THE NEW ECONOMY

FY22 BUDGET REQUEST: $32 M ON-GOING

This initiative provides state funding to Arizona's public universities to develop a skilled workforce and enhance economic opportunity. Our request leverages existing strengths in Health, Mining and Space & Defense to address critical workforce shortages and establish Arizona as a leader in solving national and global challenges.

THE UNIVERSITY OF ARIZONA

SPACE AND DEFENSE - $8M

FY22 funding will enhance capacity to train and educate students for the high demand/high paying careers in national security, space technology, and planetary defense.

WORKFORCE DEVELOPMENT

Expand undergraduate programs that directly support the aerospace and defense industry by 1,300 additional students.

- UA is 1 of 4 higher education institutions in the nation positioned to fill the research and workforce needs for the defense industry, specifically related to hypersonics.
- Federal funding for hypersonics related research is expected to grow by over $200M in the next year.
- DoD, Raytheon, and other defense companies have expressed the need for more students graduating with degrees related to hypersonics systems.

INFRASTRUCTURE

What is Hypersonics? The basis of the most leading-edge developments at the DoD, perfection of Hypersonics vehicles is necessary for the U.S. to stay ahead of the next evolution of warfare.

Upgrades that allow UA to maintain its competitive edge in hypersonics modeling and simulation needs for testing, research, and training.

- DoD is planning to double its research in hypersonic capabilities from $6.2 billion to $11.2 billion by FY2024.
    - Accessible hypersonics wind tunnels will help UA compete for this research.
- Companies like Raytheon currently spend millions of dollars per year traveling to the handful of commercially available hypersonic testing facilities in the U.S.
- Ensuring students are workforce ready requires hands on training and exposure to next-gen infrastructure.

OPERATIONS: SPACE

Establish the Arizona Space Institute furthering UA's competitiveness for DoD and NASA missions, industry partnerships and other large contracts.

- UArizona is #1 in astronomy and astrophysics, #4 in NASA funding among public universities and growing rapidly in DoD funding.
- NASA's FY20 budget shows an increase from $927 million to $1.5 billion for "Space Technology", DoD FY20 indicates $30M for "Space Technology Development."
- The cost to develop a competitive proposal for a large NASA or DoD contract has escalated dramatically over the last decade.
- Proposal development for a major mission or contract can easily cost $1 million over two years, however the payoff is very large (major NASA mission - $500; major DoD contract - $50-$100M).

HEALTH SCIENCES - $20M

The COVID-19 pandemic highlighted the essential role UA Health Sciences (UAHS) has in maintaining the state's public health through research and workforce development. FY22 funding will maintain and enhance efforts to train medical professionals and researchers to ensure Arizona is prepared for the next global pandemic.

WORKFORCE DEVELOPMENT

Launch new programs, such as those highlighted below, to create the necessary pipeline of healthcare providers.

7-year bachelor/MD Program: develop a 7-year Bachelor of Science/Medical Degree program.

- Debt has become a barrier for students interested in medical school, a BS/MD program will reduce debt and accelerate entry into the workforce.

K-12 Health Sciences Education: Create a high school dual enrollment course in health sciences and develop curriculum and teacher training to prepare K-12 students for STEM and health careers.

- Addressing the healthcare workforce shortage requires a multifaceted approach, early engagement and education will help build a pipeline.

IMPROVING HEALTH: AZ CENTER FOR ADVANCED IMMUNOTHERAPIES (ACAI)

Establish the ACAI, which will focus on coordinated interdisciplinary approaches for the discovery and development of personalized cell and gene-based therapies in cancer, autoimmune disease, infectious disease, and organ and bone marrow transplantation.

- Immunotherapy is a biological therapy that stimulates or suppresses the immune system to help the body fight cancer, infection, and other diseases.
- The ongoing COVID pandemic has highlighted the criticality of immunology in the diagnosis, public health management and development of effective therapy vaccine development.

CONTINUED ON BACK

MINING

UA is a world leader in mineral resources and mining engineering. FY22 funding will establish Arizona's only School of Mining. This school will create interdisciplinary degree programs across engineering, science, law, and business.

- The demand for copper is expected to rise 275 – 350% by 2050 due to the electrification of energy.
- Remaining mineral deposits that are more difficult to extract, as well as new societal expectations for the industry requires modernizations of the mining workforce.

ARIZONA'S RETURN ON INVESTMENT

Rounds Consulting Group, Inc. conducted an independent economic and fiscal impact analysis of the UA's FY22 NEI request. The analysis demonstrated that Arizona would experience a significant return on investment.

"Over the 20-year analysis period, an estimated $3.9B in state and local tax revenues will be generated from the $640.0M investment ($32.0M a year)."

- UA's investment proposal will support **23,487 jobs by year 10** and **57,334 jobs by year 20**.
- Over 20 years, approximately **$32.6B in labor income** (i.e., the wages and benefits) will be created for the jobs that are supported by UA's proposal.
- A total of **$94.6B in economic output** (i.e., the value of goods or services produced in an area) will be generated by UA's proposal over the 20-year period.
- UA's $32.0M investment proposal will generate a total of **$3.9B in tax revenues** (i.e., $2.0B in state tax revenues and $1.9B in local tax revenues) over the 20-year investment timeframe.
- **The breakeven point for the state's investment in UA is achieved by year 9.** In year 10, a positive ROI occurs and increases each year thereafter. The breakeven point occurs in less than half of the amount of time than would be considered acceptable for this type of investment (20-years).

Source: Rounds Consulting Group, Inc.