



# RESEARCH GROUP

Canada Arizona Collaboration

on the Semiconductor Industry

## ADDITIONAL WRITE-UPS

### Biotechnology

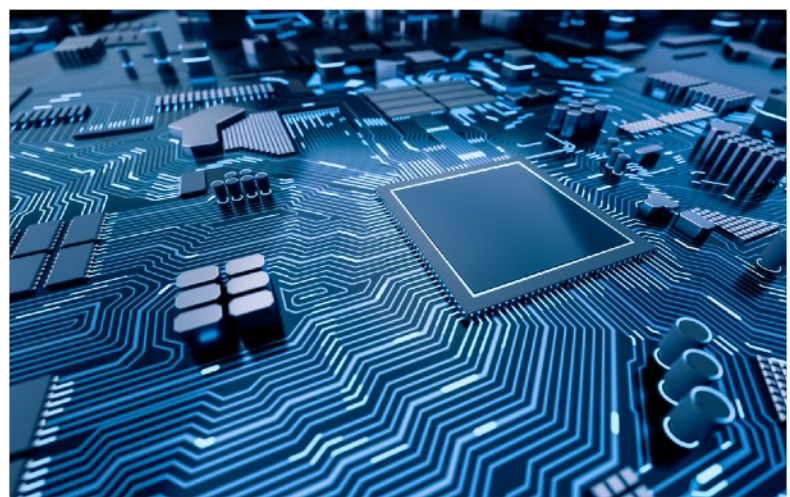
How Canadian companies and investors are involved in Arizona’s biotechnology, medical, and life-sciences industry. Click [here](#) to read.

### Mining

The future of Arizona mining, specifically copper and how Canada fits into it. Click [here](#) to learn more.

### North America

North America stands at a historic inflection point. Read the entire report [here](#).



The Arizona semiconductor ecosystem is a cornerstone of the United States’ strategy to produce over 20% of global advanced semiconductors by 2030. Supported by the CHIPS and Science Act, Arizona has emerged as a hub for fabrication, packaging, testing, research, and workforce development. The state’s concentration of talent, infrastructure, and large Canadian financial investments that has created a fertile environment for both domestic and international collaboration. With additional investments from TSMC, Intel, and Microchip Technology, Arizona is helping to strengthen North America’s competitiveness, enhance supply chain resilience, and accelerate technological innovation in semiconductors.

Canada plays a complementary role in this growing North American semiconductor ecosystem. Although it does not host large-scale fabrication plants, Canada’s strength lies in materials science, advanced design, and specialized component manufacturing as well as financing. Canadian firms such as

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Teledyne DALSA, Pultronics, Celestica, and Neo Performance Materials supply critical materials, photonics components, MEMS devices, and precision manufacturing equipment that help maintain the high standards required by Arizona fabs. These contributions support U.S. efforts to reshore semiconductor production while deepening cross-border industrial cooperation.

Collaboration between Arizona's advanced manufacturing infrastructure and Canada's R&D and design capabilities is already taking shape through partnerships led by organizations such as CMC Microsystems, C2MI / MiQro, and VueReal. These initiatives advance chiplet integration, sensor technologies, and advanced packaging—key areas for next-generation computing, AI, and quantum technologies. The synergy between Canada's innovation ecosystem and Arizona's large-scale production capabilities fosters mutual growth, driving efficiency and innovation across the semiconductor value chain.

Workforce development has become another vital area of cooperation. Arizona State University (ASU) serves as a central hub for education and training under the International Technology Security and Innovation (ITSI) Fund, offering programs such as “English for the Semiconductor Industry” to develop a skilled labor force in both the U.S. and partner countries like Mexico. By extending collaboration to Canadian universities and technical institutes, these efforts can create a North American talent pipeline for engineers and technicians, ensuring a steady supply of professionals equipped to meet the industry's rapidly evolving demands.

Ultimately, the Canada–Arizona partnership exemplifies the regional integration envisioned by the CHIPS and ITSI frameworks. By linking U.S. fabrication capacity, Canadian innovation, and coordinated workforce development, both regions are contributing to a resilient and globally competitive semiconductor ecosystem. This collaboration not only supports the reshoring of advanced manufacturing but also promotes shared leadership in cutting-edge fields such as AI, quantum computing, and advanced packaging—strengthening North America's position as a powerhouse in semiconductor technology.

Beyond manufacturing and workforce development, research and development (R&D) collaboration between Canada and Arizona is emerging as a strategic pillar of North America's semiconductor innovation agenda. Joint R&D initiatives can accelerate advancements in advanced packaging, chiplet integration, and heterogeneous computing, which are essential for next-generation AI and quantum technologies. Canadian research centers such as C2MI in Quebec and NanoFab in Alberta, combined with Arizona's National Semiconductor Technology Center (NSTC) and university-based laboratories, provide complementary expertise. By aligning their research priorities and sharing access to fabrication and testing facilities, both regions can reduce duplication, lower costs, and speed up innovation cycles.

Policy alignment and investment coordination are also critical for sustaining this collaboration. Through frameworks like the Americas Partnership for Economic Prosperity (APEP) and the OECD semiconductor ecosystem reviews, the U.S., Canada, and Mexico are identifying ways to align regulatory standards, streamline trade in high-tech components, and attract long-term private investment. Coordinated funding through mechanisms such as the ITSI Fund, the U.S. International Development Finance Corporation

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(DFC), and Canadian innovation programs can further strengthen joint initiatives. This policy coherence ensures that cross-border collaboration remains resilient against potential trade disruptions and political shifts while enabling companies in both countries to access shared resources and markets.

Looking ahead, formalizing Canada–Arizona cooperation through bilateral agreements, innovation hubs, and co-funded workforce and R&D programs could establish a durable framework for semiconductor collaboration in North America. Creating joint centers of excellence for advanced packaging, materials innovation, and design automation would deepen integration and improve regional self-sufficiency in critical technologies. As global demand for semiconductors continues to rise, this partnership offers a pathway toward sustainable growth, greater supply chain resilience, and leadership in emerging technologies. By combining Arizona’s industrial capacity with Canada’s technical expertise, North America can secure its position as a global leader in semiconductor innovation and manufacturing.

Expanding collaboration between Canada and Arizona will also enhance supply chain security and sustainability across North America. By diversifying sources of critical materials and components, both regions can reduce reliance on overseas suppliers and mitigate risks associated with geopolitical tensions or global disruptions. Canada’s abundance of essential minerals—such as nickel, cobalt, and rare earth elements—can support Arizona’s chip fabrication and packaging industries, which depend heavily on stable access to these materials. Coordinating supply chain mapping, logistics, and sustainability standards will ensure that semiconductor production in North America remains both resilient and environmentally responsible.

In the long term, the Canada–Arizona semiconductor partnership serves as a model for how regional cooperation can drive technological leadership. By integrating education, research, manufacturing, and policy efforts, the two regions are helping to build a seamless North American semiconductor ecosystem that supports innovation from concept to production. This collaboration not only advances economic competitiveness but also strengthens strategic autonomy for the U.S. and its allies. As the global race for semiconductor dominance intensifies, sustained investment and policy alignment between Canada and Arizona will be essential to maintaining North America’s edge in advanced technology and ensuring its continued leadership in the industries of the future.



