



Intro

Please reference the following information as our required submission of the first quarterly report. We are very excited by the progress made thus far and our newly formed partnership with the Small Business Administration. As you review the included information, please reach out with any questions or requests for additional clarification.

Program Startup Actions/Activities

Following notice of award, UAMMI hit the ground running preparing our processes, procedures, staff, and systems. While we were not able to fully begin the execution of the contract until the official announcement to the public, our team was able to begin work behind the scenes to ensure no time was lost. Examples of our work in this area include the following:

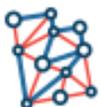
- Completed Integration of UAMMI existing systems and procedure into the SBA RIC.
- Established IPP account.
- Confirmed support relationships with all proposed team members and industry partners (including contractual agreements).
- Created information technology support systems such as shared storage tool for all program documentation.
- Identified 143 small businesses for outreach including separation by those operating in rural counties, opportunity zones, and hub zones. A full list of those identified is available upon request.

Program Strategic Tools and Events

Our team was also able to complete the setup and operational release valuable tools for use under the SBA RIC. Additionally, hosted/facilitated multiple successful events that were highly beneficial to the small business community.

RAMP

RAMP is a product/startup accelerator fully dedicated to innovators utilizing carbon fiber, advanced composites or 3D printing as key components in their product innovations. It is open to innovators at different growth stages and across a wide range of market sectors such as outdoor sports and recreation, medical devices, building construction, aerospace, commercial drones and more.



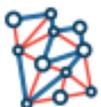


1. Conducted RAMP Accelerator Outreach and Promotional Effort--Promoted RAMP to a curated database of approximately 24,800 identified Utah innovators, entrepreneurs, and small businesses- inviting each business to join RAMP and access the support available to them and their ventures. This database was contacted 3 times through the promotional period totaling over 74,400 message contacts.

2. Successfully organized and launched 2019 Spring Cohort of RAMP- Accelerator for Advanced Materials and 3D Print Innovations--a 10-week startup and small business accelerator specifically focused on products and innovations utilizing advanced composite materials and 3D printing in their business. Combining mentoring and training, RAMP immerses innovators in a highly engaged and interactive learning experience with business mentors, advanced materials experts and 3D print specialists who are each available to help achieve success. RAMP is an entirely new accelerator dedicated fully to Utah's advanced manufacturing small businesses and innovators.



3. Small Businesses-Innovators and Entrepreneurs Selected for 2019 Spring Cohort of RAMP--Each applicant to RAMP was carefully reviewed and evaluated for a proper fit with RAMP objectives. Based on this evaluation 10 small businesses were selected totaling 25 small business team members.
4. Successfully Conducted 1st All Day RAMP Training and Mentoring Session--Successfully conducted the first all-day training and mentoring session for the RAMP teams. Detailed instruction in the Lean Launch methodology was delivered. The day consisted of 8 hours of training and mentoring delivered to all RAMP members by 3 industry experts.
5. Small Business Starts--Three teams selected for RAMP formally organized and launched their respective businesses.
6. New Innovations, products, and services supported by RAMP--The Spring 2019 Cohort of RAMP consists of 5 SB's launching new products and innovations targeting the markets of outdoor recreation, carbon fiber waste recycling, and new eco-fiber innovations. An additional 5 SB's are pivoting existing businesses into new product and service markets utilizing 3D printing technologies.





7. Innovation Support Services--RAMP secured the use of two innovation labs at both the Davis Technical College and the Salt Lake Community College. This provides access to teams specialized production and prototyping equipment needed to refine business innovations.
8. RAMP Financial Support--Each RAMP team received a total of \$20k in financial support for participating in the Spring 2019 Cohort. This support consists of both cash contributions and in-kind contributions.
9. RAMP Teams Received Cash Contribution of \$24k--Grow Utah arranged for a cash contribution to be made by the public entity Davis County Economic Loan Fund for the teams to be used as a tuition scholarship for their participation in RAMP.
10. RAMP In-Kind Contribution--Each RAMP team received an in-kind contribution of services and assistance totaling \$17k for each team. This consists of access to work stations at the Davis Technical College made available to each team during the course of RAMP; access to lab training equipment, time and expertise of industry mentors and advisors, and discounted initial Lean Launch training materials
11. Capital Access--Three major public funding programs were secured as sponsors of RAMP. These funding programs represent over \$20 million in available financial capital which RAMP teams will be able to apply for at the completion of RAMP. RAMP will serve to vet the viability of each team increasing the funding consideration by these program sponsors.
12. RAMP Outreach Targeted Underserved Areas--Weber County, Box Elder County, and Carbon County--RAMP outreach efforts targeted the traditionally underserved areas of Weber County, Box Elder County and the rural areas of Carbon County. These outreach efforts have created and awareness of the RAMP program across these regions that will benefit future cohorts of RAMP. The 2019 Spring Cohort of RAMP has selected three teams from each of these underserved areas. The success of these teams will beneficially impact each of these regions.

UAMMI Supply Chain Tool

Designed and constructed over the last year, this custom database tracks the complex Utah composites supply chain and identifies specific gaps and areas of opportunity for new business and new business services within the cluster. This tool serves as a virtual collaboration center where business needs are matched with new Utah business partners, regardless of geographic location.





In a world of diverse and geographically dispersed supply chains, a virtual tool allowing collaboration is critical. The value of this tool is even more significant considering the rural focus of the regional innovative cluster.

1. Overall, since Jan 15, there were 28 new users registered for the SCT (21 as a result of Crosstalk per below). 4 of the 7 were industry, all large business (Northrop Grumman, Boeing) looking to increase their local small business outsourcing opportunities.
2. As a result of UAMMI's Crosstalk event, 21 new SCT users were added on request. Of the 21, 12 are Utah-based small businesses and of those, 6 were a rural small business from cities North around Brigham City and as far south as Nephi. Of the remaining 9 registrants, 6 were from Utah large businesses looking to create more local partnerships (representing Northrop Grumman, Lockheed Martin, Albany.)
3. Northrop Grumman Innovation Solutions (formerly Orbital ATK) posted one RFI to the SCT looking for Utah companies that could provide outsourced honeycomb and composite machining.

CrossTalk Conference

The March 2019 UAMMI CrossTalk Conference was a successful regional industry event where experts shared their latest research and trends in advanced materials and manufacturing. It was held on March 27, 2019, bringing together industry, academic and military members in an effort to educate, exhibit and promote the interchange of ideas and experiences. 182 individuals attended the six-hour training, including 88 SB leaders. 11 speakers, including representatives from international organizations, spoke at the event. The event included exhibiting a booth for four hours where some 30 SB members received training on supply change management software tools. This conference brings speakers from throughout the composites and advanced manufacturing world to speak on topics of interest to businesses in Utah. The CrossTalk event held in March 2019 featured speakers from NIST, Germany, Composites One (owner), GE Additives, IACMI, Northrop Grumman and several small companies in Utah.





Wasatch Front Material Expo



Coordinated with the Utah chapter of SAMPE to bring small businesses to the Wasatch Front Materials Expo, an event in which 70 companies had tabletops to display their work and network with the composites community in Utah. The large attendance of nearly 500 makes this event the premier composites show in Utah and is a wonderful way for small companies to network with potential and actual customers. Surveys of exhibitors and other participants universally praised the expo for its attendance, good (qualified) leads, and general enthusiasm for bringing the composites

community of Utah together. Additionally, many companies from outside Utah came as exhibitors to acquaint the attendees with the products and services offered by the non-Utah companies and thus increase the supply chain for Utah companies.

Outreach and Marketing

In order to increase the visibility of UAMMI to the SBA RIC target audience, UAMMI executed extensive outreach and marketing efforts. A sample of those efforts is listed below for your reference.

1. UAMMI Outreach-Newsletter-- Issued the latest newsletter of the Utah Advanced Materials and Manufacturing Initiative to some 1,800 recipients. The newsletter serves as the main outreach and communication tool for the industry providing relevant information and insight into the Utah industry.
2. UAMMI Outreach-Email Circulation-- Issued four UAMMI emails to 1,800 recipients promoting relevant industry information and event and training opportunities for SB leaders in the industry sector.
3. UAMMI Outreach- Website-- Managed and updated the UAMMI website with relevant industry information and key events and new

DIRECTOR'S MESSAGE JAN 2019 – NEW PROGRAM FOR INDUSTRY STARTUPS

UAMMI Press - January 27, 2019



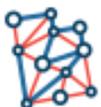
It's no secret to the outside world that Utah is a great place to do business. Among the many accolades Utah has been recognized for in recent years, the Forbes rankings continue to stand out. Forbes has ranked Utah the "Best State for Business" eight of the last nine years now and there are no signs of that changing anytime soon. The Wall Street Journal also just recently published an article on

how Utah's robust labor force has contributed to the state's economic expansion, which has outpaced the rest of the country since 2010.

This booming business climate has generated growth across many industries, especially the fast growing tech sector in Salt Lake and Utah counties. Deservedly so, many successful tech startup companies have been praised for creating jobs and attracting outside investment and tech talent to Utah in recent years.

The tech startups are not the only ones leading the way in new business creation, however. Other industries across the state are growing such as the advanced materials and manufacturing industry which UAMMI represents. While much of the growth in this field is happening within larger companies such as Boeing, Northrop Grumman, Hexcel, and others, there is also growth happening in the small and medium sized businesses and even new startup businesses.

Capitalizing on this growth and prime business climate, I am excited to announce a new UAMMI program that aims to foster even more growth in the industry. The program is a new startup accelerator for Utah entrepreneurs in the advanced materials, advanced manufacturing or additive manufacturing (3D printing) fields.





business opportunities. The website received visitations of 500 per month with 1,500 visitors for the reporting period.

4. UAMMI SBA RIC Press Release—Created pending press release for the award announcement of the SBA RIC Contract. As requested, the current draft will be coordinated with our contracting officer from SBA prior to the official distribution. We anticipate that official release will be executed in the 2nd quarter.
5. Met with USDA leadership—Discussed potential partnering opportunities and the alignment of SBA RIC and USDA goals and activities.

Additional Noteworthy Activities

While the following are only a small sample of the additional activities and efforts executed by the UAMMI team, we believe that illustrating a few items of interest is valuable to the SBA team.

1. Met with the principals of Aqua-Yield, a new company that uses nanoparticles to retain water that is administered to the roots of plants during irrigation. This technology has demonstrated improved plant yields. We assisted by linking Aqua-Yield with Solid Carbon Products, a startup company making nanoparticles. This linkage will assist both companies.
2. Met with Kory Wynne, a young inventor who is seeking to develop a unique concept of a backpack. We helped him with the design, materials choice, and manufacturing concepts. This meeting was the culmination of significant effort and resulted in a viable direction for product development.
3. Continued the technical meeting with the University of Utah professor Eric Eddings and his students to support the coal-to-carbon-fiber program. This program was initially identified by UAMMI in conjunction with the University of Utah. The partnership combined the coal expertise at the U of U and the carbon fiber expertise within UAMMI. It soon became apparent that other partners were needed and so UAMMI contacted Professor Matt Weisenberger at the University of Kentucky who has the capability to extrude carbon fibers. Then, when a source of coal pitch was needed, UAMMI identified Craig Eatough, an entrepreneur in Utah, who has developed a technology to efficiently make metallurgical coke with coal pitch as a by-product. Other members of an advisory team were also assembled by UAMMI and have been meeting regularly to move the research project along.

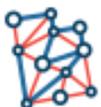




4. Contact was established with CFK Valley, an organization headquartered in Stade, Germany that promotes advanced materials and manufacturing in much the same way that UAMMI does in Utah. Because of these interactions, CFK Valley has decided that the United States will be the country of focus for the annual CFK Valley conference in June 2019 to be held in Stade, Germany. UAMMI will be the USA partner organization. The conference will be held in conjunction with an internal Airbus conference and there will be great opportunities for the USA companies to meet the Airbus people and, if the USA company has a booth, to demonstrate products. UAMMI has contacted 18 companies to offer space in the CFK conference and to present a paper. Several companies have shown interest and we have received 5 abstracts for papers to be presented. This event provides a significant opportunity to the SBA RIC's target companies. As examples of that value, consider the following:



- a. TCR is a company with significant interest in the CFK conference. This company makes resins and prepregs that can be stored at room temperature for up to 6 months (whereas normal epoxy prepreg materials must be refrigerated to 0°F during the entire storage period). TCR developed a new resin that, in addition to the storage advantages, recently passed stringent aircraft flammability and strength requirements. TCR is anxious to find a way to introduce this new resin to Airbus and other European manufacturers. TCR will take a booth and give a paper at the CFK conference and will likely also be allowed to make a special presentation to Airbus in a private conference for only Airbus technical people and invited potential suppliers.
 - b. Another company that is interested in the CFK conference is ACT Composites, a rural-based composite company in Gunnison, Utah. ACT has recently purchased a small injection molding company that was recently qualified as a Boeing supplier. ACT composites is, therefore, anxious to discuss the company's capabilities with Airbus and other European manufacturers. Hence, ACT is also taking a booth and giving a paper at the CFK conference. All this arranged by UAMMI.
5. Met with Russ Whatcott, the current technical manager of Edizione/Purple, who wants to start a new business in plastics processing. In the meeting and subsequent





discussions, we laid out a strategy for starting a new business. On a subsequent day, we met with Travis Sessions, CEO of Biometrics who started his company using the strategy that we outlined for Russ. We also introduced Russ to Tyler Margetts of LR Dynamics, who has just purchased the company and is starting a new facet of his business. This could not only be a model for Russ but LR Dynamics could be a supplier for molds for Russ' plastics molding company.

6. Assisted Conductive Composites, a small business located in rural Utah, to use their nickel-coated carbon fiber to make tests samples for products needing electronic shielding. Preliminary results were very positive.



7. At the request of Northrop Grumman, UAMMI invited 13 small companies to have tabletops at a reception following an internal technical meeting for Northrop Grumman representatives from throughout the USA. The companies were invited and more about the meeting will be discussed in the next report as the meeting will be held in April.
8. Met with Bill Benz and Ed Holt to explore the possibility of their forming a company to license technology from BYU for making a pop-up, personnel shield for anti-ballistic protection. The technology was developed by Professor Larry Howell and relies on origami folding of the anti-ballistic material so that the shield can be portable and then deployed quickly for protection. We provided technical advice and reinforced the capability of the team. The Benz/Holt team later learned that they were chosen to negotiate the contract and one of the reasons given was our team's expertise in composites as a basis for the development of the technology.

Summary

The above information is not all inclusive of every meeting, counseling service, or activity executed by the UAMMI team, but this is a representative sample of the significant progress made during our first quarter. We are very pleased by the success of our startup action, the wonderful event participation, growth and use of our IST tools, and individual company assistance provided by the UAMMI team. We believe that the SBA funds used to complete these activities is highly valuable and will result in a long term positive ROI.

