



House Finance Committee
And
House Business Affairs & Labor Committee

Senate Finance Committee
And
Senate Business, Labor and Technology Committee

Advanced Industry Accelerator Grant Program Update
as of
June 30, 2019

Advanced industries (AIs) are key drivers of the U.S. and Colorado economies. Comprised of engineering and R&D-intensive companies, they deliver products and services in a wide range of markets, from aerospace to robotics to medical devices. Colorado's AIs include aerospace, advanced manufacturing, bioscience, electronics, energy and natural resources (including cleantech), infrastructure engineering, and technology and information. Together, they account for nearly 30 percent of the state's total wage earnings, around 30 percent of total sales revenue, and almost 35 percent of the state's total exports.

To ensure the progression of this vital aspect of Colorado's economy, the AI Accelerator Program was created in 2013. This initiative promotes growth and sustainability in these industries by driving innovation, commercialization, and public-private partnerships, while also increasing access to early-stage capital and creating a strong infrastructure that enhances the state's capacity to be globally competitive.

OEDIT offers four grants and two global business programs to support AI companies in their various phases of growth. The grants include Proof of Concept, Early-Stage Capital and Retention, Infrastructure Funding, and AI Export. The programs include a network of Global Consultants and export training to build export readiness and help connect Colorado AI companies to global opportunities.

Proof of Concept

Proof of Concept (POC) grants fund research with commercial applications at Colorado research universities, federal labs located in Colorado, and other Colorado labs with valid technology transfer offices. Funding helps pull technologies from the research institutions where they were discovered and connect them to the private sector where they can be developed into commercialized products. This acceleration of applied research leads to the rapid commercialization of products and services and provides significant economic impact and competitive advantage for Colorado and the Advanced Industries.

Grants support the commercialization of technologies at research institutions at two distinct stages along the commercialization pathway: Pre-Commercial Research (Phase I) and Commercialization Preparation (Phase II). Pre-Commercial Research includes proof of principle studies and other studies on intellectual property and resulting prototypes that demonstrate the utility of a technology for a specific application. Commercialization Preparation includes the process of creating a commercial opportunity assessment for a technology and the development of a commercialization plan.

In Fiscal Year 2019, 32 POC grants were awarded to researchers at Colorado research institutions, bringing cutting-edge technologies closer to market. Over 228 POC grants have been funded since the AI Accelerator Program's inception.

Early Stage Capital and Retention

Early Stage Capital and Retention (ESCR) grants fund companies using technologies developed in proof of concept or other early stage start-ups that have created viable products that meet a market need. Grants support technology commercialization by funding product development in preparation for a product launch or the advancement of a product or technology to achieve a commercial milestone that significantly increases the company's value and stability and better positions the company for follow-on investment, including through the federal Small Business Innovation Research program, angel funding, or venture capital. The resulting product or service must be manufactured or performed in Colorado.

Grant funding does not compete with existing marketplace funding opportunities, but rather supplements and fills an existing void for capital market's tendency to under-invest in early stage technologies. ESCR grants allow early stage businesses to complete commercial activity such as production, sales and distribution, and business growth. Funds can also be used for business start-up activities, market validation, and pre-production prototypes.

47 Early Stage Capital and Retention Grants helped Colorado companies further advance in Fiscal Year 2019. Since the program's inception, 186 Colorado companies have been funded.

The AI Accelerator Program's statute requires an allocation of at least 15% of funds to Proof of Concept grants, 15% of the funds to Early Stage Capital and Retention Grants, and up to 15% of the funds to Commercialization Infrastructure. The table below summarizes all grants awarded in Fiscal Year 2019.

Status	Program	# of Awards	\$ Awarded	\$ Spent to date	Jobs Created	Jobs Retained	New Co Created	Follow- On Capital	IP	Projected Annual Revenue
	Proof of Concept	32	\$2,383,148	\$1,879,933	4.7	16	4	\$1,171,000	16	\$825,500
Active Grants	Early Stage Capital and Retention	47	\$10,588,584	\$3,682,556	39	65	0	\$19,867,999	31	\$6,289,093
	Infrastructure	5	\$1,520,000	\$95,853	N/A	N/A	N/A	\$0	0	N/A
Totals		84	\$14,491,732	\$5,658,402	43.7	81	4	\$21,038,999	47	\$7,114,593

Approximately \$68,043,519 from the Advanced Industry Fund has been granted since 2013. The chart above shows returns realized during the 2019 grant term and those that continue to accrue as the technologies become closer to and actually enter the market-place. To date, the program successes include the creation of 1,555 new jobs and approximately 1,556 jobs retained. Additionally, these funds have helped the technologies acquire an additional \$794,484,031 in grants and investments to commercialize further.

The following three Fiscal Year 2019 success stories show how the Advanced Industry Grant Program has provided critical gap funding to technologies in early development:

MUNIREvs Technology and Information, Dolores, CO

MUNIREvs, a Dolores-based technology company, automates business revenue collection for 30% of the jurisdictions in Colorado. Established in 2011, MUNIREvs works with communities to automate their business revenue collection.

Backed by a lifetime of experience in municipal finance, MUNIREvs has revolutionized the tax and licensing process. Adding up to more than \$1 billion in paperless revenue, they have become the trusted source for payment processing, allowing residents the ease and convenience of on-time payment while helping cities and states eliminate approximately 95 percent of the manual data entry tasks.

MUNIREvs' valued team members are hand-selected for their experience in both tax accounting and customer support. Providing attentive, knowledgeable guidance that is prompt and courteous, their customer support specialists are their driving force, providing expert care to each and every one of their 50,000 customers, from right here in Colorado.

As an added service, MUNIREvs developed LODGINGREvs to turn their expert attention to helping those in the vacation rental industry. Providing helpful guidance and accounting services to lodging and short-term accommodation providers, their tax professionals help owners and managers reconcile ledgers and achieve full compliance through systematic

audits. State funding was used to accelerate LODGINGRevs' growth in rural Colorado.

Securisyn Medical, Bioscience, Highlands Ranch, CO

Securisyn Medical, LLC, a company dedicated to making airway management safer, pioneered the first, fully integrated airway stabilization system – called SolidAIRity -- designed and patented to provide unmatched airway stability for ventilated patients.

Each year, 121k ventilated patients in the United States suffer from a preventable problem called Unplanned Extubation (UE), the unintentional removal of a patient's life-sustaining breathing tube. Annually, UE contributes to 36,000 cases of ventilator associated pneumonia (VAP), 33,000 deaths and \$4.9B in avoidable costs.

Securisyn's Colorado-based team has cleared many of the hurdles required to launch SolidAIRity including securing nearly \$6M in seed capital, obtaining multiple patents, defining market and product requirements, conducting risk-assessments, building engineering prototypes and collecting technical validation data via bench, usability and voice of the customer testing. It has also received U.S. Food and Drug Administration (FDA) pre-submission guidance resulting in iterative design improvements and the third-generation SolidAIRity is undergoing final testing in preparation for FDA clearance submission.

State funding was used to help offset remaining verification and validation expenses necessary to successfully obtain FDA 510(k) market clearance and to collect evidence from early adopters to validate clinical efficacy, which is often one of the largest costs in medical device development.

On October 9, 2019, Securisyn, announced that they received 510(k) clearance from FDA to market the third-generation SolidAIRity for airway management of patients requiring oral intubation.

Lada Cube, Advanced Manufacturing, Grand Junction, CO

Låda Cube, a Grand Junction based company, aims to steadily move forward with the mission to accelerate the world's transition to reusable, demountable, and environmentally friendly construction solutions.

Through the manufacturing of pre-engineered and pre-manufactured lego-like walls, they are helping to bring the building industry into the 21st century. Architectural in design and extremely adaptable with plug-in-play electrical, Låda Cube walls provide limitless options to meet ever changing needs. Their modern and stylish solutions work for retail, residential, and anyone needing innovative reusable solutions with superb acoustical control.

Låda Cube is the first wall system to be engineered from the ground up as a solution to sustainable interior and exterior construction. Their product solves the enormous skilled labor void through the use of building technology that they believe has the capacity to fundamentally change how they are built.

Additionally, they are working in collaboration with AutoDesk to develop some of the world's first additive manufacturing processes for construction manufacturing.

State funding was used to help leverage additional capital to and help scale manufacturing orders. They have created 5 new jobs in Grand Junction.

Collaborative Infrastructure Grants

In order to align private industry and Colorado Research Institutes, Collaborative Infrastructure Grants help fund Advanced Industry projects that substantially build or utilize existing infrastructure to support or enhance the commercialization of Advanced Industry products, assist Advanced Industry start-ups with mentoring or access to

outside capital, or contribute to the development of an Advanced Industry workforce.

Collaborative Infrastructure grants are used to assist in the implementation and execution of action items identified in Advanced Industry Strategic Plans, as developed through the Colorado Blueprint Key Industry Network initiatives. Collaborative Infrastructure Grants may also be used to assist the implementation of newly identified action items that are needed to accelerate such Advanced Industries.

In addition, Collaborative Infrastructure grants may also be used to leverage federal funding opportunities that address a specific need of an Advanced Industry. Here is an example of a Fiscal Year 2019 Collaborative Infrastructure funding award:

Rockies Venture Club; Funding will impact all Advanced Industry Sectors, Denver, CO

Rockies Venture Club (RVC) (501(c)6) is the longest-running and one of the most active angel groups in the United States, operating since 1985, with 220 investor members leading syndicates valued at about \$20 million per year with \$4 million direct investment in 20-24 deals. RVC has a history of successful execution on its strategies and programs and has led local, national, and international accelerators, VC funds, and angel syndicates as well as over 140 events per year. RVC is responsible not only for funding Colorado companies, but for bringing out of state and international companies to headquarter here.

Rockies Venture Club was funded through AI to launch a new Colorado Capital Mobilization Project (CCMP) to mobilize passive capital in Colorado into Advanced Industries startups via vertically and geographically oriented Communities of Interest. Colorado has over 83,000 accredited investors, yet fewer than 1% of these individuals are actively involved in investing in early stage Colorado startups. At the same time, while Venture Capital had a record increase in overall investment nationally and in Colorado last year, Angel and Series A investments are on the decline in terms of dollars invested, with 2018 showing the lowest level of Angel investment in Colorado since 2014. (Source: Pitchbook)

This OEDIT Collaborative Infrastructure Grant will allow RVC to create new angel investing communities throughout the state, using well established principles and practices of angel group formation and management, in order to mobilize accredited investors to invest in Advanced Industries companies.

Angel investors like to co-invest with others who share their interests and/or geographic area. Investors who prefer these communities of interest, such as bioscience or energy and natural resource deals, feel unrepresented in a horizontally oriented angel group. The Colorado Capital Mobilization Project leverages our partner organization's membership to focus on AI vertical investments in bioscience, aerospace, energy and natural resources and IT. Angel education is key to mobilizing accredited investors to become active angels. This project involves leveraging the RVC Angel Accelerator program to instill confidence in accredited investors to invest in their community. Angel groups are fundamentally socially oriented. This project provides the personnel for the time-consuming task of creating relationships with Colorado's community leaders and AI associations and institutions, leveraging these communities to recruit and engage investors. There are two types of angels - those who like to meet, do due diligence and invest in individual deals. Others don't have the time, skills or inclination and prefer to invest via VC Funds. The CCMP proposes to offer both options to Colorado investors statewide.

Rockies Venture Club will promote the following activities under the Collaborative Infrastructure Grant:

- Active recruitment of angel groups within communities of interest.
- Community events in geographic Communities of Interest (Angel Forum, and Pitch Events).
- Engagement of angels through education and training programs. Generation of Community of Interest focused deal flow.
- Coordination of syndication of investment into Colorado Advanced Industries companies by these Communities of Interest.
- Creation of legal vehicles for investment Funds. Coordination of deal negotiation, funding and post-investment

management.

Rockies Venture Club expects the following outcomes during and following the grant period: 100+ new angels recruited, educated, engaged, and retained in investing Colorado companies in two years; \$3.75 million syndicated with \$1.25 million direct investment in 12 Colorado companies per year through the CCMP; 127 jobs created in Advanced Industries Companies (Kauffman research shows 7 jobs for each startup funded, and 76% survival rate beyond year one, for a total of 127 jobs); Sustainability - RVC staff continue beyond grant with new membership dues.

This CCMP will impact multiple Advanced Industries through strategic partnerships with the following institutions: Bioscience: Colorado Bioscience Association; Technology: Colorado Technology Association; Colorado Aerospace: Catalyst Space Accelerator/Colorado Space Coalition; Energy and Natural Resources: Colorado Cleantech Industry Alliance, CleanTech Open, NREL; Universities: CU Venture Partners and Anschutz CU Innovations; Rural and Community: Startup Colorado, Greater Colorado Venture Fund, SBDC, Local EDCs on the Western Slope and Front Range.

Advanced Industry Export Accelerator

The Advanced Industry (AI) Export Grant provides financial assistance for aspiring (new to export) and current (market expansion) Colorado exporters. The grant program supports small and medium-sized AI businesses through funds to offset international business development and marketing costs. Qualified expenditures include:

- Translation services for contracts;
- Legal fees related to intellectual property protection abroad and compliance/regulatory issues;
- Conducting due diligence or credit reviews on potential buyers or distributors;
- Travel-related costs for international sales trips and trade shows;
- Costs for exhibiting at an international trade show; and
- Production and design of international marketing materials.

International business development grants provide expense reimbursements to businesses that are new to exporting or are expanding into new export markets, helping them to grow and accelerate their businesses. OEDIT reimburses up to \$15,000, and Colorado businesses provide a 1:1 match for specific international export development needs.

AI Export grants were awarded to 32 Colorado companies to advance Colorado exporting in fiscal year 2019. Since the program's inception in 2013, 110 Colorado companies have been funded. The table below summarizes all grants awarded in Fiscal Year 2019.

Status	Program	# of Awards	\$ Awarded	Jobs Created	Jobs Retained	Immediate Export Sales	Projected Export Sales after 1 year
Active Grants	Export Accelerator	32	\$228,445	15.75	100	\$2,951,014	22,733,090

OEDIT tracks companies' export sales, jobs created, and the nature of the jobs created resulting from the AI Export Acceleration Program grants. Return on investment (ROI) for the state is calculated by tracking total actual export sales and dividing this by every dollar the state spends on international business development grants. As of September 2019, the program has an initial ROI of \$1:\$13. The three success stories from Fiscal Year 2019 below show successful international activity leading to job creation and business growth

Abel Automatics (Mayfly Outdoors), Advanced Manufacturing, Montrose, Colorado

Abel Automatics is a premium fly fishing company that invests heavily in research and development to continue to improve the design and technologies for its products. Abel Automatics received an \$11,000 AI Export grant to attend

and exhibit at the EFTTEX Trade Show in Brussels, which is the world's premier trade show for fishing products. By exhibiting at EFTTEX and holding additional in-country client meetings, Abel Automatics was able to gain global market exposure and attract discussions with new distributors. Attending EFTTEX resulted in \$20,489 in immediate export sales, and the company expects an additional \$2,635,000 in sales over the next year as they close contracts.

Theratogs Inc, Bioscience, Telluride, Colorado

Theratogs Inc. is a manufacturer of customizable physical rehabilitation systems for children and adults to bring ongoing therapy throughout the day. Theratogs used the AI Export grant for international client meetings including an exhibit at the COBRAFIN trade show in Brazil. The funds helped the company solidify existing relationships and form new ones in three markets (Argentina, Brazil, and Uruguay). This trip gave them insights into the needs and challenges for sales and has resulted in product modification that can gain a more favorable customs rates, lower pricing for 2019, and set the stage for a distributor summit in June 2019 where they introduced new products. Theratogs exported \$86,565 as a result of the trip and expects sales to grow an additional \$95,000 over the next year.

RemoteLock, Electronics & Information Technology, Denver, Colorado

RemoteLock used AI Export grant funds to travel with the Colorado delegation to attend London Tech Week. RemoteLock develops, markets, and sells access control software, including technology that wifi enables door locks. By attending the event, they were able to form new relationships with businesses, foster collaborative efforts, and expedite expansion efforts in the United Kingdom and other European countries. This activity resulted in \$202,201 in immediate export sales, and the company expects \$700,000 in sales in the next year.