



PROJECT AEROSPACE & DEFENSE

Goals for Strengthening the Arizona-Canada Aerospace and Defense Partnership

Based on the strategic importance of the Arizona-Canada relationship in the aerospace and defense (A&D) sector, here is a set of actionable goals designed to further enhance the collaboration and ensure both regions lead the next wave of A&D innovation and development:

1. Expand Joint Research and Development (R&D) Initiatives

Goal: Foster cutting-edge innovation through collaborative research and development in advanced aerospace and defense technologies, including AI, autonomous systems, UAVs, cybersecurity, and missile defense systems.

- **Action Steps:**

- Establish dedicated R&D hubs and innovation centers in both Arizona and Canada, where industry leaders, universities, and government agencies can collaborate on emerging technologies.
- Launch joint R&D projects focused on AI, autonomous systems, and next-gen missile defense and aerospace technologies.
- Create incentives for private sector companies and academic institutions to partner on cross-border R&D programs.

Outcome: Position Arizona and Canada as global leaders in the development of next-generation defense and aerospace technologies.

2. Strengthen Aerospace and Defense Manufacturing Capabilities

Goal: Enhance the manufacturing infrastructure and capabilities to support the growing demand for advanced aerospace and defense systems.

- **Action Steps:**

- Develop an Arizona-Canada manufacturing alliance to streamline production, testing, and assembly of aerospace and defense products.

- Invest in advanced manufacturing technologies, including additive manufacturing (3D printing), advanced materials, and precision robotics.
- Create specialized training programs in advanced manufacturing techniques at local universities, trade schools, and military installations.

Outcome: Build a robust, scalable manufacturing ecosystem in both Arizona and Canada that supports the full life cycle of A&D systems, from design to deployment.

3. Enhance Workforce Development and Talent Retention

Goal: Ensure a highly skilled workforce to meet the growing demands of the aerospace and defense sectors in both regions.

- **Action Steps:**

- Expand educational programs, internships, and apprenticeships in aerospace engineering, AI, cybersecurity, and defense technology at universities and vocational schools in Arizona and Canada.
- Launch cross-border workforce exchange programs to allow workers to gain experience in both regions' A&D sectors.
- Strengthen collaboration between industry leaders and educational institutions to align curriculum with emerging industry needs, particularly in high-tech fields such as AI, autonomous systems, and cybersecurity.

Outcome: Create a pipeline of skilled professionals to fill critical roles in aerospace, defense, and emerging technology sectors.

4. Promote Bi-Lateral Trade and Investment in A&D

Goal: Increase bi-lateral trade and investment in the aerospace and defense sector between Arizona and Canada, positioning both regions as attractive destinations for A&D business.

- **Action Steps:**

- Organize trade missions, investment forums, and business development events to promote Arizona-Canada A&D collaborations.
- Advocate for favorable trade policies, tax incentives, and regulatory frameworks that facilitate cross-border investment in aerospace and defense.
- Leverage the CABC to engage key stakeholders and ensure continued policy alignment between Arizona and Canada for A&D growth.

Outcome: Boost the economic contribution of the A&D sector to both Arizona and Canada by attracting new investment, business opportunities, and partnerships.

5. Strengthen NORAD Cooperation and Joint Defense Exercises

Goal: Fortify the aerospace and defense capabilities of both regions in support of the **North American Aerospace Defense Command (NORAD)**, ensuring preparedness and collaboration in continental defense missions.

- **Action Steps:**

- Increase joint military training exercises between Arizona and Canada, focusing on air defense, aerospace control, and cyber defense.
- Upgrade military infrastructure in Arizona and Canada to ensure readiness for NORAD missions, including advanced air defense systems and missile defense technologies.
- Facilitate joint participation in international defense exercises and operations, strengthening NORAD's ability to respond to emerging threats.

Outcome: Enhance NORAD's operational capabilities through improved coordination, infrastructure, and joint defense readiness between Arizona and Canada.

6. Advance Space and Satellite Technology Development

Goal: Position Arizona and Canada as leaders in the rapidly expanding field of space technology, including satellite systems, space-based defense, and space exploration.

- **Action Steps:**

- Promote collaboration between Arizona's aerospace companies and Canadian space agencies (such as **Canadian Space Agency**) to develop next-generation satellite and space technologies.
- Establish joint space innovation hubs to foster collaboration on satellite manufacturing, space defense, and deep-space exploration technologies.
- Invest in infrastructure to support the testing, launch, and operational deployment of satellite systems and space-based defense technologies.

Outcome: Strengthen Arizona and Canada's leadership in space technologies and expand their role in global space-based defense and exploration initiatives.

7. Leverage Artificial Intelligence (AI) for Advanced Defense Systems

Goal: Integrate AI and machine learning into aerospace and defense technologies to enhance operational capabilities, efficiency, and safety.

- **Action Steps:**

- Establish specialized AI research initiatives within A&D companies in Arizona and Canada to develop AI-powered defense solutions such as autonomous drones, cybersecurity systems, and predictive maintenance tools for aircraft and defense systems.
- Support collaborations between AI-focused tech companies, defense contractors, and government entities to apply AI in defense and aerospace sectors.
- Develop training programs for defense personnel and engineers to specialize in AI applications for aerospace and defense.

Outcome: Ensure that both Arizona and Canada are at the forefront of integrating AI into the aerospace and defense industries, enhancing military and civilian capabilities.

8. Expand Aerospace and Defense Cybersecurity Capabilities

Goal: Ensure that both Arizona and Canada are leaders in cybersecurity for aerospace and defense systems, protecting critical infrastructure and sensitive data.

- **Action Steps:**

- Promote the development of joint cybersecurity initiatives between aerospace and defense companies in Arizona and Canada to safeguard military and commercial assets.
- Create cybersecurity task forces to address emerging threats to defense systems, including space-based assets, unmanned vehicles, and missile defense infrastructure.
- Support cybersecurity education programs tailored to the aerospace and defense industries, focusing on developing a workforce capable of tackling future cybersecurity challenges.

Outcome: Safeguard the integrity of both Arizona's and Canada's aerospace and defense infrastructure by advancing cybersecurity capabilities.

9. Foster Sustainability in Aerospace and Defense Technologies

Goal: Encourage the development and adoption of sustainable technologies within the aerospace and defense sectors to reduce environmental impacts and promote energy efficiency.

- **Action Steps:**

- Promote R&D into alternative fuel sources, renewable energy systems, and environmentally friendly materials for aerospace manufacturing.
- Foster collaboration between Arizona and Canada to develop and implement sustainability initiatives in military training, aircraft systems, and manufacturing processes.
- Implement policies and incentives for companies in both regions to prioritize sustainable practices in the design, testing, and deployment of aerospace and defense systems.

Outcome: Lead the transition to a more sustainable aerospace and defense industry that minimizes its environmental footprint while maintaining operational effectiveness.

Conclusion

These goals outline a comprehensive strategy to strengthen the Arizona-Canada aerospace and defense partnership. By focusing on R&D, manufacturing, workforce development, trade, defense cooperation, AI, cybersecurity, and sustainability, both regions can position themselves as global leaders in the next generation of aerospace and defense technologies. Through collaborative efforts, the Arizona-Canada A&D sector can drive innovation, enhance defense readiness, and promote economic growth for both regions.

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Arizona is a key component in the global aerospace and defense (A&D) arena and has historically been home to top A&D companies and military bases. The Canada Arizona Business Council (CABC) realizes the opportunity that Arizona and Canada have to be even more successful in retaining and expanding this industry sector. This partnership possesses all of the crucial assets to become the leader in North America's aerospace and defense industry. This is one of the Council's most important initiatives to date.

The State's aerospace and defense industry has evolved since the mid-20th century. Arizona has been home to major military bases such as Davis-Monthan Air Force Base, Fort Huachuca, Luke Air Force Base, and Marine Corps Air Station Yuma. The bases and military presence are some of the main contributors leading to Arizona's robust aerospace and defense industry. In addition, Arizona's favorable flying conditions are ideal for both military and commercial aviation test aircraft development and pilot training.

Several major aerospace and defense prime contractors are operating in Arizona and Canada, and include Bombardier, StandardAero, Canadian Aviation Electronics Ltd., Boeing (Apache Helicopter), Raytheon Missiles & Defense, Honeywell, Lockheed Martin, Northrop Grumman, and many others. These top companies operate in both Arizona and Canada and engage in diversified activities. The partnership between Canada and Arizona covers various activities, including research and development and traditional aerospace and defense (A&D) operations. This encompasses the manufacturing and testing of military engines and aircraft systems, military training, unmanned aerial vehicles (UAVs), satellite and space technology, as well as missile and defense systems. The leading prime contractor companies are advancing technologies and expanding capabilities in cybersecurity, advanced manufacturing, optics, autonomous systems, and AI. This positions both Arizona and Canada as leaders in innovative and advanced technologies and systems, including missile and defense systems."

Arizona is ranked fourth in the US in aerospace and defense research, development, businesses, and manufacturing. The state and Canada continue to attract bi-lateral A&D investments due to several factors, which include: a 24% lower cost of doing business compared to other states, location, existing bi-lateral policies, and a strong supply chain, proximity to top A&D prime contractor companies operating in Arizona and Canada, along with military assets, access to a specialized workforce offering tailored educational/training programs from local universities, trade schools, and military bases, a reliable energy grid (ranked 2nd in the US), 300 days of sunshine, and convenient access to trucking, seaports, airports, and rail transportation.

NORAD (*The North American Aerospace Defense Command) is a collaborative effort between the United States and Canada handling aerospace warning, aerospace control, maritime warning, and military defense on the continent. Arizona and Canada play a crucial role in supporting NORAD's mission through their military assets and aerospace capabilities. The military bases in these locations are essential for training personnel and pilots for air defense missions. The aircraft stationed in Arizona stand ready to assist in continental air defense missions. Moreover, joint training exercises between Arizona, and Canada are essential in ensuring preparedness and defense among U.S. and Canadian forces, fortifying our collective ability to respond to aerospace threats in North America.

As next-generation research and development and technologies such as drones, planes, and ballistics become more advanced, destructive, mobile, and cost-effective production, the A&D market will become more accessible to all allied countries, leading to increased opportunity and competition in global A&D markets. Artificial Intelligence (AI) will catalyze change in North America's technology and defense industries. The strong connection between Arizona and Canada will continue to dominate global influence as we move further into the new frontier of aerospace and defense.

CABC has established a diplomatic and professional partnership between Arizona and Canada. Its longstanding membership has provided a natural forum for investment and business opportunities, including in the aerospace and defense (A&D) industry. The main goal of this initiative is to maintain, continue, and elevate the subject of aerospace and defense to ensure that the synergy continues to strengthen and grow between Arizona and Canada, as well as the CABC's members. Arizona and Canada are poised to emerge as global leaders in the aerospace and defense sphere. CABC stands prepared to support through the fostering of relationships and by facilitating discussions to further this pursuit.

*The North American Aerospace Defense Command (NORAD) was a pact made in 1957, at the height of the Cold War. It came under joint command of the Canadian and United States air forces. In 1981, its name was changed to the North American Aerospace Defense Command, but it retained the NORAD acronym.