



House Finance Committee
And
House Business, Labor and Economic Workforce Development Committee

Senate Finance Committee
And
Senate Business, Labor and Technology Committee

Advanced Industry Accelerator Grant Program Update
as of
June 30, 2018

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 2018, 42 POC grants were awarded to researchers at Colorado research institutions, bringing cutting-edge technologies closer to market. Over 196 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 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 SBIR, 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.

Thirty-Five Early Stage Capital and Retention Grants helped Colorado companies further advance in fiscal year 2018. Since the program's inception, 139 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 2018.

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	24	\$1,922,342	\$1,826,224	14.7	20.5	4	\$2,832,637	6	N/A
Active Grants	Early Stage Capital and Retention	35	\$7,682,426	\$1,664,566	37	65	N/A	\$11,717,000	10	\$4,350,000
	Infrastructure	4	\$2,576,492	\$275,294	4	4	N/A	\$0	0	N/A
Totals		63	\$12,181,260	\$3,766,084	55.7	89.5	4	\$14,549,637	16	\$4,350,000

Approximately \$50,057,942 from the Advanced Industry Fund has been granted since 2013. The chart above shows returns realized during the 2018 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 763 new jobs and approximately 870 jobs retained. Additionally, these funds have helped the technologies acquire an additional \$360,297,152 in grants and investments to commercialize further.

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

GitPrime, Technology and Information, Durango, CO

GitPrime, a Durango based technology company, has a mission to bring unprecedented visibility into the software development process. Using data from source control and the broader development toolchain, GitPrime provides software leaders a unique view into the human side of Engineering. In its raw form these data sources can be quite noisy, so GitPrime uses decades of industry research and their own immense sample set to parse the data, sort signal from noise, and create a unique view of ground truth. This approach gives software managers an edge in prioritizing their daily focus, empowers them to better advocate for the needs of their department, and gives them tools they need to communicate the impact of their work across the entire company.

GitPrime received a \$250,000 ESCR Grant for continued product development. GitPrime was funded in May of 2017 and started and finalized their grant in 2018. Their company was able to successfully add 45 technology-focused jobs to their workforce since initiating the grant to add to their current team of 9 employees. GitPrime also used the grant to hire 3 graduates from the local college. They successfully raised a \$10.5 million round of venture capital financing to help with their continued technology development.

Tailwind Nutrition, Advanced Manufacturing, Bayfield, CO

Tailwind Nutrition is a fast growing sports nutrition company based in Durango, CO with manufacturing, office, and warehouse facilities in Bayfield, CO, a Colorado Enterprise Zone. They were named a 2017 Colorado Company to Watch and selected as 2017 OR Editor's Choice from Men's Health. They appear on "Best of" and "Favorites" lists in Womens Running, Competitor Magazine, Ultrarunning Magazine, The Clymb, and Road Bike Rider. Tailwind has an avid and engaged customer base, with 19,000+ followers on Facebook, 12,700+ on Instagram, 5,600+ on Twitter and thousands of 5-star reviews on our website and Amazon.

Tailwind Nutrition received a \$250,000 Early Stage Capital and Retention Grant in November 2017. Use of the Advanced Industry funds were to be spent in Colorado on retaining personnel and creating new jobs. Having enough bandwidth to pursue new markets has been a challenge for the company, but with this infusion of capital from the OEDIT grant they were able to aggressively target opportunities that had huge upside potential. While continued operations were not dependent on the grant, acceleration of their growth curve was.

They added nine new jobs to their existing 11-person workforce. Here are specifics on how they created nine new full time jobs:

Accelerate Sales with Reps: Tailwind Nutrition has hired two employees for our sales team, in addition to filling out the remaining US territory with independent sales reps. An investment was made in Myagi (<https://myagi.com/>), an on-line learning platform to accelerate learning/training not only for our internal team, but retail sales associates and international partners as well. To date, retail and international sales are up 61.8% through the end of July.

Raise Awareness and Interest with Marketing: Tailwind Nutrition hired 3 employees for the marketing team to provide outstanding customer support, drive digital marketing efforts (email automation, affiliate marketing, and web-based efforts), and bring creative services in-house. To date, direct-to-consumer sales (website and Amazon) are up 44.4%.

Event Support and Sponsorship: Tailwind Nutrition significantly increased their physical presence at events (being on-site) in addition to expanded support by providing Tailwind Endurance Fuel on the course at many more races. Physical presence at events increased significantly from 12 to 31 events. Tailwind Nutrition expanded into triathlons (Oceanside, Madison, Chattanooga, Boulder, and Oceanside), took on the Epic Ride Mountain Bike series (24 Hours in Old Pueblo, Whiskey, Oz Trails, Carson City, and Grand Junction), and added CABDA (Chicagoland Area Bicycle Dealers Association) to drive awareness in the bike channel, in addition to some additional road marathons. In terms of product

sponsorship, Tailwind was found on the course at nearly 450 events compared to 375 last year.

Production Capacity: Tailwind Nutrition hired 2 additional FT production employees and one additional FT shipping employee, in addition to PT seasonal help during the summer in order to meet the demands of our business. From a capacity standpoint, our production team installed a stick pack machine that makes our stick packs the easiest to open on the market, implemented lean manufacturing inventory and production planning systems, and purchased a vacuum conveyor system to reduce cleaning cycle times as outlined by Manufacturers Edge consultant.

Tailwind Nutrition was also able to file for one new patent and add new equipment to their facility with the use of the grant funds.

Infrastructure Grants

In order to align private industry and Colorado Research Institutes, Commercialization 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.

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. 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, 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 Infrastructure funding awards:

Catalyst Campus for Technology and Innovation, Aerospace, Technology and Information, Colorado Springs, CO

Catalyst Campus for Technology & Innovation is a collaborative ecosystem where industry, small business, workforce training, entrepreneurs, startups and venture capital intersect with Colorado's aerospace and defense industry to create community, spark innovation and stimulate business growth. Located in downtown Colorado Springs, Catalyst Campus currently spans ~8 acres and boasts 135,000+ SF of commercial space, with an additional 50,000 SF of commercial space is planned.

Catalyst Campus provides an infrastructure platform for small business to support the rapid innovation of technology to solve operational needs for the warfighter and mature technological capabilities to launch new products and services in the commercial market. Providing a 'hub and spoke' research and development environment, the campus thrives through collaboration and engagement with federal agencies, academic institutions, nonprofit organizations, small business, business resource partners and venture capital to support innovation and the advancement of technology across the industrial base of the western region of the United States and beyond.

Catalyst Campus provides an agnostic ecosystem focused on accelerating our nations' industrial, security and innovation base by advancing technology innovation and development in support of national defense and homeland security priorities. Catalyst Campus aspires to improve the rapid development

and deployment of emerging technologies, fulfilling one of the highest priorities at the Department of Defense as they push to keep up with more advanced threats to national security.

The vision of Catalyst Campus for Technology & Innovation is to leverage an economic development 'cluster' strategy that advances and strengthens the nation's aerospace and defense industries through public-private partnerships that integrate the knowledge of government, academia and industry while supporting small businesses interested in engaging with the federal contracting goals and objectives of the Department of Defense and other federal agencies.

The Catalyst Campus for Technology and Innovation received a \$700,000 Collaborative Infrastructure Grant to build a state-wide data ecosystem where data collected from various space programs can be collected, stored, shared and analyzed by industry, academia and government. This multi-node data repository will store data produced by projects at the industry-led Space Operations Cybersecurity Center (SpOCC) at Catalyst Campus in Colorado Springs; Space and Missile Center's (SMC) Tools, Applications and Processing (TAP) Lab in Boulder (which was funded in 2017); CU Boulder Earth Lab Analytics Hub, along with other organizations who engage with these facilities or harvest data. The repository ecosystem will enable academic, government and commercially-gathered satellite and cyber security data sets to be accessed and leveraged for research and development (R&D) innovation and acceleration of technological solutions for both defense and commercial markets.

This grant targets the critical space data gap and will (1) enable existing R&D centers with state-wide connectivity to interactively develop new space-related products and solutions; (2) establish Boulder and Colorado Springs as regional hubs to advance data analytics tools and applications; (3) provide opportunities for business incubation and venture capital investment; (4) promote partnerships to train Colorado's workforce in data analytics and artificial intelligence; and (5) create a unique, cloud-based capability between government, industry, and academia in a Colorado-based non-profit innovation center; capitalizing on the private investment made at Catalyst Campus.

Through the use of the Advanced Industry funds, the Catalyst Campus has created 101 new jobs and retained 29 jobs. They have successfully been awarded numerous design patents, five utility patents and one provisional patent for a total of 10 new patents. They were also able to successfully leverage over \$134 million from federal grants, venture capital and SBIR funding.

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 25 Colorado companies to advance Colorado exporting in fiscal year 2018. Since the program’s inception in 2013, 78 Colorado companies have been funded. The table below summarizes all grants awarded in fiscal year 2018.

Status	Program	# of Awards	\$ Awarded	Jobs Created	Jobs Retained	Immediate Export Sales	Projected Export Sales after 1 year
Active Grants	Export Accelerator	25	\$176,454	15.5	71	\$2,942,570	\$27,770,000

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.¹ As of September 2018, the program had an initial ROI of \$1:\$17. The three success stories below show successful international activity leading to job creation and business growth.

StoneAge Tools, Advanced Manufacturing, Durango, Colorado

StoneAge is leading the industry in the design and manufacturing of hands-free cleaning equipment for almost all industrial cleaning applications. StoneAge received a \$15,000 AI Export grant to attend and exhibit at IFAT in Munich, which is the world’s leading trade fair for water, sewage, waste, and raw materials management. By exhibiting at IFAT, StoneAge was able to gain global market exposure and showcase their innovative cleaning solutions to 135,000 attendees from 168 countries. Attending IFAT resulted in \$472,500 in immediate export sales and the company expects an additional \$200,000 in sales over the next two months as they close contracts.

MMA Design, Aerospace, Boulder, CO

MMA is a manufacturer of solar arrays, antennas, and deployables. MMA used the AI Export grant for international patents and IP protection. The funds helped navigate the export process and protect IP overseas. This dramatically increased MMA’s willingness and ability to share information on technologies while protecting the company’s ability to generate sales without fear of encroachment from foreign suppliers. MMA exported \$630,550 in product to Japan and Singapore and expects sales to grow to \$2,800,000 over the next 6 months.

Moots Cycles, Advanced Manufacturing, Steamboat Springs, Colorado

¹ The Global Consultant Network expense to OEDIT is not included because these are market-entry services not grants to offset international export activities.

Moots Cycles used AI Export grant funds to travel to Eurobike tradeshow in Germany with two goals: meet potential customers and increase brand awareness through international press. By attending the event, they directly delivered to one new distributor in the Czech Republic and three new Authorized dealers in Switzerland and Germany. They also had meetings with 54 other dealers from around the world and were highlighted by two international industry magazines. This activity resulted in \$679,500 in immediate export sales and the creation of 2.5 full time equivalent jobs to focus on international sales.