

ARIZONA AEROSPACE, DEFENSE AND SECURITY ENTERPRISE

STRATEGIC PLAN 2011-2013



Sustain • Build Upon • Transform • Increase Jobs

ARIZONA'S AEROSPACE AND DEFENSE ECONOMY

The State of Arizona is younger than the history of manned flight. Statehood was achieved eight years after the Wright brothers' first flight at Kitty Hawk, North Carolina, on December 17, 1903. Yet in that relatively short period of time, Arizona has firmly established itself as an accommodating and receptive host of, as well as a driving force in, our nation's aerospace and defense installations, research, industry and manufacturing.

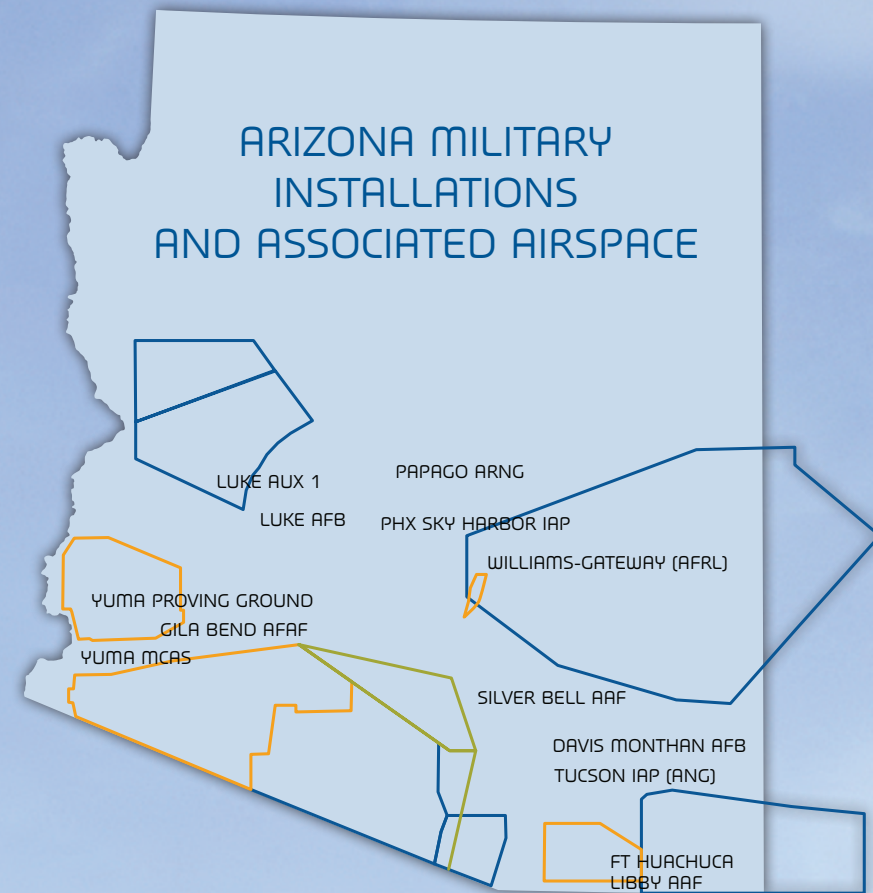
Arizona, boasting over 340 days of perfect flying weather a year and with 72% of its lands controlled by the federal government (much in the form of restricted airspace and military operating areas), is home to a multitude of Active Duty, Reserve and National Guard installations.

This military footprint remains a critically important economic engine for Arizona with 96,000 jobs (45K direct and 51K indirect jobs), \$401M in taxes to the state and an annual economic impact of \$9.12 billion.

Arizona is also home to a vibrant and sizeable defense industry, with 37 defense-related companies across the state. The companies together comprise another significant facet of Arizona's economy with 94K jobs (39K direct, 17K suppliers, 30K indirect and 7K spending tax revenues), \$301M in direct taxes and a gross economic impact of \$8.8 billion.

Together, the military and the defense sectors contribute 190,000 jobs and \$18 billion annually to Arizona's economy, approaching 10% of the state's economy.

Sustaining this critically important foundation of Arizona's economy and then expanding that base of high-technology jobs are clearly in the best interests of the state. The *Arizona Aerospace, Defense and Security Enterprise* was conceived to lead in both those dimensions.



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This project was supported by the Arizona Governor's Office of Economic Recovery and Science Foundation Arizona.

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The vision of the Arizona Aerospace,
Defense and Security Enterprise is:

to **sustain** and **build upon** Arizona's rich legacy
in aerospace, defense and security

to **transform** Arizona into the location of choice
for research, testing and high-technology manufacturing
across America's aerospace, defense and security sectors

to **increase** Arizona revenues and **jobs**.



OUR VISION

There are three distinct yet related facets of this vision statement. The first – *sustain and build upon Arizona's rich legacy in Aerospace, Defense and Security* – requires sustaining (even protecting) the present footprint of military and defense entities across Arizona. In short, despite inevitable changes to national security priorities and budgets, this means ensuring that Arizona's best case is made to continue as host of existing military installations and as home for their next generation of weapon systems and personnel.

This first facet equally and importantly also applies to the defense-related industry in Arizona, fostering the environment whereby these 37 companies are firmly rooted in Arizona soil and continue as an important base of Arizona's high-tech economy.

The second facet – *transform Arizona into the location of choice* – overlaps with the first tenet's "build upon" mandate, in how to position Arizona to expand upon its existing bedrock foundation of military and defense industry. Transforming Arizona includes building synergy across the state with a new and vibrant consortia of technical research, academics, industry, test ranges and policy makers.

The third facet – and measurable bottom line of the Enterprise – is to *increase state revenues and jobs* by attracting increased defense and national security investments that take full advantage of Arizona's strengths and contributions to America's defense and security.

Sustain • Build Upon • Transform • Increase Jobs

OUR STRATEGY

The genesis of the *Arizona Aerospace, Defense and Security Enterprise* was a FY2011 grant from the Governor's Office of Economic Recovery to form the Aerospace and Defense Initiative under the umbrella of Science Foundation Arizona. That grant's purpose was to complement Science Foundation Arizona's education and research programs; execute an aggressive plan to address and implement the state's aerospace and defense industry objectives; and help transform Arizona into the most desirable destination for aerospace research, technology and manufacturing.

Our strategic planning process began with the following guiding principles:

We will remain aligned with the policies and strategic objectives of the Governor, her staff, and the Arizona Commerce Authority toward sustaining and expanding Arizona's defense and national security sectors of the economy.

Arizona has a remarkable array of individual strengths – across academia, research, military installations and their test and training ranges, defense industry, a high-tech skilled workforce, and geography and climate. We will band together these strengths into a formidable synergistic force for success.

We will act as an integrating and coordinating team.

We will have a statewide perspective, focus and approach.

We will be lean, efficient and fiscally vigilant, ensuring public and private investments maximize the return on those investments.

The *Arizona Aerospace, Defense and Security Enterprise* will be designated by the Governor as having the authority, on behalf of the State and the Arizona Commerce Authority, to act upon and implement state policies and strategic objectives that foster the expansion of Arizona's economy across aerospace, defense and security domains.

OUR STRATEGIC GOALS

Sustain and Build Upon Arizona's Rich Legacy in Aerospace, Defense and Security

1. Base the next generation of weapon systems at existing Arizona military installations.
2. Smartly absorb excess Department of Defense facilities as an Arizona asset.
3. Position Arizona's military organizations for continued operations following budget reductions and Base Realignment and Closure Commission (BRAC).
4. Nurture existing defense industry and strengthen the foundation of Arizona assets.
5. Leverage Arizona aerospace and defense foundation to address national security issues.

Transform Arizona into the Location of Choice for Research, Testing and High-Technology Manufacturing

6. Formalize needed consortia and networks and, create synergies.
7. Expand related academic research with industry and government partners.
8. Influence education systems to meet needs of aerospace, defense and security workforce.
9. Promote identity of Arizona as the *Center of Excellence* for global aerospace, defense and security.

Increase Arizona Revenues and Jobs

10. Be in sync with emerging high-tech requirements from the Department of Defense (DOD), Department of Homeland Security (DHS) and commercial ventures.
11. Orchestrate Arizona-based Requests For Proposals matching high-tech requirements of DoD, DHS and commercial ventures.

OBJECTIVES SUPPORTING OUR STRATEGIC GOALS

GOAL 1	OBJECTIVES
Base the next generation of weapon systems at existing Arizona military installations.	<p>1.1 Secure the active duty F-35 training missions for Luke AFB (F-35A) and MCAS Yuma (F-35B), and the National Guard (F-35A) training mission at Tucson International Airport.</p> <p>1.2 Secure the Army's future Aerial Exploitation Brigade at Fort Huachuca.</p>
GOAL 2	OBJECTIVES
Smartly absorb excess Department of Defense facilities as an Arizona asset.	<p>2.1 Transfer the Air Force Research Lab (AFRL) facility to the City of Mesa.</p> <p>2.2 City of Mesa secure lease with USAF to operate the AFRL lab, maintain uninterrupted SCIF operations during transfer and beyond.</p>
GOAL 3	OBJECTIVES
Position Arizona's military organizations for continued operations following budget reductions and Base Realignment and Closure Commission (BRAC).	<p>3.1 Secure decision for the 612th Air Operations Center to remain at Davis-Monthan AFB.</p> <p>3.2 Advise the Governor and Legislature on strategies and impacts of budget reductions and BRAC.</p> <p>3.3 Liaise with Arizona federal delegations on budget and BRAC impacts and strategies.</p>
GOAL 4	OBJECTIVES
Nurture existing defense industry and strengthen the foundation of Arizona assets.	<p>4.1 Establish contacts and dialogue with each company; compile their needs for continuing in Arizona.</p> <p>4.2 Initiate and coordinate policy/legislative initiatives to secure/improve environment for industry.</p> <p>4.3 Form the Arizona Aerospace, Defense and Security Trade Association.</p>
GOAL 5	OBJECTIVES
Leverage Arizona aerospace and defense foundation to address national security issues.	<p>5.1 Champion using military ISR assets in the border security operations.</p> <p>5.2 Apply military cyberspace advances to national security issues and challenges.</p>
GOAL 6	OBJECTIVES
Formalize needed consortia and networks and create synergies.	<p>6.1 Create an Academic Consortium of universities, community colleges, technical institutes.</p> <p>6.2 Designate Aerospace & Defense Research Collaboratory (ADRC) as the Research Consortium.</p> <p>6.3 Establish working relationship with existing Arizona military range managers group.</p> <p>6.4 Organizationally create regional <i>Aerospace, Defense and Security Enterprise</i> hubs in Tucson, Sierra Vista, Yuma and Prescott/Flagstaff.</p> <p>6.5 Create and maintain a register of Arizona-based aerospace, defense and security businesses/industry.</p> <p>6.6 Demonstrate value to the state, partners and consortia members via recurring meetings, focus and priorities on aerospace, defense and security.</p>

GOAL 7	OBJECTIVES
Expand related academic research with industry and government partners.	<p>7.1 Initiate and continue dialogue between ADRC, academic consortium, industry and government to prioritize, fund and conduct research.</p>
GOAL 8	OBJECTIVES
Influence education systems to meet needs of aerospace, defense and security workforce.	<p>8.1 Assist SFAz to expand STEM programs.</p> <p>8.2 Expand dialogue between industry and academic consortia on workforce development.</p> <p>8.3 Annually, devote one trade association meeting to public education needs of the industry.</p>
GOAL 9	OBJECTIVES
Promote identity of Arizona as the Center of Excellence for global aerospace, defense and security.	<p>9.1 Nationally and globally market Arizona's synergy and strengths to government and industry.</p> <p>9.2 Assist DoD and DHS to meet their FAR requirements for Market Research.</p> <p>9.3 Semi-annually update Arizona's federal delegations on Arizona as the Center of Excellence, both its strengths and potential.</p>
GOAL 10	OBJECTIVES
Be in sync with emerging high-tech requirements from DOD, DHS and commercial ventures.	<p>10.1 Nurture, maintain contacts with DoD and DHS.</p> <p>10.2 Establish means to identify emerging high-tech requirements.</p> <p>10.3 Communicate emerging high-tech requirements with consortia and industry; secure agreement on which to invest dollars for research and submittal of RFPs.</p>
GOAL 11	OBJECTIVES
Orchestrate Arizona-based Requests For Proposals matching high-tech requirements of DoD, DHS and commercial ventures.	<p>11.1 FAA select Arizona as an Unmanned Aerial System Test Range.</p> <p>11.2 Arizona become the Aerostat development and testing location for the DoD.</p> <p>11.3 Concentrate on UAS, ISR, Cyber, Space systems for DoD; Border Security for the DHS.</p>



METRICS

- Baseline of active duty military installations, personnel, infrastructure, economic impact, state revenue, jobs
- Baseline of Reserve military installations, personnel, infrastructure, economic impact, state revenue, jobs
- Baseline of National Guard military installations, personnel, infrastructure, economic impact, state revenue, jobs
- Baseline of Defense Contractor size, scope, dollars, economic impact, state revenue, jobs
- Annual updates to economic impact baselines
- Trade Association members
- Consortia members
- Industry-Academic Research projects
- Industry-Academic Workforce Development
- STEM baseline and updates
- Targeted RFPs for DoD, DHS, commercial ventures. Teams built for RFP development, number submitted, number awarded, changes to revenues and jobs
- Market RFPs with government, federal delegations, state

©2011 Science Foundation Arizona. Photos courtesy U.S. Air Force: Cover Predator aircraft, Captain Nathan Broshear; F-16, Master Sgt. David Neve; satellite graphic. Page 2 simulation, Rich McFadden; helicopter, Tech. Sgt. Michael R. Holzworth; F-16s, Master Sgt. John Nimmo Sr. Page 9 Army helicopter, Capt. Cathleen Snow. Below STEM simulator, Lisa Norman; National Guard Soldiers, Sgt. Jim Greenhill. Page 11 pararescue, Tech. Sgt. Ruby Zarzyczny; STEM event, Alex Lloyd. Photo courtesy U.S. Army: Page 9 flexible panel display, Ms. Andricka Thomas (CECOM). Photos courtesy Raytheon: Cover Lab; Page 4. Photos courtesy University of Arizona: Page 9 Mars deck work, NASA JPL UA Lockheed Martin; Below Mars Lander.



APPENDIX: TERMS AND DEFINITIONS

- ADI Aerospace and Defense Initiative
- ADRC Aerospace & Defense Research Collaboratory
- ADSE *Arizona Aerospace, Defense and Security Enterprise*
- AFRL U. S. Air Force Research Laboratory
- AOC Air and Space Operations Center
- BRAC Base Closure and Realignment Commission
- DHS Department of Homeland Security
- DoD Department of Defense
- FAA Federal Aviation Administration
- FAR Federal Acquisition Regulation
- GOER Governor's Office of Economic Recovery
- ISR Intelligence, Surveillance and Reconnaissance
- MCAS Marine Corps Air Station
- RFP Request For Proposal
- SFAZ Science Foundation Arizona
- STEM Science, Technology, Engineering and Mathematics
- UAS Unmanned Aerial System



ARIZONA AEROSPACE AND DEFENSE INITIATIVE