

Situational Analysis

Arizona is home to three nationally recognized research universities, a number of large companies supplying leading-edge technology products, several prominent U.S. government facilities and a robust small/medium-sized business community with a strong entrepreneurial spirit. Nevertheless, Arizona has relatively little experience in transferring and/or commercializing available technologies developed by its large organizations to its small business community. Arizona's small/medium-sized businesses also often find it extremely difficult to identify and/or make needed technology commercialization connections with large organizational entities in Arizona and vice versa.

A low level of community awareness and understanding is deemed to exist in Arizona as to the importance of innovation, technology business creation/development and technology commercialization to Arizona's economic future. There are a relatively large number of organizations in Arizona engaged in business and/or economic development, although little of their effort/resources are specifically devoted to innovation, technology business creation/development or technology commercialization.

Arizona's small/medium-sized business community has historically operated with minimal access to available venture capital and other financial resources, particularly as they relate to early-stage, seed and/or capitalization grants/funding. In fact, it is commonly cited today as one of the biggest hurdles (if not the biggest one) smaller/newer firms in Arizona face when starting/growing a high-tech business. Several worthwhile programs are available to Arizona small businesses through ADOC's existing Arizona Innovation Accelerator Program. They include: investment tax credits, SBIR/STTR proposal support services, market studies and technology assessments. In addition, the state offers a high-tech business development website. Feedback from the small business community indicates additional support services are needed in areas such as IP legal assistance, incorporation, operating agreements, patent filings, etc. Improvements to the technology business development website were also noted. They include: the addition of information on how best to access research taking place in Arizona, as well as technologies under development by local companies, information about special lab and other facilities available for use by the business community, and an idea-exchange facility or mechanism.

The key or critical components to significantly increasing the level of technology commercialization in Arizona include: revisiting Arizona's current technology commercialization policies; making the creation/growth of innovation/technology businesses a key part of statewide economic development efforts; and providing the infrastructure and resources to effectively support Arizona's innovation/technology businesses.

References/Citations:

1. State of Arizona Strategic Roadmaps Recommendations & Progress Report, Sept. 2008 (click [here](#) to see full report)
2. High-Technology Activities in Arizona: 2007 Update, W. P. Carey School of Business, Arizona State University, January 2008 (click [here](#) to see full report)
3. Arizona Solar Electric Roadmap Study, Arizona Department of Commerce, January 2007 (click [here](#) to see full report)
4. Building from a Position of Strength: Arizona Advanced Communications & Information Technology Roadmap, Arizona Department of Commerce, March 2004 (click [here](#) to see full report)
5. Positioning Arizona for the Next Big Technology Wave: Development & Investment Prospectus to Create a Sustainable Systems Industry in Arizona, Arizona Department of Commerce, March 2004 (click [here](#) to see full report)
6. Platform for Progress: Arizona's Bioscience Roadmap, Prepared for Flinn Foundation by Battelle Memorial Institute, December 2002 (click [here](#) to see full report)

Objective

Develop a collaborative and coordinated technology commercialization effort among Arizona's research universities and manufacturers.

Proposed Initiatives and Action Items

The following technology commercialization initiative recommendations have been identified by members of the technology commercialization focus group for possible adoption and/or implementation in Arizona. The recommendations will be further discussed, expanded as deemed appropriate and assigned a final priority at the Governor's Manufacturing Summit.

Initiative	Action Item	Time Frame
1. Improve the process of identifying resources, consummating linkages, exchanging ideas, sharing information & obtaining assistance in support of technology commercialization in Arizona	<ul style="list-style-type: none"> ○ Evaluate existing manner/method of making such connections ○ Determine what can be done on a statewide basis to improve it (e.g., conducting forums specifically aimed at bringing university, other research institutions and large company technology transfer/commercialization programs and companies together, employing concierge-type services to better make connections at key locations; establishing a user-friendly, web-based, technology-business development information one-stop and idea-exchange mechanism, etc.) ○ Implement suggestions as deemed appropriate/practical 	Near-term (High Priority)
2. Strengthen existing incubation efforts to better support technology commercialization opportunities capable of increasing technology business creation, development and innovation in Arizona	<ul style="list-style-type: none"> ○ Determine what actions can be meaningfully undertaken at the state level (e.g., grants, low-interest loans, etc.) to strengthen the level of financial and other resource support to existing business incubation efforts in Arizona ○ Implement recommendations as deemed appropriate 	Near-term (High Priority)
3. Create additional capital formation opportunities & programs deemed essential to effectively support technology commercialization, yielding additional technology business creation, development and innovation in Arizona	<ul style="list-style-type: none"> ○ Existing efforts to provide newer/smaller Arizona high-tech businesses with additional capital formation opportunities should be fully supported as a high-priority item ○ New opportunities for providing capital formation to existing Arizona companies should also be explored (e.g., attracting more venture capital firms to Arizona with charters oriented to funding start-up companies in emerging technologies, providing early-stage or seed and/or capitalization grant funding, etc.) 	Near-term (High Priority)

Initiative	Action Item	Time Frame
<p>4. Encourage the conduct of local/regional collaborations, partnerships and/or pilots to gain critically-needed experience in commercializing available technologies</p>	<ul style="list-style-type: none"> ○ Determine what measures can be undertaken on a statewide basis to increase/accelerate the level of technology commercialization collaborating, partnering and/or piloting (e.g., conducting forums mentioned under Initiative 1 above, making items such as patents part of the tenure track for university professors, better coordinating university technology transfer programs at the state level, providing tax incentives for companies licensing technology from an Arizona university or developing emerging technologies that are strategically important, encouraging universities to make their technology transfer programs more service- as opposed to profit-/loss-oriented) ○ Implement as deemed appropriate/practical 	<p>Near-term (High Priority)</p>
<p>5. Expand Arizona Department of Commerce's (ADOC's) existing AZFAST & related grant programs to better meet the formation/commercialization needs of technology businesses in Arizona</p>	<ul style="list-style-type: none"> ○ Review existing grant program to determine where gaps exist and/or streamline (e.g., add technology business formation support services, make existing programs easier to utilize and better promote them, broadening the definition of a qualified investor under the Angel Investment Tax Credit program, etc.) ○ Take into account what others are doing in this area (e.g., Michigan Economic Development Commission, Utah Governor's Office for Economic Development, including its Centers of Excellence Program, etc.) ○ Add new services as appropriate to close the gaps and fully meet the needs of early-stage small businesses 	<p>Near-term (Medium Priority)</p>
<p>6. Establish a comprehensive Web-based portal capable of serving as a user-friendly, one stop for technology businesses to conveniently access current information about available resources, programs, facilities, expertise & services in Arizona</p>	<ul style="list-style-type: none"> ○ Update the existing website with additional features as needed and deemed appropriate ○ Re-launch the updated website 	<p>Near-term (Medium Priority)</p>

Initiative	Action Item	Time Frame
7. Establish an infrastructure devoted to increasing the level of innovation, technology business creation/development and technology commercialization taking place in Arizona	<ul style="list-style-type: none"> ○ Determine what type of infrastructure could best support innovation, technology business creation/development and technology commercialization on a statewide and regional basis (e.g., establishing an operating model in Arizona which could be aspired to by its research universities/institutions and large companies developing technology, securing financial resources to support such a model, etc.) ○ Implement recommendations as deemed appropriate/practical 	Mid-term (High Priority)
8. Support legislative efforts such as re-addressing the need for Arizona research universities' having the capability to take an equity position in companies as part of the technology transfer/commercialization process	<ul style="list-style-type: none"> ○ Determine where gaps exist in current legislative policy (e.g., allowing universities to take an equity position in companies engaged in technology transfer/commercialization) ○ Identify policy changes to close ○ Align with business groups having active legislative agendas ○ Endorse actions to rectify 	Mid-term (High Priority)
9. Determine what research facility enhancements can be undertaken to increase the level of technology commercialization in Arizona	<ul style="list-style-type: none"> ○ Investigate what additional resources are needed to support areas such as classified research, rapid prototyping, commercialization of border security, etc. ○ Determine what measures can be undertaken to address them ○ Implement items as deemed appropriate 	Long-term (Medium Priority)
10. Elevate the level of community awareness & understanding of the critical role played today by innovation, technology business creation/development & technology commercialization to generate high-wage jobs, build wealth, increase the standard of living & improve the quality of life in Arizona	<ul style="list-style-type: none"> ○ Utilize existing State marketing opportunities to the maximum extent possible to better educate the community at large in Arizona ○ Undertake an effort to create a higher level of awareness/understanding with key policy makers and elected officials in Arizona 	Long-term (Medium Priority)

KEY: Time Frames: Near-term (0-12 months), Mid-term (13-24 months), Long-term (25-48 months)

Proposed Outcome

The development of a comprehensive, technology-commercialization strategy will increase the level of technology business creation, development and innovation throughout Arizona.