RESEARCH GROUP

Canada & Arizona:

Integrated Weapons Systems Activities

ADDITIONAL WRITE-UPS

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The Canada-Arizona collaboration on the semiconductor industry. Click here to learn more.

Agriculture

The agriculture relationship is a mutually beneficial partnership. Read the entire report here.

The defense relationship between Canada and Arizona represents a significant dimension of North American security, grounded in industrial collaboration, technology sharing, and academic partnerships. Arizona is a central node of the U.S. defense industrial base, hosting major primes such as Raytheon Missiles & Defense in Tucson, Northrop Grumman in Chandler, Boeing in Mesa, and Honeywell Aerospace in Phoenix. These facilities focus on missile systems, aviation, UAVs, and space technologies. Canadian firms contribute specialized subsystems, high-precision sensors, avionics components, satellite-linked payloads, and operator training tools. While Canadian companies do not produce complete missiles or aircraft in Arizona, their components are critical to performance, guidance, electronic warfare, and command-and-control integration, ensuring that U.S. defense products benefit from Canadian technological expertise.

Testing and evaluation activities in Arizona further integrate

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Canadian technology into operational systems. The Yuma Proving Ground, one of the largest military test environments globally, evaluates artillery, missiles, UAVs, and sensors. Canadian firms participate directly or through U.S. primes, providing sensor payloads, electronics, and autonomy algorithms, ensuring compliance with U.S. standards and interoperability. Arizona's Air Force bases support these collaborations. Luke Air Force Base, the primary F-35 training site, uses Canadian-developed simulation modules from CAE, while Davis-Monthan Air Force Base incorporates Canadian avionics and communications components into A-10 operations and electronic warfare training. These operational applications demonstrate how Canadian contributions are embedded in both the industrial and operational lifecycle of U.S. military platforms in Arizona.

Missile systems exemplify this collaboration, with Raytheon Tucson producing Patriot, Standard, AMRAAM, and emerging hypersonic missiles. Canadian contributions include advanced electronics, signal-processing units, sensors, satellite communications modules, and operator training simulations. L3Harris Canada and Ultra Electronics supply communications, guidance, and targeting subsystems, while CAE provides mission training tools. This integration ensures that personnel are trained on fully functional, interoperable systems. In space and satellite-linked defense, Northrop Grumman, Raytheon, and General Dynamics operate programs in Arizona that develop ISR, communications, and sensor technologies. Canadian companies such as MDA and Magellan Aerospace provide satellite payloads, optics, robotics, and mission-critical electronics, supporting Arctic monitoring, NORAD modernization, and space situational awareness.

Academic and research collaboration strengthens these industrial ties. Arizona State University and the University of Arizona partner with Canadian institutions, including the University of Toronto, McGill University, and Polytechnique Montréal, focusing on dual-use technologies, aerospace materials, advanced composites, satellite payloads, autonomy, and AI-driven defense systems. Structured programs, workshops, and student exchanges facilitate knowledge transfer from Canadian universities to Arizona-based research teams and help develop a skilled workforce for North American defense supply chains. Canadian-developed algorithms for sensors and autonomous systems are often tested in Arizona facilities, bridging academic research and industrial application.

Looking ahead, the Canada–Arizona defense relationship is expected to deepen and diversify. Supply chain collaboration will expand in high-precision subsystems for missiles, UAVs, and satellite-linked ISR platforms. As Arizona-based contractors develop hypersonic systems, next-generation air defense technologies, and autonomous weapons, Canadian firms with expertise in electronics, sensors, composites, and landing gear will play central roles. Testing at Yuma Proving Ground and Arizona Air Force bases will continue to validate Canadian components for operational readiness and interoperability. Simulation and training will expand through AI-enabled simulators, cyber-training modules, and digital twin environments for multi-domain defense operations. Space and satellite-linked defense cooperation will grow, particularly in payloads, sensors, and Arctic/NORAD monitoring. University-industry partnerships will remain critical for advancing dual-use technologies, autonomous systems, and advanced materials while supporting workforce development.

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In conclusion, the Canada–Arizona defense partnership represents an integrated, technologically advanced collaboration that strengthens North American security. Canadian contributions, ranging from subsystems and sensors to simulation and research, are embedded in the production, testing, and operational lifecycle of U.S. missile systems, aircraft, UAVs, and space platforms. Over the next decade, these collaborations will continue to expand, enhancing interoperability, operational readiness, and innovation while ensuring that Canadian expertise complements Arizona's industrial and military capabilities. This cross-border engagement underscores the strategic value of partnership in advancing military preparedness and sustaining the technological edge of North American defense.