator at Embry Riddle University in Prescott, Center for Entrepreneurial Innovation at Gateway Community

College in Downtown Phoenix, Town of Maricopa Business Incubator, and business assistance centers in Prescott and Cottonwood, and a Native American business incubator serving Tribes located in Coconino, Navajo, Apache, and Yavapai counties. NACET is also negotiating to develop incubators in greater Phoenix and other rural communities. Northern Arizona University has campuses in 30 locations in both rural and urban Arizona.

### **Metrics/Outcomes**

The outcome from this investment by ACA will be the formation of new companies, growth of existing start-up companies, new private investment, and new jobs. The partnership that Northern Arizona University holds with NACET and the City of Flagstaff has already created new jobs, start-up companies, and private investment to-date. The venture acceleration program at Innovation Mesa will build upon this success by accelerating the growth of the existing start-up companies and developing new companies.

The City of Flagstaff provided the EDA with the following metrics and outcome as part of their grant proposal. Based on historical track record, projected outcomes (see Appendix Two), existing companies in the incubation pipeline, and long term commitments to the EDA will leverage the \$1.0 million with the \$6.8 investment by EDA, City of Flagstaff, and NAU to incubate and accelerate over a 10 year period approximately:

1. 10 -20 companies
2. 300 -600 new jobs
3. A minimum of \$20 million - \$40 million new private investment.
4. The longer term projection calls for additional companies, jobs, and private investment.

### **Innovation Mesa Project**

- Located on City-owned Land on McMillan Mesa, adjacent to USGS and NACET (Phase One)
  - Approximately 25,000 square foot building
  - Wet/Dry labs and office space (80%)
  - Light manufacturing (20%)
  - Conference room/EOC
  - Server facilities
- Purpose
  - Tier 2 companies /graduates of NACET/ NAU Faculty and Students
  - Advanced Venture Acceleration Program
  - Entrepreneurs/Economic Gardening
  - Growing new businesses/Retention and Expansion
  - Job creation – 300 new jobs
  - Alternate/secondary EOC

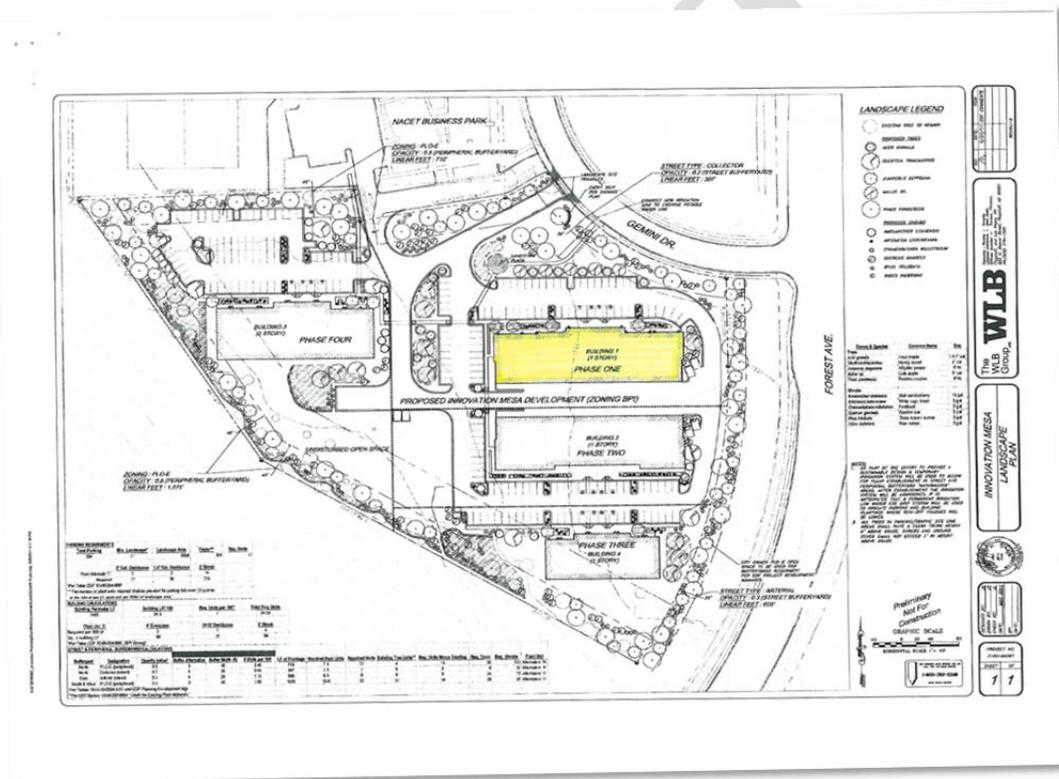
○ Design and Construction Funding Summary

\$4,000,000 – Federal - EDA

\$2,662,500 – City - Bond Capacity

\$1,100,000 – Northern Arizona University

**\$7,762,500 – Total Project Cost**



### **Appendix One – NAU Economic Development Mission**

Northern Arizona University has established a track record of success in economic development and has developed and continues to develop innovative tools, methods, and programs that utilize its expertise, intellectual capital, influence, and presence to expand the economic base of Arizona and create global economic competitiveness:

1. Develop, teach, and host economic development training in the region and state. Also participate and collaborate with other higher education entities, statewide partners, and organizations such as the Arizona Association for Economic Development (AAED) and the International Economic Development Council (IDEC) to provide economic development learning opportunities.
2. Work with rural Arizona communities to assist in developing and employing economic development strategic planning.
3. Engagement and service on the various local, regional and statewide economic development organizations including the local chamber of commerce and state chamber of commerce. Serve on the boards and committees of the various organizations.
4. Serve as a liaison between the university community and private and public organizations for the purpose of fostering collaborative economic development, research, tech transfer, commercialization, internships, and public service.
5. Foster and develop relationships with businesses and the business community. Increase the business community awareness of the importance of the universities to the economic development of the state. Work to strengthen and grow existing Arizona businesses.
6. Increase innovation, entrepreneurship, and investment. Assist with the development of an angel and venture investment network. Vice President of Research drives success in tech transfer and commercialization activities. Support and promote jointly-funded technology incubators and encourage the creation of additional hands-on educational programs for K-12 and higher education students. Increase job creation and capital investment in the State by working with the ACA and the Governor to create incentive programs that are competitive, sustainable, and used selectively.
7. In collaboration with internal university parties and external constituents seek grants and research funds to assist in economic development of the region and state.
8. Expand business incubation activities in rural Arizona communities.
9. Collaborate with other public and private organizations to improve the workforce. Assist in prioritizing education to develop the workforce of the future. Connect higher education, industry and government to identify industry workforce needs and ensure plans are in place that will deliver a trained and ready workforce for the future by

### **Appendix One Continued**

continuing the partnership between workforce development, economic development and higher education to conduct Cluster Acceleration Partnership (UCAP) projects.

- 10.** Partner to increase the velocity of capital flow by further supporting and developing an environment that encourages private capital investment in the State from local, national and international sources.
- 11.** Support and strengthen entrepreneurship and company growth through programs and partners such as business resource centers, NACET, NAU entrepreneur programs, international export training, and rural outreach and mentoring.
- 12.** Expand Northern Arizona's capacity for technology-based economic development by working with the region to develop an interdisciplinary bio-focused research development and commercialization center and technology park.
- 13.** Continue to foster high-powered research and commercialization collaborations. Assist in expanding the number of world-class innovators recruited to the Northern Arizona Center for Entrepreneurship and Technology, NAU, TGEN North, Pathogene, etc.
- 14.** Assist start-up business growth and foster more interaction between local companies, entrepreneurs, and regional higher education institutions by providing business services and project management through NAU Center for Business Outreach, Science Foundation Arizona, Flinn Foundation, Arizona Commerce Authority, Local SBDC, etc.
- 15.** Partner to train Northern Arizona's future entrepreneurs and innovators by connecting private industry with institutions of public and higher education through programs such as the NACET student entrepreneur program and SEDI Seeds.
- 16.** Collaborate to attract capital to the State and help introduce start-up companies to potential investors through NACET angel investor training, ACA venture fund, the developing Arizona Fund of Funds, and other venture capital programs.

**Appendix Two – NACeT Job Projection  
Affiliate to Acceleration Clients**

<b>Section A NACeT Affiliate Clients</b>																	
<b>Total On-Site Employees</b>																	
Industry Type	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Clean Energy	A						12	15									
Software	B						2	3									
Software	C						3	5									
Software	D						1	2									
Software	E						2	3									
Life Science	F						3	6									
Life Science	G						1	2									
Clean Energy	H						4	6									
Clean Energy	I						10	14									
Software	J						2	3									
Hardware	K						1	1									
<b>Section B Venture Accelerator Clients</b>																	
<b>Total On-site Employees</b>																	
Industry Type	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Clean Energy	A								18	25	30	35	38	40	42	44	46
Software	B								5	7	9	10	11	12	13	14	15
Software	C								8	15	20	25	30	32	34	36	38
Software	D								3	5	8	10	12	14	16	18	20
Software	E								4	8	12	16	20	22	24	26	28
Life Science	F								12	20	30	40	45	50	55	60	65
Life Science	G								4	8	12	16	20	22	24	26	28
Clean Energy	H								8	12	16	18	20	22	24	24	24
Clean Energy	I								20	30	35	40	45	50	55	60	65
Software	J								4	6	8	10	12	14	16	18	20
Hardware	K								2	8	16	24	28	32	34	36	38
<b>Section C Average Salary</b>																	
<b>Average Salary</b>																	
Company		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Clean Energy	A						\$35,000	\$38,000	\$40,000	\$42,000	\$43,000	\$43,000	\$44,000	\$44,000	\$45,000	\$45,000	\$46,000
Software	B						\$25,000	\$30,000	\$34,000	\$36,000	\$38,000	\$40,000	\$41,000	\$41,000	\$42,000	\$42,000	\$42,000
Software	C						\$35,000	\$40,000	\$45,000	\$48,000	\$50,000	\$52,000	\$52,000	\$54,000	\$54,000	\$56,000	\$56,000
Software	D						\$30,000	\$40,000	\$42,000	\$45,000	\$47,000	\$48,000	\$48,000	\$49,000	\$49,000	\$50,000	\$50,000
Software	E						\$15,000	\$25,000	\$30,000	\$32,000	\$33,000	\$33,000	\$34,000	\$34,000	\$35,000	\$35,000	\$35,000
Life Science	F						\$45,000	\$50,000	\$55,000	\$60,000	\$65,000	\$68,000	\$70,000	\$72,000	\$74,000	\$75,000	\$76,000
Life Science	G						\$0	\$40,000	\$5,000	\$55,000	\$60,000	\$65,000	\$68,000	\$70,000	\$72,000	\$74,000	\$75,000
Clean Energy	H						\$55,000	\$58,000	\$60,000	\$65,000	\$70,000	\$75,000	\$78,000	\$80,000	\$82,000	\$84,000	\$85,000
Clean Energy	I						\$65,000	\$65,000	\$68,000	\$68,000	\$70,000	\$70,000	\$72,000	\$72,000	\$74,000	\$74,000	\$75,000
Software	J						\$25,000	\$28,000	\$30,000	\$32,000	\$34,000	\$35,000	\$35,000	\$36,000	\$36,000	\$38,000	\$38,000
Hardware	K						\$0	\$20,000	\$25,000	\$25,000	\$26,000	\$26,000	\$28,000	\$28,000	\$28,000	\$29,000	\$29,000
																	387

**Appendix Two – NACET Job Projection  
Incubator to Acceleration Clients**

<b>Section A NACET Incubator Clients</b>																	
<b>Total On-site Employees</b>																	
Industry Type	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Software	A					2	2	3									
Life Science	B					4	4	6									
Life Science	C					6	8	8									
Clean Energy	D					2	3	3									
Materials	E					7	8	10									
Life Science	F					2	3	4									
Clean Energy	G					3	3	6									
Hardware	H					0	2	2									
Software	I					1	2	2									
	J																
<b>Section B Venture Acceleration Clients</b>																	
<b>Total On-site Employees</b>																	
Industry Type	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Software	A								4	5	5	6	8	10	10	10	10
Life Science	B								6	8	10	12	12	14	14	16	16
Life Science	C								10	12	15	18	20	21	22	23	23
Clean Energy	D								5	6	8	10	12	14	15	16	18
Materials	E								20	25	30	35	38	40	42	42	44
Life Science	F								6	10	15	18	20	21	22	23	23
Clean Energy	G								10	15	20	24	28	30	32	34	36
Hardware	H								4	8	15	20	25	30	34	36	38
Software	I								8	15	20	25	30	35	40	45	50
	J																258
<b>Section C Average Salary</b>																	
<b>Average Salary</b>																	
Industry Type	Company	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Software	A					\$50,000	\$50,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$56,000	\$56,000	\$56,000	\$58,000	\$58,000
Life Science	B					\$67,964	\$70,000	\$70,000	\$75,000	\$75,000	\$75,000	\$76,000	\$76,000	\$78,000	\$78,000	\$80,000	\$80,000
Life Science	C					\$45,000	\$45,000	\$50,000	\$50,000	\$50,000	\$52,000	\$52,000	\$52,000	\$52,000	\$54,000	\$54,000	\$54,000
Clean Energy	D					\$15,000	\$140,000	\$150,000	\$160,000	\$160,000	\$160,000	\$165,000	\$165,000	\$170,000	\$170,000	\$175,000	\$175,000
Materials	E					\$60,000	\$65,000	\$65,000	\$65,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$72,000	\$72,000	\$72,000
Life Science	F					\$30,000	\$40,000	\$45,000	\$50,000	\$50,000	\$52,000	\$52,000	\$54,000	\$54,000	\$55,000	\$55,000	\$55,000
Clean Energy	G					\$46,000	\$50,000	\$60,000	\$60,000	\$65,000	\$35,000	\$68,000	\$68,000	\$70,000	\$70,000	\$70,000	\$70,000
Hardware	H					\$0	\$25,000	\$35,000	\$40,000	\$42,000	\$44,000	\$45,000	\$46,000	\$47,000	\$48,000	\$49,000	\$50,000
Software	I					\$0	\$20,000	\$35,000	\$40,000	\$45,000	\$48,000	\$50,000	\$52,000	\$52,000	\$53,000	\$53,000	\$54,000
	J																