

# TCIP Overview Document

## Company Name, Project Name, Award Amount, Project Status, Overview, & Use of Funds

This document showcases 90 TCIP (Technology Commercialization & Innovation Program) projects from 2015, 2016, 2017, and 2018. It provides the Company Name, Project Name, Award Amount, Project Status, Overview, and Use of Funds for each project in addition to the specific metrics we keep track of on an annual basis. Each company is required in contract to provide the data as well as an update on their project and how they used the grant funds.

Below is an overview of each of the main pieces of information we keep track of including Capital Raised, Payroll, Revenue, Full Time Employees, Patents, and Customers/Users as incremental growth. When we enter into a contract with a company which has gone through our rigorous review process we include baseline numbers as a snapshot of where their company or project is before receiving funding. We then track the growth every year as per the contract and come up with the incremental growth each year to see the effectiveness of the program. The two main parts we focus on are jobs created and capital raised.

These numbers are highlighted below as an introduction to the program. As you read through you'll be able to take a closer look at each project including the fields mentioned above to shed additional light on the nature of the program, the return on investment and return on objective.

Capital Raised				Payroll				Revenue			
Solicitation Round	Baseline Capital Raised	Total Capital Raised	Incremental Capital Ra...	Solicitation Round	Baseline Payroll	Total Payroll	Incremental Payroll	Solicitation Round	Baseline Revenue	Total Revenue	Incremental Revenue
FY2015	\$1,595,191.00	\$10,353,784.25	\$9,235,593.25	FY2015	\$801,539.48	\$2,295,529.90	\$1,522,390.42	FY2015	\$772,724.00	\$1,327,199.25	\$554,475.25
FY2016	\$9,931,900.00	\$16,349,343.00	\$6,417,443.00	FY2016	\$659,400.55	\$8,482,910.00	\$7,823,509.45	FY2016	\$2,659,837.22	\$12,059,779.23	\$9,399,942.01
FY2017	\$15,027,668.00	\$22,842,572.05	\$7,814,904.05	FY2017	\$2,373,942.49	\$6,042,066.69	\$3,668,124.20	FY2017	\$1,837,444.23	\$36,786,256.27	\$34,948,812.04
FY2018	\$20,008,255.00	\$24,477,716.40	\$2,981,447.40	FY2018	\$2,647,662.00	\$7,037,496.40	\$4,389,834.40	FY2018	\$10,012,254.00	\$14,202,857.91	\$4,190,603.91
<b>Total</b>	<b>\$46,563,014.00</b>	<b>\$74,023,415.70</b>	<b>\$26,449,387.70</b>	<b>Total</b>	<b>\$6,482,544.52</b>	<b>\$23,858,002.99</b>	<b>\$17,403,858.47</b>	<b>Total</b>	<b>\$15,282,259.45</b>	<b>\$64,376,092.66</b>	<b>\$49,093,833.21</b>

  

Full Time Employees				Patents				Customers/Users			
Solicitation Round	Baseline # FTE	Total # FTE	Incremental # FTE	Solicitation Round	Baseline # Patents	Total Patents	Incremental Patents	Solicitation Round	Baseline # Customers...	Total # Customers/Us...	Incremental # Custom...
FY2015	40	44	12	FY2015	12	25	14	FY2015	2	5,878	5,876
FY2016	55	156	101	FY2016	33	37	4	FY2016	42,521	60,647	18,126
FY2017	73	112	39	FY2017	43	49	6	FY2017	30,983	145,024	114,041
FY2018	94	145	51	FY2018	103	126	23	FY2018	143,382	171,613	28,231
<b>Total</b>	<b>262</b>	<b>457</b>	<b>203</b>	<b>Total</b>	<b>191</b>	<b>237</b>	<b>47</b>	<b>Total</b>	<b>216,888</b>	<b>383,162</b>	<b>166,274</b>

# FY15

Solicitation Round	Company Name	Project Name	Project Status	Incremental # Customers/User	Incremental # FTE	Incremental Capital Raised	Incremental Net Income	Incremental Patents	Incremental Payroll	Incremental Revenue
FY2015	Applied Biosensors	Multi-analyte biosensor	Active	-1	-3	\$0.00	\$-41,821.00	-1	\$-83,167.00	\$-268,040.00
	Argo Fuels	Supercritical Biofuel Reactor	Inactive							
	Digithought	Weedobot	Inactive	0	1	\$50,000.00	\$0.00	0	\$30,000.00	\$0.00
	Espira Inc	Fast Diagnostics	Active	0	2	\$206,527.25	\$17,191.18	0	\$96,792.50	\$206,527.25
	LIYEN Inc.	The Slyder - asthma spacer	Active	0	1	\$350,000.00	\$0.00	3	\$50,281.00	\$0.00
	Mapps Lab	Mapplivities	Active	1,500	2	\$85,000.00	\$0.00	0	\$0.00	\$0.00
	Mobile Health Inc.(Swipe Healthcare-new name)	Mobile Health	Active	3,000	-1	\$150,000.00	\$-75,000.00	0	\$0.00	\$200,000.00
	Mommi	Clean prenatal protein blend	Active	1,114	-1	\$425,000.00	\$343,359.00	0	\$-85,417.00	\$94,387.00
	NanoAir	Nanopurification of Air	Active	0	0	\$0.00	\$0.00	0	\$0.00	\$0.00
	NanoSynth Materials and Sensors Inc.	TB Breathalyzer	Active	0	-1	\$745,000.00	\$0.00	0	\$-45,000.00	\$0.00
	ProActive Memory Services, Inc	Memory Care Partner	Active	0	1	\$0.00	\$0.00	1	\$325,750.40	\$0.00
	Progenitor Life Sciences	StemCell Reprogramming Systems	Active	2	0	\$0.00	\$-102,000.00	8	\$140,000.00	\$271,000.00
	SimPayX	Mobile Collaborative Commerce	Active	250	-1	\$10,000.00	\$130.00	0	\$5,000.00	\$300.00
	Spectra Symbol	MagnetoPot Sensor	Active	8	2	\$150,000.00	\$0.00	-2	\$258,000.00	\$118,805.00
	Thermal Management Technologies	Battery Thermal Management	Active	3	0	\$0.00	\$-85,010.00	1	\$126,496.52	\$13,645.00
	Turner Innovations	3D Dental Imaging System	Active	0	-2	\$226,000.00	\$571,909.00	-2	\$-1,671.00	\$-82,149.00
	University of Utah	StreamDX-Uroflowmeter	Active	0	5	\$2,765,000.00	\$0.00	3	\$357,000.00	\$0.00
	Witting Innovation LLC	Smart Tank: Breath Simulator	Active	0	2	\$173,066.00	\$0.00	1	\$12,431.00	\$0.00
	iVeena, LLC	Biodegradable Ocular Implant	Active	0	5	\$3,900,000.00	\$0.00	2	\$335,894.00	\$0.00

## Applied Biosensors- Multi-analyte Biosensor

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** This technology merges two highly established techniques (smart hydrogels and magnetic sensing) for the first time to create a novel microsensor that can continuously monitor almost any biomarker (e.g. glucose, pH, CO<sub>2</sub>, O<sub>2</sub>, trace metals, etc.) in liquid media. Researchers have known for over a decade that smart-hydrogels are bound to revolutionize the sensing techniques and will (1) overcome the limitations of current commercial continuous sensors (2) address the untouched market need in several industries such as bioprocess control, animal research, water quality management, etc. The biggest limitation has been in the methods to transduce the response of hydrogels into readable values. Groups around the world have used several transduction techniques without much success. We have successfully proven for the first time (& IP protected) that when smart hydrogels are embedded with magnetic particles, the response of the hydrogels can be accurately measured using a low-cost magnetometer.

**Use of Funds:** Our work in TCIP applications established the technical and commercial feasibility of the proposed continuous multi-analyte sensor for bioprocess control market. We executed a long-term licensing agreement for a specific field along with a professional services and feasibility agreement with our potential high-volume customer. This customer and partner is a Fortune 200 company with more than 30 years' experience in supplying cell culture products and bioprocess containers, has the largest (~65%) market share in bioprocess control area. In the past 2 years, we progressed from concept stage to industry-validated prototype sensors, grew from 1 employee to 6 full-time employees and 4 part-time. We have also filed 4 patents including 1 PCT application in 8 countries. In the last 1.5 year, we progressed from concept stage to industry-validated prototype sensors, grew from 1 employee to 6 full-time employees and 5 part-time. Major achievements made through the TCIP milestones are:

- (1) We built the 1st and 2nd generation working prototype and tested it successfully in the field environment,
- (2) Received purchase orders from our partner,

- (3) Conducted professional market research study (interviewed 13 fortune 500 pharma companies), and,  
(4) Filed 1 patent in 8 COUNTRIES and 2 provisional patent applications.

**Argo Fuels- Supercritical Biofuel Reactor**

**Award Amount: \$100,000**

**Project Status: Inactive**

**Overview:** Traditional biodiesel production uses a process called transesterification which combines expensive, highly filtered and purified oils (i.e. canola, corn, safflower oils, etc.) with methanol and a chemical catalyst (usually lye). This process yields methyl esters (biodiesel), glycerine, excess methanol and catalyst, and water. Argo Fuels has found a way to increase the efficiency of traditional biodiesel production methods using highly controlled environments, recyclable catalysts, and other technological innovations that streamline the process. These innovations have resulted in production speeds of up to 30 times faster the traditional process as well as a condensed form factor utilizing less energy and less real estate. Possibly the best thing about these innovations is that an Argo Fuels processor thrives on utilizing waste fats, oils, and greases (FOG) that are up to 100% free fatty acids (FFA) that are unused by other companies because of their need for pre-processing.

**Use of Funds:** TBD (awaiting 2018 annual report)

**Digithought-Weedobot**

**Award Amount: \$50,000**

**Project Status: Inactive**

**Overview:** Weedebud is a small, low-cost robot that uses artificial intelligence to find and destroy weed sprouts from a flower or garden bed before they grow into full-fledged nuisances. This softball sized robot is turned on and placed on the kind of surface it should stay on. Using solar power and its advanced computer vision system, it will tirelessly seek out and destroy weed sprouts. In cloudy areas, the solar power can be augmented by plugging in for an overnight charge. Weedebud is the first mass-market, consumer-grade robot for horticulture. By focusing on a small but important home and garden problem, Weedebud appeals to lower spending, impulse-buyers as well as more serious gardeners. The labor savings for organic gardeners is clearly appealing, but over time the product is also cost-competitive with herbicides.

**Use of Funds:**TCIP funds were used for prototyping parts and equipment, early momentum marketing, electrical engineering parts and services – designing revs of boards, industrial design – CAD designs towards making device elegant and attractive, and a portion of owner's salary

**Espira Inc.- Fast Diagnostics**

**Award Amount: \$25,000**

**Project Status: Active**

**Overview:** Espira has developed a novel pathogen detection device. Using a unique combination of advanced technologies, our detector goes beyond lab culturing of indicator coliforms and E.coli by detecting a suite of specific bacteria, protozoa and viruses in the same test. Total organisms and viable organisms are separately reported for each pathogen. A typical test cycle is under 2 hours. This includes automated sample collection, concentration, and detection and can be operated by minimally trained personnel. Espira's detector is fully automated, robust and versatile in nature and quantifies organic content of the effluent in less than 1 hour. Espira has received a Phase I Navy SBIR to rapidly detect pathogens.

**Use of Funds:** We completed all the milestones to develop the prototype for testing pathogens in water and used funds to complete milestones to secure Army Phase 1 SBIR. The work was focused on deliverables associated with this grant. We demonstrated detection of bacteria, parasite and virus from drinking water successfully. We have been awarded a Phase II SBIR (\$1Million) by Army. Please note that none of TCIP funds were available to spend in 2016.

#### **iVeena- Biodegradable Ocular Implant**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** The Biodegradable Dexamethasone Implant (BDI) is a small, degradable insert placed intraocularly at the time of cataract surgery that reduces post-operative inflammation by sustained release of a corticosteroid eliminating the need for post-operative topical drops, thus enabling drop-free cataract surgery. The BDI is comprised of poly lactic glycolic acid (PLGA), the active ingredient dexamethasone (DXM), and an excipient to control the rate of release of the DXM. Two BDI formulations are under development, a 2-week DXM releasing implant that is intended for prophylactic inflammation reduction in all cataract patients and a 4-6 week DXM releasing implant that is intended for higher-inflammatory risk cataract extraction. A major advantage of the BDI is the simultaneous delivery of therapeutic concentrations of DXM to both the anterior and posterior segments of the eye, safely suppressing inflammation and preventing posterior segment complications, including swelling of the retina.

**Use of Funds:** Use of funds were tied to milestones. Produce GMP Quality BDI Batches – To satisfy the requirements for an IND, iVeena will follow good manufacturing practices to produce a clinical quality pharmaceutical product. Use of clean room and GMP facilities (\$53,000), GMP grade materials (\$15,000), independent audit of clean room (\$14,000). To satisfy the requirements for an IND, iVeena will follow good laboratory practices to conduct an ocular and systemic toxicology analysis of GMP grade BDIs. Ocular toxicology will be done in the Mamalis laboratory (\$53,000) and systemic toxicology work at ARUP (\$35,000). Conduct Shelf Life and Stability Validation of Formulation from Milestone 1 - We will perform accelerated temperature degradation studies to assess stability of implants and predict shelf life in sterile, inert-gas packaging. The storage and validation of samples will be done by Nelson Laboratories.

#### **Liyen (Waterbear Life Devices)- The Slyder, asthma spacer**

**Award Amount: \$60,000**

**Project Status: Active**

**Overview:** Over 25 million Americans have asthma, and use a metered dose inhaler (mdi) to treat and manage their respiratory conditions. If the inhaler is used correctly, only 10-20% of the medication is effectively delivered into the patient's lungs. When an inhaler is used in combination with a spacer device, drug deposition increases to 50+%. However, spacers have not changed in over 35 years, and are seldom used due to inconvenience and poor design. This non-compliance attributes to 9 deaths, and 9000 ER visits daily due to asthma attacks. The financial burden associated with asthma is estimated to be 18 billion annually. For asthma patients looking to control their condition, LIYEN Inc. offers the Slyder—a uniquely integrative inhaler spacer that mimics the look of an iPhone case, doubles as an inhaler carrying case and enables users to customize their spacer design. Now asthmatics finally have an empowering device that has been created by an asthmatic, for asthmatics - and looks cool too!

**Use of Funds:** Since first reception of grant funding in FY2015, the bulk of our use of funding has gone towards various aspects of development of the Sidekick. In 2015, we essentially had a proof of concept model, so a large portion of funding has gone into: prototyping equipment and supplies, payroll for our engineering and development team, performance testing and validation, small office/workspace, usability studies, etc. to bring the level of development from proof of concept to a minimum viable prototype that is now being put through the final stages of design for manufacture and preparation for tooling.

Additionally, we have used our funding towards regulatory development to build out our quality system and initiating the preparation of our 510k to subsequently progress towards our milestone of getting regulatory clearance to enter the market upon the completion of manufacturing. Equally, the next largest use of grant funds has gone towards securing our intellectual property and patent work to date. This includes attorney time/team payroll and the necessary filing fees to prepare and draft and file/litigate our IP since 2015. With IP, Tech Development of the Sidekick, and Regulatory being the largest categories of our grant funding usage, any remaining fund usage comprises necessary expenditures like operational expenses, business fees, marketing, etc.

### **Mapps Labs- Mapptivities**

**Award Amount:\$70,000**

**Project Status: Active**

**Overview:** Mapps Lab LLC presents Mapptivities, a web based application that has the ability to replace the paper map in every K-12 classroom with an interactive portal for authentic learning and educational transformation. Students can build interactive maps with photos, videos and writing on almost any subject: the distance that they travel around the neighborhood, the timeline of the Roman Empire, the demographics of the state, even maps of poetry inspired by place, all geared to be customizable by the classroom teacher to meet required learning goals. These maps also become tools for assessment replacing some standardized testing. Tested and proven with over 2,000 students, first to market, and with substantial institutional and corporate support Mapptivities is positioned to become a presence in every school in America and beckon to the international marketplace. Brought to you by the people that created and commercialized the largest teacher training in US history (800,000 in the 1990s).

**Use of Funds:** Build Mapptivities App functionality so that an interactive map can be authored with words, photos, images, and videos and then can be saved and shared on the web based Esri ArcGIS platform. Mapptivities App can be used to access and utilize open source GIS data. Mapptivities App adds teachers to an interactive social network. Mapptivities App tested with key classrooms and data gathering

### **Mobile Health (Swipe Healthcare)- Mobile Health**

**Award Amount: 100,000**

**Project Status: Active**

**Overview:** MHT is bringing to market a first of its kind, diabetes mobile-centric, social health platform that assembles all the key constituencies to lower costs, improve data and information sharing, improve medication adherence, increase margins and enable better health outcomes for patients. Joining together in one Smartphone application, partners include Pharma companies, insurance companies, healthcare providers, pharmacy chains, fitness providers, groceries, etc. Additionally, individuals using the application would be able to utilize diet and exercise programs, blood glucose logging, secure instant messaging with medical providers, get community information, reorder prescriptions and supplies, and incorporates a behavior intervention program for improving the health of individuals.

**Use of Funds:** Our mobile application is live on the Apple store and has been working in conjunction with the Dollar Diabetes Club e-commerce store as a support tool for those with diabetes. Now that we have proven our V 1.0 model, the TCIP grant will allow us to build our initial V 2.0 that will take 90 days and \$60,000 to complete for us. This allows us to install our first set of clinics and doctors in Utah, totaling 8 locations that currently service 20,000 patients. The build out will be for iOS and Android. We further enhanced our features and offering on our application that will make it have a broader appeal for other health care providers and their patients. Joint Marketing Agreement with a Large Pharma partner for distribution of our application. This will allow us to leverage the sales force of a company that is already marketing to our doctor network and gives us the potential to reach millions of patients with diabetes across the U.S. We have already had several discussions/meetings with the #1 company in this space and our initial adoption into the clinics and offices are the critical element for them distributing.

**Mommi- Clean Prenatal Protein Blend****Award Amount: \$50,000****Project Status: Active**

**Overview:** Mommi has created a supplement for pregnant women that includes 15 g of protein, 200 mg of DHA, and a full prenatal vitamin. When taken with milk, it accounts for nearly all the extra nutrition a woman needs when pregnant (25 g of protein, 300 calories, plus vitamins and minerals). Protein, minerals, vitamins, and DHA (fish oil) contain naturally occurring heavy metals. Heavy metals are known to cause birth defects, learning disabilities, and other problems for growing fetuses. Mommi 3-in-1 contains a very low level of heavy metals and passes the most stringent global standards, including California Proposition 65. It took Mommi and the Twinlab science team about 6 months and 9 iterations to develop a formula with such a low heavy metal count. Other manufacturers Mommi worked with didn't think it was possible. There is no similar product in the market that meets the same stringent standard; similar products are only sold online as a result.

**Use of Funds:** This grant was provided for a program tied to our product, Mommi 3-in-1. The grant was for a sampling program and outreach to OB/GYN's, midwives, doulas, pregnancy centers. Since launching this program we have reformulated our product and we are now in the market with a new version and a new product name, Mommi Prenatal Protein Powder. The sampling program was conducted with the original product and helped open doors to a few OB/GYN offices, midwives and lactation nurses. Those contacts have proven fruitful as we continue to build our customer base with our new formula. This grant also provided us with the funds for legal trademark work on potential products in our pipeline.

**NanoSynth Materials & Sensors Inc.- TB Breathalyzer****Award Amount: \$70,000****Project Status: Active**

**Overview:** The tuberculosis (TB) breathalyzer provides an immediate TB diagnosis by detecting the unique biomarkers in a patient's breath that are only present in an active TB infection in the lungs. This sensor uses a nanotube array that accurately detects these biomarkers and produces an identifiable electronic signal when they are present in a patient's breath. Once a diagnostic result is generated, this result will be aggregated with demographic and other relevant information to an analytics platform that can map TB cases and emerging trends in real time. This technology is unique as it generates a TB diagnosis using only breath and automatically collects and maps disease relevant data in real time. Overall, this is a diagnostic test that is easy to use, affordable, and generates real time disease information that can be used by public health-related organizations to track and manage TB.

**Use of Funds:** Funds Used for materials & supplies, manufacturing and tooling of the sensor, site,field testing of the sensor and partnership development with potential end users and distributors. This was done in FY15. No TCIP funds have been spend in the last year.

**PAMS- Memory Care Partner****Award Amount: \$25,000****Project Status: Active**

**Overview:** Family members are often at a loss to obtain quality care for loved ones with memory loss. Enter PAMS, Inc.'s unique solution The Memory Care Partner (Partner) - an innovative, personalized mobile technology application to help those with a memory concern identify needs and navigate the healthcare system. Partner is an accessible and interactive guide to high quality care from first concerns about memory through each phase of a progressive dementing disease with checklists, informational sidebars and local resources. Using Partner the care team can monitor progress in achieving management goals and actively participate in dignified and respectful care that provides a high quality of life. It is unique in the marketplace in being proactive-based and providing a customized

guided approach, ease of navigation, a pleasant interface, targeted advice, and putting the patient and family in control when dealing with memory health needs.

**Use of Funds:** We used its grant funds to attend and complete BoomStartup Accelerator program.

With support of TCIP and BoomStartup, PAMS was able to develop Fundraising Strategy, including Non-Dilutive Funding, Develop Metrics to measure PAMS progress and processes. We also reviewed PAMS Brand Strategy, User Acquisition Strategy and Sales Strategy. Completed a Business Model Canvas for PAMS. Started our Financial Forecasting and Key Operational Processes. Earlier focus of funds immediately after receiving funds was to design a log and create a website while finishing up the idea into a commercializable platform while creating and testing the modules with volunteers and caregivers.

### **Progenitor Life Sciences- StemCell Reprogramming System**

**Award Amount: \$50,000**

**Project Status: Active**

**Overview:** The Technologies in development by Progenitor are focused on cellular reprogramming, genomic profiling, and control of differentiation into tissues/cells of desired function. The Matisse™ reprogramming system reprograms normal human or animal somatic cells into iPSCs. Matisse™ is unique in several ways: it provides improved quality and homogeneity of iPSCs and is easier and faster to use. Being footprint free, Matisse™ can produce safe, patient specific stem cells. State assessment products provide a unique opportunity for quantitative analysis of reprogramming and differentiation processes not provided by current assay technologies. The company is developing and licensing specific content to be used in the qualification of cells for use in assays and as therapeutics. Because of the improved quality of Matisse generated iPSC's researchers are better able to obtain cells with desired functions.

**Use of Funds:** Development of state assessment assays that will progressively evaluate stem cell quality from initial reprogramming steps to final generation of induced pluripotent stem cells. Refinement of the use stem cell markers to verify reprogramming progress, completion and maintenance of pluripotency. Development of chromosome specific markers for monitoring cell health throughout the reprogramming process. Development of methods identifying gene specific modifications that predict early pluripotent potential. Markers and assays will also be developed to determine and demonstrate state of differentiation.

Improvement of Matisse reprogramming technology, optimization of technology to increase both efficiency of product and convenience to the end-user. Improve on current methods in Matisse reprogramming to obtain homogenous, high quality iPSc with plasticity to differentiate. Provide a portfolio of products to users by developing new constructs and reagents. Development of materials and protocols to increase efficiency, improve ease of use by the customer, and expand cell types and sources for reprogramming.

Utilize current industry best-practices to demonstrate capacity of Matisse cells to generate several differentiated cell types with high value for basic science and industry research; including Phase II Pharma project requiring Brown Adipocytes. Demonstrate functionality of Matisse Brown Adipocytes vis a vis mitochondrial uncoupling and oxygen consumption/energy expenditure. Pilot new U. of Utah technology (Graham) to enhance brown adipocyte production via a self-shedding Fndc5 protein product.

Develop and close 2 additional commercial partners for application, use, and support of Matisse reprogramming and differentiation. Discussions are initiated with potential targets, including European company, a Japan based company, and an additional large Pharma user. These discussions will be focused on use of the Matisse technology and could lead to channel distribution agreements as well.

### **SimPayX- Mobile Collaborative Commerce**

**Award Amount: \$50,000**

**Project Status: Active**

**Overview:** SimPayX is building a universal mobile shopping platform which allows customers to shop and pay while doing in person shopping. While walking into a coffee shop in the morning Amy gets the menu on the mobile device, selects the cafe latte and pays. During lunchtime while closer to the drive thru Amy's mobile gets the restaurant menu, Amy selects and pays. SimPayX technology also allows Amy to shop at the unattended systems like vending machine and car wash. Providing a very convenient way to shop at any in person shopping locations with a single app and ability to avoid the lines is a new and unique 'mobile collaborative commerce' market space! This experience is made possible by SimPayX's patent pending technology called as 'Dynamic Menu Generation (DMG)'. None of the payment data is stored on the phone or transferred to the Point of Sale which makes SimPayX a very 'secure' shopping platform. SimPayX uses Reverse Authorization (rAuth) technology (patent pending) to make this happen.

**Use of Funds:** Develop Beta product, Conduct pilot tests, Develop production version, Patent legal fees

### **Spectra Symbol- Magneto Pot Sensor**

**Award Amount: \$50,000**

**Project Status: Active**

**Overview:** AST (Above-Ground Storage Tank) owners want monitoring systems for: safety, environmental compliance, leak detection, overflow prevention, automated alerts, inventory management, and real-time data (nprweb.com). This is accomplished with expensive or ineffective options, such as magnetostrictive, laser or Reed Switches. Spectra Symbol's MagnetoPot 2 technology measures liquid level in an oil tank with stable electronic components. The difference our patented and patent-pending tech offers compared to other technologies is two-fold: 1. It is less expensive by half 2. As covered by the patent-pending claims, it is able to detect two levels of liquid. This is important for oil tanks because oil is lighter than water. Water can fill up in the bottom of tanks and cause problems in calculation of fill level, in contamination, in overall operational efficiency for the oil well operator. So for half the price, oil tank companies can get double the value in a single linear sensor.

**Use of Funds:** Used long ago for engineering. Documented in earlier submissions. It was all used for engineering development to finish the product up for commercialization, materials to build the product, and to build our online presence. Continued engineering support and product development enhancement, collection of VOC (Voice of the Customer), and refining of product attributes and price for the market. Low cost maintenance to lead on the market pricing; improve product functionality, quality and delivery of MagentoPot 2 sensors to the oil tank market.

### **Thermal Management Technologies- Battery Thermal Management**

**Award Amount: \$75,000**

**Project Status: Active**

**Overview:** The technology consists of an air tight case in which closely packed cells of any desired shape are immersed in an environmentally benign, non-conducting, fire retarding, fluid engineered to boil at low temperature. Heat released from the cells/wires/ junctions is readily absorbed as liquid is converted to vapor. The vapor bubbles quickly make contact with a cooled wall/lid of the case and condense thus releasing the captured heat into the outside air or a circulating coolant from the vehicle AC unit. Included is a simple system to effectively reject air from the enclosure while retaining the condensable vapor. This system is unique in that internally generated heat is quickly transferred to outside the case and, in addition to being immersed in an effective fire suppressant; all cells are maintained at a uniform temperature far below ignition thresholds and in an oxygen free environment. This eliminates the possibility of fire.



**Use of Funds:** Created a working relationship with one or more high performance battery and/or electric vehicle manufacturer is established. Interest in the technology has been expressed by K2 Battery. A reciprocal NDA is in place and K2 engineers are currently evaluating the technology. (See response to question 46.) Other potential partners and customers will be contacted all through the project and during the funding and commercialization effort following the project. Technical and cost requirements for a battery package demonstration prototype directed at a specific application but exhibiting features adaptable to a wide variety of applications are defined. These requirements will be developed in conjunction with the cooperating industry partner identified in Milestone 1.

Design review for the demonstration prototype described in Question 39 completed. Reaching this milestone will involve engineering design, analysis, and design iteration. Reviewers will include both TMT and cooperating industry personnel. Demonstration of the functional prototype conducted. This requires acquisition of all components and materials, fabrication, assembly and preliminary functional testing. A well instrumented baseline standard air-cooled battery pack will be subjected to a discharge rate expected to result in excessive cell temperatures. Thermal response will be observed. An identical battery pack with the integrated TMT thermal management system will then be subjected to the same rates of discharge and temperature response observed. Invited to the official demonstration will be representatives from industry, state government, USU, state and national legislators, and press.

Patent application(s) updated and technology licensed to initial customer. The technical lessons learned in accomplishing Milestones 1-4 will enable the preparation of additional or more comprehensive patent application. Licensing to at least an initial customer will involve negotiations, business expertise, substantial legal costs and travel. This licensing process will be critical to successfully issuing additional licenses.

#### **Turner Innovations- 3D Dental Imaging System**

**Award Amount: \$97,000**

**Project Status: Active**

**Overview:** Turner Innovations proposes to develop a 3D intra-oral x-ray imaging system for use in dental diagnostics. This simple and easy to use system will allow dentists and dental technicians to improve caries (cavity) detection, crack detection, perform implant planning on single teeth, and improve imaging for root canal procedures. All of this will be done at much lower radiation dose to the patient than other 3D imaging techniques, and at a much lower cost to the dentist and the patient.

**Use of Funds:** Design and build a breadboard prototype - The basic components of the breadboard prototype that will be used to demonstrate technical feasibility will consist of a combination of off-the-shelf components. We will design the system, procure the components, and build the functional prototype. This will require about 3 months time. Automation of the prototype - Concurrently with the hardware build, we will begin work on the automation and control software. For this breadboard prototype the automation will be controlled by Labview software using a National Instrument's I/O board in a personal computer. The software will be designed to synchronize the x-ray detector and source control.

Image quality determination - Feasibility of this 3D imaging approach will be determined primarily based on the image quality of the 3D reconstructions. These reconstructions will be performed by outside collaborators for a fee of \$15,000. Figures of merit such as Image Resolution, Contrast to Noise Ratio, Accuracy, and Diagnostic Quality will be measured using standard imaging techniques.

#### **StreamDX- Uroflowmeter**

**Award Amount: \$50,000**

**Project Status: Active**

**Overview:** StreamDx™ is a mobile at-home uroflowmeter, which enables urologists and Primary Care Physicians (PCP) to make more informed therapeutic decisions at lower cost and reduces the rate of preventable ER visits. StreamDx™ works by measuring the change in capacitance that occurs when the fluid height within the container changes upon urination. Our device uses a sensing capacitor, battery powered measurement circuit, wireless data transfer to mobile device, and a data display application. The StreamDx™ at-home system works by collecting urine flow data and then transferring to a communication interface with our servers and then downloads the data to a patient's electronic medical records in an easy to read and interpret display. Finally, the StreamDx system allows access to patient uroflow data, diagnostic predictions, patient notifications, and emergency patient condition warnings. Unlike other devices on the market which cost \$20,000 or more, our device can be manufactured for \$30.

**Use of Funds:** Stream Dx received a \$50,000 TCIP Grant in early 2015. The TCIP Grant Funds were used to initiate and make progress on the 5 proposed Milestones (see response to Question 6). Subsequent to receiving the TCIP Grant, Stream Dx raised private equity capital and received a direct to Phase II NIH Grant. Without the TCIP Grant and the progress made on the Milestones, it would not have been possible to raise the additional capital and to be near FDA registration and first sales.

#### **Witting Innovation- Smart Tank: Breath Simulator**

**Award Amount: \$75,000**

**Project Status: Active**

**Overview:** Capnometers (CO2 analyzers) allow clinicians to monitor patient health during sedation and anesthesia and are becoming increasingly more utilized and relied upon during critical care procedures. Failure of a capnometer can be life threatening. One out of every hundred incident reports involving capnometry is attributed to capnometer malfunction and could have been prevented if the capnometer was functioning properly. Current calibration procedures and equipment are not capable of detecting malfunctioning capnometers. We are developing a portable device that will test capnometers to make sure they are performing correctly and are safe to use. The device will dynamically simulate a patient's breath and test other key elements of a capnometer. The ability to detect capnometer failures under real world conditions will improve patient safety as well as increase standardization of testing procedures and decrease testing and calibration costs.

**Use of Funds:** Grant funds were used to help with development and testing. Specifically they were used to create prototype V6 of the SmartTank and do preliminary testing on it.

# FY16

Solicitation Round	Company Name	Project Name	Project Status	Incremental # Customers/User	Incremental # FTE	Incremental Capital Raised	Incremental Net Income	Incremental Patents	Incremental Payroll	Incremental Revenue
FY2016	Axon Optics	Migraine Eyewear	Active	17,000	1	\$0.00	\$28,000.00	0	\$418,447.00	\$1,900,000.00
	Bastion Biologics	polyFab Therapeutic Platform	Active					7	\$-18,800.00	
	Chapul	Insect Protein Capture	Active	0	0	\$360,000.00	\$0.00	0		\$0.00
	Dark Energy	Destruction-Tested Tech	Active	20,000	-1	\$0.00	\$-20,000.00	2	\$-38,800.00	\$1,270,000.00
	Distal Access	RESECTR	Active	1,000	3	\$-1,000,000.00	\$0.00	2	\$968,000.00	\$5,000.00
	EStar Solutions, LLC	RazorTek Modular LED Lighting	Active	3	0	\$-173,000.00	\$57,500.00	0	\$-7,500.00	\$-36,500.00
	Elute, Inc.	ElutiBone	Active	0	-1	\$2,220,000.00	\$1,508,301.00	-4	\$-13,375.00	\$-120,000.00
	Fluidx Medical Technology	Vascular Occlusion Device	Active	0	3	\$1,855,000.00	\$0.00	3	\$418,000.00	\$0.00
	Homie, Inc.	Homie Platform	Active	753	84	\$-649,990.00	\$599,997.25	0	\$2,836,000.00	\$2,388,000.00
	Lazarus Medical Technologies, LLC	Repositionable Chest Tube	Active	-2	-3	\$-270,000.00	\$0.00	-5	\$-120,000.00	\$0.00
	Linq Home	Smart Home Vents - IoT	Inactive	-33	-1	\$-120,000.00	\$0.00	0	\$-4,750.00	\$-30,175.00
	MesaGen	Biologics for Immuno-oncology	Active	0	0	\$3,500.00	\$0.00	0	\$0.00	\$0.00
	Microsurgical Innovations	Vessel Coupling	Active	0	1	\$341,000.00	\$81,352.14	0	\$34,336.00	\$193,812.00
	Mommi	Clean Prenatal Protein - Mommi	Active	114	-1	\$600.00	\$-449,860.00	0	\$0.00	\$39,989.00
	MultiFunctional Imaging (MFI)	MultiFunctional Imaging	Active	0	-1	\$-1,300,000.00	\$-20,000.00	-1	\$-32,000.00	\$0.00
	PK Clean Technologies	Plastic Waste to Fuel	Active	2	10	\$666,667.00	\$-762,168.00	1	\$749,704.00	\$2,077,363.00
	PatternJam, Inc.	PatternJam Quilt Design	Inactive	-21,253	-5	\$-362,000.00	\$-167,549.00	0	\$13,500.00	\$193,519.00
	Rosivo Inc	Cartesse	Active	0	0	\$358,000.00	\$0.00	1	\$6,000.00	\$4,000.00
	SimpleCitizen, Inc.	SimpleCitizen	Active	556	5	\$1,442,600.00	\$-370,775.00	0	\$639,418.00	\$170,920.00
	Title IO, Inc.	SecureSync	Active	-39	2	\$52,645.00	\$-52,838.24	0	\$78,000.00	\$178,656.78
	UtiliSync, LLC	UtiliSync	Active	20	-1	\$488,421.00	\$134,326.28	0	\$446.45	\$522,625.53
	Verum	Verum TCS	Active	1	3	\$519,000.00	\$535,410.73	-6	\$557,309.00	\$2.26
	Xenocor, LLC	Xenoscope	Active	4	-1	\$1,385,000.00	\$0.00	2	\$120,000.00	\$0.00
	nView medical	4D soft tissue scanner	Active	0	4	\$600,000.00	\$-609,873.81	2	\$1,219,574.00	\$642,729.44

## Axon Optics- Migraine Eyewear

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Development of eyeglasses and contact lenses that block the wavelength of light that triggers migraines.

**Use of Funds:** Funds were used to develop semi-finished lens, Increase Web Traffic, and to increase the placement into optical shops as per the milestones.

## Bastion Biologics- polyFab Therapeutic Platform

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** PolyFab technology that can eliminate tumors in patients suffering from non-Hodgkin's lymphoma more efficiently and without life threatening side effects.

**Use of Funds:** We have accomplished three of the milestones we set out to perform with the grant and amendment. Fifty thousand dollars of the grant money was used to directly fund the studies and the other fifty thousand was used to fund operations, including the hiring of a new employee.

## Chapul- Insect Protein Capture

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Chapul is developing the technology to manufacture high quality, ultra-fine (sub-100 micron particle size) cricket powder for a host of new nutritional applications.

**Use of Funds:** TBD (awaiting 2018 annual report)

**Dark Energy- Destruction Tested Tech**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Dark Energy's wearable radio and GPS converts a person's smartphone into the ultimate hunting and outdoor companion. It gives your phone the capability to be a two-way radio, GPS, distress beacon, and more.

**Use of Funds:** Milestone 1 was to hire another engineer to aid in developing the product. Milestone 2 was to develop prototypes, test prototypes, and start tooling. We accomplished milestone 1 and partially accomplished milestone 2 which was to develop prototypes and test them and go to tooling. We did not have enough money to get to the tooling stage of making the product. More funding is needed to get to higher fidelity prototypes and confidently start the manufacturing implementation process which includes plastic injection mold tooling referenced in milestone 2. Generally, the project is in standby until we can secure more funding. Getting said funding has been difficult and extremely time demanding. It has taken a heavy toll on the business. We are open to opportunities to hasten progress on Kodiak project, but funding is proving to be the key. We've tried changing our overall strategy to create more profit in the business to allow for greater investments to be made in product development. So far our strategy has been doing well. Our profits are up, market share is up, and product development budget can subsequently grow. Notable contracts are as follows: multiple contracts with the FBI, multiple contracts with the DEA, multiple contracts with the US ARMY, rollout to all SCHEELS stores, rollout to SPORTSMAN'S WAREHOUSE stores, ongoing business with ACE HARDWARE & TRUE VALUE HARDWARE, contract with MONSTER ENERGY DRINKS, to name a few. Dark Energy is on track to grow 200% year over year. Greatest need to maintain growth is funding, particularly funding for product development. We are in need of additional capital to bring Kodiak to market as well as another cheaper to develop, yet highly requested solar product.

**Distal Access- Resectr**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** The RESECTR is a non-powered, hand-manipulated device designed to combine the benefits of powered systems with the lower cost and improved control of manual surgical devices that remove uterine polyps and fibroids that cause pain and infertility in millions of women.

**Use of Funds:** Funds were successfully used to engineer, prototype, test, FDA clear, and launch the SPINR. 100% complete in 2015.

**Elute, Inc- ElutiBone**

**Award Amount: \$100,000**

**Project Status: Acquired by Boston Scientific for \$58.5M**

**Overview:** ElutiBone is made from a unique combination of clinically well-known biomaterials to create an improved bone graft filler and antibiotic.

**Use of Funds:** 1. Develop Quality Management System: The company has developed a written quality management system that meets FDA requirements and is compliant with ISO 13485 requirements. The company is focused on

launching product in the USA.

2. Complete ISO 10993 Battery of Biocompatibility Tests for ElutiBone at Nelson Labs in Salt Lake City. The test results have been incorporated in an FDA 510(k) application for its first product: EP Granules (granular form of ElutiBone) without antibiotic.

### **EStar Solutions- RazorTek Modular LED Lighting**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** EStar Solutions has created the most efficient way to convert high-voltage power to light emitting diodes (LED's) in the industry.

**Use of Funds:** Use of Grant funds has not changed from our last reporting. The amounts used that was reported from our last report are as follows: UL Certification: \$3,221.00, Inventory: \$5,322.00, Salaries: \$42,000.00, New Product Design/Molds: \$9,725.00, Patents/Legal Fees: \$39,742.00. Total funds used: \$100,000.00. All documentation for these uses of funds was reported last report.

### **FluidX Medical Technology- Vascular Occlusion Device**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Embo-X allows physicians to perform embolics that are much more targeted, cost effective, and eliminates the need to use toxic substances.

**Use of Funds:** GPX is a cost-effective non-toxic solid polymer embolic designed for increased targeting, precision, flexibility, and control. It has been tested to be:

- Non-Cytotoxic
- Non-Inflammatory
- Non-rigid
- No catheter adhesion
- Compatible with standard catheters and micro-catheters...special catheter technology not required

The GPX Embolic device consists of two solid polymers with and without radiopaque metal pre-mixed in a 1ml syringe with saline (9% sodium).

Milestone# 1: Product Development and pre-clinical status

- The GPX embolic design has been frozen and is currently being manufactured at two private contract manufacturers.
- FDA pre-submission is currently being prepared
- Multiple viscosities of GPX have been produced and evaluated

Milestone #2:25,000 for pre-clinical in-vitro and in-vivo testing

- Additional in-vitro and in-vivo studies completed resulting in product design freeze
- GPX product development status presented at major medical conference trade shows including:
  - LINC (Leipzig Interventional Congress, Leipzig, Germany January 2018)
  - SIR (Society of Interventional Radiology, Los Angeles, CA March 2018)
  - GEST (Global Embolization Society Technologies, Miami, FL May 2018)
  - CIRSE (Cardiovascular Interventional Radiology Society of Europe, Lisbon, Portugal September 2018)

### **Homie- Homie Platform**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Homie is a unique online marketplace where people can buy or sell residential and commercial real estate using technology instead of a real estate agent.

**Use of Funds:** We have hired software engineers to help us build our software. We have also filed a preliminary patent on our Contract Negotiating Tool. These activities are tied to our milestones and have helped us commercialize our technology and raise additional funds to expand and grow.

#### **Lazarus Medical Technologies- Repositionable Chest Tube**

**Award Amount: \$100,000**

**Project Status: Acquired by Merit Medical**

**Overview:** RCT is the first repositionable chest drainage system. The current products date from 1875. Difficult to remove chest fluid can lead to significant morbidity and mortality.

**Use of Funds:** We have been acquired by Merit Medical. They have made some design changes but not much has been done as far as marketing. They plan to start that in spring 2019. Use of funds which helped us get acquired were to have RCT utilized in additional hospitals - This milestone will take 30 weeks at a cost of \$15,000, A second production build of 500 sterile RCT will take 10 months at a cost of \$40,000, and design and prototype construct of a smaller diameter RCT.

#### **Linq Home- Smart Home Vent**

**Award Amount: \$100,000**

**Project Status: Inactive**

**Overview:** Smart vents for central heating and air conditioning units.

**Use of Funds:** Work with potential distribution partners such as Home Depot to help with the global manufacturing and retail aspects of the business. Use of funds also tied to collecting data to increase revenue streams for existing products while also introducing additional products in the pipeline.

#### **MesaGen- Biologics for Immuno-oncology**

**Award Amount: \$99,700**

**Project Status: Inactive**

**Overview:** Protein therapeutic which disables a tumor's invisibility cloak and activating a cancer patient's immune system and using the body's own defense mechanisms as a cure.

**Use of Funds:** 7/3/17 \$4500 Lab Rental Fees

7/31/17 \$8362.14 for Protein Biologics Production for Milestone 1

9/20/17 \$3457.14 for Protein Biologics Production for Milestone 1

12/19/2017 \$12665.24 Macrophage Phagocytosis Assay for Milestone 3

#### **Microsurgical Innovations- Vessel Coupling**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** The product is a vascular coupling device designed to join blood vessels. Our device works for both arteries and veins and can rapidly connect the two vessel ends together in a watertight seal without leaving any foreign material in the lumen to come in contact with flowing blood.

**Use of Funds:** We have developed biodegradable prototypes with TCIP funds. DSM Biomedical is the supplier for the same. Additionally, we have used services of consultants for regulatory and product development funds and paid for patent fees. TCIP funds have been also used for payroll, bench and animal testing.

**Mommi- Clean Prenatal Protein**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Mommi has created a supplement for pregnant women that includes 15 g of protein, 200 mg of DHA, and a full prenatal vitamin. Mommi 3-in-1 contains a very low level of heavy metals and passes the most stringent global standards, including California Proposition 65.

**Use of Funds:** TCIP Grants were instrumental in helping Mommi re-launch its new formula. This new formula took much longer than anticipated due to the directive that carrageenan an original ingredient was problematic for securing natural retailers. We also decided to take DHA out of the shake as it was impossible to get the shake to taste good. We reformulated and finally have a viable, tasty, blendable prenatal protein powder available for sale. Sales started in August of 2017. Mommi was essentially dormant for about a year. During this dormant period, the Mommi team refocused efforts on rebranding, repackaging, securing our Amazon sales channel and optimizing the Mommi.com website. We also started to incorporate a funnel system to help increase abandoned cart sales; produced a few promo videos and create an influencer and PR program to help us at launch. Finally, we contracted a Utah based 3PL. Although delayed in our relaunch, Mommi has now been in the market over 9 months and sales have been increasing steadily month over month. Our main focus has been in the Direct to Consumer space. We felt it was critical to have a strong customer base before proceeding with outreach to retailers. About 10% of our sales are repeat customers and our Amazon and social media reviews are consistently 4 and 5 stars. We were able to place our 2nd inventory order in July 2018. During this time we started limited testing on a DHA chew to replace the DHA taken out of the original.

**MFI, Inc- MultiFunctioning Imaging**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** MFI-Cardiac's patented software will allow clinicians to perform rest+stress MPI procedures (PET/CT scans) within 10-20 minutes compared to 60 minutes currently.

**Use of Funds:** Grants funds were used to support the milestones of the grant, specifically to complete verification and validation of our software product (mfiVerse), to perform a human factors usability study using images in 20 patients, and to submit a 510(k) application for marketing clearance to the FDA. Specifically grant funds were used to pay partial salaries of product development engineers, regulatory personnel, misc. expenses, plus costs associated with performing the human factors patient study and FDA 510(k) submission costs.

**nView Medical- 4D Soft Tissue Scanner**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** insta3D provides continuous, real-time 3D imaging so that medical interventions can be more accurate, improving the quality of care, shortening procedure times and reducing costs.

**Use of Funds:** Personnel: \$65,701.36 , Travel: \$ 4,479.61 , Other: \$11,065.45  
Direct costs: \$81,246.42 (see attachment for detailed entries) , IP 1/16-1/18: \$32,691  
TOTAL spent on project: \$113,937.42. All moneys have been spent.

**PatternJam- PatternJam Quilt Design****Award Amount: \$100,000****Project Status: Inactive**

**Overview:** PatternJam's web application allows users to design and preview a custom quilt plan. Specific tools within the application provide a way for users to: - Create custom quilt plans using the block pattern designer - Preview fabric designs from online vendors in a quilt plan - Upload personal fabric designs to preview in a quilt plan, etc.

**Use of Funds:** Funds used to acquire materials for in-house quilting. Set up operation processes necessary to automate and record the machine-quilting of 5 pattern options sold to users. Reduce time spent on each quilt to max of 1.5 hours to lower cost. Assist the setup Kickstart campaign to handle large orders in effort to manage and scale operations in preparation for full-website turn on. This will include selling approximately 1000 quilts through the campaign. Initial costs for these quilts will be paid for with grant funds. Finalize training program and employ three refugees quilting at least 30/hrs per week with a pipeline of refugees ready to come on board as needed to scale. Utilize strategic design partnerships with local design influencers (housewifebuilt, etc.) to drive traffic and increase sales of quilts. Be able to fulfill demand of 200 quilts per week.

**PK Clean (Renewlogy)- Plastic Waste to Fuel****Award Amount: \$100,000****Project Status: Active**

**Overview:** PK's proprietary technology converts plastic waste into fuels including diesel. What makes our technology unique is that we are able to process and handle post-consumer mixed dirty plastic waste streams (without being picky on what we can take and can't take), and do so profitably.

**Use of Funds:** Our two key milestones were to upgrade our facility in order to make our first customer sale, and to develop a prototype for a small-scale unit. We successfully achieved both these milestones, and received a lot of press for both. This Waste 360 article discusses our first sale (<https://www.waste360.com/waste-energy/how-pk-clean-s-plastic-fuel-plant-nova-scotia-will-work>), and this press release details the prototype for our small-scale unit which we sold to Plastic Ocean Project (<http://www.renewlogy.com/news-2.html>).

**Rosivo- Cartesse****Award Amount: \$100,000****Project Status: Active**

**Overview:** Cartesse™ is an animal-derived cartilage repair material that retains the feel and function of genuine cartilage and has been processed to resist resorption by the body.

**Use of Funds:** All grant funds were used exactly as budgeted in the application: \$37,500 for patenting; \$28,000 for the animal studies; \$10,650 on supplies, materials and processing of devices; \$10,000 loan repayment; \$5,000 facilities access; \$6,700 for travel and conference fees; \$2300 business and legal fees.

**Simple Citizen- Simple Citizen Platform****Award Amount: \$100,000****Project Status: Active**

**Overview:** SimpleCitizen is an online do-it-yourself tool for immigrants who need to file for a green card or other basic immigration documentation. SimpleCitizen helps those filing attain the same confidence and reassurance in their application without being forced to pay the high premiums associated with legal counsel.



**Use of Funds:** Funds were used to accomplish Milestone 1 in getting 50,000 users on SimpleCitizen filling out applications and using the learning center resources. Scale operations and acquire customers to ~\$15k in monthly revenues and hire additional employees in marketing and engineering.

**Title IO- SecureSync**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** SecureSync is an extremely powerful application integration and data synchronization technology that allows customers to access any type or format of data in one location and integrate it with any other data format or type in any other location. SecureSync dramatically reduces the amount of time, expense, risk and hassle of integrating disparate data sources and can open up entirely new products and services that are based on SecureSync.

**Use of Funds:** The funds were used to pay fees for continuing technology development and the salary of a customer service team member as operations continue to grow as per our milestones.

**UtiliSync- UtiliSync Platform**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** UtiliSync is a web app that makes it easy for city utility departments to complete inspection forms in the field on mobile devices. UtiliSync integrates with the city's utility mapping data and makes it easy to complete inspections for all of their utilities, and utility related activities: manholes, water valves, fire hydrants, water sampling, water main breaks, signs, lights, street sweeping, snow plowing and so on.

**Use of Funds:** Use of funds went to build a sales team and update our technology and marketing collateral to help expand our reach and get additional customers.

**Verum- VerumTCS**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Verum TCS employs longwave laser light to determine the precise location of the tip of a catheter as it approaches the heart. Other Tip Confirmation Systems (TCS) use a combination of RF antennae and ECG measurements to locate this tip. Our optical technology allows for more accurate positioning along with greater safety at a lower cost.

**Use of Funds:** Grant funds were used to build two prototypes of the confirmation system and research and development.

**Xenacor- Xenoscope**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** The technology is a new ultra low cost high definition medical imaging platform. Although our platform can address several medical imaging pain points, our initial focus is on the global laparoscopic surgery market.

**Use of Funds:** The TCIP grant dollars were used to complete all 5-milestones outlined in the grant contract. Specifically: Milestone 1) Completion of technology manufacturing design optimization. --Completed! Contract manufacturing of commercial product is being performed for initial sales and feedback. Milestone 2) Completion of required regulatory testing elements.--Completed! All regulatory testing for the product

was completed and the Xenoscope passed all requirements.

Milestone 3) Regulatory submission for US and European sales. Completed! Regulatory clearance submissions for FDA and CE Mark were completed during the grant award period.

Milestone 4) Initial introduction of technology for sales/clinical use in India. Completed! The scope was used to conduct clinical surgeries in both India and in Mongolia. In India, the scope was used to perform both laparoscopic tubal ligations and cholecystectomies by Indian surgeons. In Mongolia, 29 cases were performed by University of Utah and Intermountain Medical Center surgeons along with 20 Mongolian surgeons. The scopes were sold at cost to obtain user feedback and study the clinical deployment of the system.

Milestone 5) FDA and European Union regulatory clearance and Initial sales for clinical use in the United States.--Completed! FDA 510(k) clearance, ISO13485 certification and CE Mark were all achieved for the Xenoscope. Initial sales were established through a contract with University of Utah Health.

## FY17

Solicitation Round	Company Name	Project Name	Project Status	Incremental # Customers/User	Incremental # FTE	Incremental Capital Raised	Incremental Net Income	Incremental Patents	Incremental Payroll	Incremental Revenue
FY2017	Ancestor Cloud Inc	trace.com	Active	-9,823	5	\$792,032.00	\$-222,884.00	0	\$-234,107.00	\$212,592.00
	CureMD LLC	Cinluma	Active	200	-1	\$2,860,000.00	\$0.00	0	\$75,000.00	\$177,858.32
	Elastocrete LLC	Elastocrete	Active	-891	1	\$54,124.00	\$-675,963.00	2	\$468,981.00	\$1,740,745.00
	Gruv Fishing	Ice box	Active	836	2	\$97,200.00	\$-18,438.40	3	\$0.00	\$78,904.18
	Inertial Sense, LLC	Tightly Coupled GPS Navigation	Active	67	3	\$2,203,000.00	\$0.00	0	\$2,967.00	\$435,512.00
	Innosys, Inc.	iLumens Intelligent Lighting	Active	20	3	\$-150,000.00	\$-250,458.00	1	\$216,532.00	\$260,180.41
	Microsurgical Innovations Inc	Vacular Coupler	Active	0	-2	\$73,023.01	\$81,352.14	-1	\$-318.42	\$107,123.01
	Novi Security, Inc.	Novi Security	Active	2,505	-4	\$1,338,735.84	\$-1,169,569.10	1	\$730,989.00	\$346,069.50
	Nozzle	Enterprise SEO Software	Active	-42	2	\$16,000.00	\$338,000.00	0	\$647,500.00	\$521,300.00
	PK Clean	Plastic Waste to Fuel	Active	120,900	1	\$475,000.00	\$-1,252,513.36	-3	\$-24,082.00	\$381,104.08
	Promotus	KneeMD - Knee Motion Device	Active	-1	-6	\$-950,000.00	\$0.00	1	\$0.00	\$-476,000.00
	Qualified Rapid Products	Metal Additive Manufacturing	Active	241	0	\$22,318.00	\$-8,114.72	0	\$91,715.00	\$84,690.54
	Simplicity Airway Inc	ReddyPort	Active	3	1	\$-110,000.00	\$139,236.00	0	\$-25,377.00	\$330,259.00
	Spectra Symbol	Smart Well-Sites	Active	0	0	\$-137,500.00	\$-624,963.03	0	\$369,400.00	\$0.00
	Storj Labs	Cloud Storage	Active	5	0	\$0.00	\$0.00	0	\$45,000.00	\$118,805.00
	Through The Cords, LLC	Airway Management Devices	Active	0	23	\$-200,000.00	\$10,000,000.00	0	\$118,907.11	\$30,000,000.00
	Veritas Medical	LightLine	Active	0	3	\$553,127.20	\$-229,990.41	1	\$-1,996.67	\$301,500.00
	Waterbear Life Devices (LIYEN Inc.)	The Sidekick	Active	0	0	\$120,000.00	\$0.00	1	\$31,837.00	\$0.00
	Whistic, Inc.	Whistic	Active	0	1	\$280,000.00	\$0.00	0	\$-61,141.00	\$0.00
	ZipBooks (Phlo, Inc)	Accounting Software	Active	21	7	\$477,844.00	\$-575,305.00	0	\$1,216,318.18	\$328,169.00

### Ancestor Cloud (Trace)- Trace dot com

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Cloud based marketplace for genealogy research from translations to custom research projects that helps users connect with and pay researchers all over the world to help them with their family research.

**Use of Funds:** Funds allowed us to become cash flow positive by allowing us to increase marketing efforts and user on-boarding efforts. Hire additional employees to help with customer success. Funds helped increase monthly users as well.

### CureMD- Cinluma

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** This technology offers a highly-effective and ultra low cost thermo-ablation system to eliminate cervical intraepithelial neoplasia in the clinic or pre-clinical setting. The device is small, portable and handheld offering a fully automated program that automatically treats each lesion with a kill depth and radius that exceeds World Health Organization treatment requirements.

**Use of Funds:** Use of funds: 1) Design, development and testing of disposable thermo-coagulation probe. (Design work \$29,028.97, Contractor (Datec) \$9,000, NMS stamping \$8,000, CMI contract work \$6,329.29) 2) U.S market viability analysis for disposable probe (\$6,000). 3) Regulatory consulting for FDA/CE mark clearance (in-progress, not yet billed) 4) support of US and global thermo-coagulation efficacy trials. (\$21,000)

**Elastocrete- Elastocrete****Award Amount: \$100,000****Project Status: Active**

**Overview:** Elastocrete is a polymer-modified cement. The technology results in concrete that is flexible and has many superior properties compared with traditional concrete which also allows it to bond to organic and inorganic material which allows it to therefore be poured over troubled surfaces, wood, rubber, cracked concrete, and even commercial concrete.

**Use of Funds:** Grants funds were used to: 1) fund additional inventory; 2) general marketing; and 3) R&D efforts on the Elastocrete sealer. The concrete sealer has been finalized and sub branded with the name HydroWic. In May 2018 HydroWic sales accounted for ~ 40% of revenue.

**Gruv Fishing- Ice Box****Award Amount: \$50,000****Project Status: Active**

**Overview:** Technology designed to improve the ways in which fishing lures are organized and carried using award winning silicone hook anchoring mechanism to solve major customer pains unaddressed by current tackle storage systems.

**Use of Funds:** We have accomplished both of our first two milestones. We were able to successfully introduce three products at ICAST 2017. The funds allowed us to build molds for the two new products, the Hard Bait Box and the Big Jig Box, which was a total of \$13,700. We also used the funds to attend ICAST and marketing material for that. We spent \$2,400 on drawstring bags which we used at the show for marketing purposes and continue to use many of those at any events we attend. We spent \$17,774.01 to take our team to ICAST in 2017 and exhibit and introduce our product line and company there. The remainder of the funds, \$16,125.99 were used to purchase inventory, and get that product here to our warehouse in American Fork.

Our second milestone was to improve our prototyping and development capabilities by purchasing a 3D printer. While the funds we received from the grant didn't end up going directly towards the purchase of a 3D printer, they did free up other cash so that we could purchase a 3D printer. So indirectly the funds allowed us to achieve this milestone and develop and test new products much quicker. This prototyping has been crucial throughout the development of new products and saved us thousands of dollars in wasted molds for concepts and products that would not have worked.

Our third milestone is one we haven't been able to fully achieve yet. Because the sales have not taken off as we forecasted we have been unable to hire the employees we forecasted. The slow growth of our company has meant

that we are funding much of the growth from our sister company, Tacky Fly Fishing. That company has hired four more part time employees and is continuing to grow while we continue to build off the momentum of the ICAST 2018 show which was a huge success.

#### **Inertial Sense- Tightly Coupled GPS Navigation**

**Award Amount: \$50,000**

**Project Status: Active**

**Overview:** Tightly-coupled GPS inertial navigation technology fuses GPS, gyro, accelerometer, and other sensor data in a manner that improves GPS reliability and accuracy when GPS signals are weak or not available, such as urban canyons, highway overpasses, and tunnels.

**Use of Funds:** The grant funds have been used to progress towards the development of our Tightly Coupled GPS solution. Primarily the funds have been utilized for engineering salaries directly applicable to the GNC engineer assigned to the project. We have also purchased hardware for testing and evaluation.

#### **InnoSys- iLumens Intelligent Lighting**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Innosys has the key requirements to achieve a cost effective upgrade from linear fluorescent lighting (LFL) to intelligent LED lighting.

**Use of Funds:** We have focused on being able to perform rapid prototyping of printed circuit boards and assembly of prototype products and actual small scale (hundreds to low thousands) product order fulfillment. So far this has been very successful and has allowed us to respond quickly to customer orders.

#### **Microsurgical Innovations- Vascular Coupler**

**Award Amount: \$50,000**

**Project Status: Active**

**Overview:** The product is vascular coupling device designed to join blood vessels. Our device works for both arteries and veins and can rapidly connect the two vessel ends together in a watertight seal without leaving any foreign material in the lumen to come in contact with flowing blood.

**Use of Funds:** We have used the grant funds for product development, patent costs, payroll and animal studies. Mainly, we had a next generation device prototypes and tools that enabled us to perform long term (6 month) animal study. We conducted customer and stakeholder interviews (including > 70 surgeons) to help with product design and minimum viable product identification. TCIP funds also enabled us to engage consultants towards product development road map and regulatory.

#### **Novi Security- Novi Security**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Simple, portable, and affordable security that you can monitor right from your phone disrupting the security industry by offering services 1/5 the price of the competition with set up by anyone.

**Use of Funds:** All three milestones are completed by internal employees we already had. As a result the bulk of the funds were used in OpEx (primarily payroll) to allow us to complete them. Milestone 1 was to integrate an additional Smart Sensor into Novi Security Ecosystem - Launch an additional sensor that integrates with the existing Novi

Security system and sell \$25k in revenue of the new Smart Sensor. We did this at the end of march of 2018 and have sold over \$1k in product. Milestone 2 was to create integration with COPS Monitoring - Integrating Novi's system with COPS Monitoring's platform will allow Novi to sell to COPS' 3,300 dealers who service over 2.5 million accounts. We completed this recently in April. Milestone 3 which was to decrease COGS for our Main Kit from \$138 to \$118 (a decrease of \$20 or 14.5%) by implementing automation into our manufacturing processes is still a work in progress. We have decreased it to \$130 by \$8 dollars and look to decrease it an additional \$12.

#### **Nozzle- Enterprise CEO Software**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** We track search engine rankings, reporting to customers where they rank in the top 100 search results per keyword and how that compares to their competitors. Existing solutions include having team members spot check rankings manually by typing queries into Google and record rankings in Excel. Other competitive tools either don't provide enough data or are too expensive and inflexible to be cost effective at scale. We allow companies to track their most important keywords daily or even hourly in some cases, and keep an eye on thousands more by scheduling them weekly or monthly.

**Use of Funds:** Grant funds have been used to hire two additional employees (one software engineer and one marketing employee), accelerate product development, grow monthly recurring revenue, and market & demo product to new potential customers.

#### **Zipbooks (Phlo Inc.)- Accounting Software**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Small businesses need accounting software and timely financing to survive and grow. ZipBooks is the only option that seamlessly provides both the day-to-day functionality needed to run a business and access to short-term capital in one product.

**Use of Funds:** Funds were used to hire additional headcount and invest in product and marketing. Milestone #1 (Complete) - Double Entry Accounting - That was complete early 2017

You can sign up for a free account and check or here is a recent review that speaks to it:

<http://www.businessnewsdaily.com/7543-best-accounting-software.html>

Milestone#3 (Complete) - Added Machine Learning to the APP

This was completed fairly recently. Here's a recent press release about it. Feel free to also check it out in a ZipBooks account.

<http://www.nasdaq.com/press-release/zipbooks-announces-personalized-machine-learning-for-better-bookkeeping-20171031-00747>

Milestone #4 (Complete) - User Growth @ 7500. We surpassed that on Aug 1, 2017. See our metrics dashboard below for the last 3 months.

#### **PK Clean (Renewlogy)- Plastic Waste to Fuel**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** PK's proprietary technology converts plastic waste into fuels including diesel. What makes our technology unique is that we are able to process and handle post-consumer mixed dirty plastic waste streams (without being picky on what we can take and can't take), and do so with profitability.

**Use of Funds:** Our two key milestones were to design our first 10 Ton per day commercial deployment for our first external customer, and to design our first commercial small-scale unit. We successfully achieved both these milestones, and received a lot of press for both. This Wall Street Journal article shows photos from the deployed Canadian facility which we designed in SLC (<https://www.wsj.com/articles/we-got-lazy-u-s-recyclers-try-cleaning-up-their-scrap-1528286401?>), and this press release details the Sustainable Brands award we won for launching our first commercial small-scale unit (<http://www.renewlogy.com/renewlogy-awarded-grand-prize-at-sustainable-brands.html>).

#### **Promotus- KneeMD**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** KneeMD is the first patient-controlled knee rehabilitation device that helps patients who have undergone total knee replacements or other major knee surgeries improve range of motion and stretch in extension. KneeMD is an easy-to-use, portable device that allows patients to effectively reinforce and augment the motion and functional gains achieved in formal physical therapy in the comfort of their own home.

**Use of Funds:** Grant funds were used in FY2017 to make significant progress towards all the Company's milestones. Most notable progress was achieved in the following areas:

1. First production - funds were used to pay manufacturing partner for final tooling on the patient model. This milestone has subsequently been met in FY2018 with the recent reception of 200 patient model devices.
2. Finish clinical trial - funds were used to pay research partner for new patients enrolled in clinical trial during FY2017. This milestone is nearing completion as of the reporting date.

#### **Qualified Rapid Products- Metal Additive Manufacturing**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** QRP offers Utah's only metal additive manufacturing services including design services related to 3D printing specific but not limited to 3D printing of production aerospace and medical products.

**Use of Funds:** Down payment on larger metal 3D printing machine. Infrastructure and build-out to support machine. ISO 13485 and AS9100 certification. Work towards first production antenna contract from Optisys.

#### **Simplicity Airway- ReddyPort**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Non-invasive positive pressure ventilation (NPPV) is used in hospitals to assist critically ill patients with breathing. Non-invasive ventilation, as opposed to traditional ventilation (intubation), uses a mask and positive pressure to assist breathing, instead of a tube placed in the lung. NPPV is often preferred over intubation because it has a lower mortality rate and does not require sedating the patient.

**Use of Funds:** The grant funds were used to prepare (including testing) and submit the 510(k) for the ReddyPort Oral Access Elbow (Regulatory clearance gained January, 2018). In addition, the funds were used to manufacture the ReddyPort Elbow (May, 2017). The major uses thus far for the TCIP funds are listed below.

Toxikon: \$11,735 - Toxikon was used to do the biocompatibility testing for the ReddyPort elbow 510(k). Nelson Labs: \$10,270 - Nelson labs was used to do the extractable and leachable testing on the ReddyPort Elbow 510(k). Biologics Consulting: \$ 8,582 - Biologics consulting was used to do the biocompatibility risk analysis for the Elbow 510(k). Global Resources International: \$23,430 - GRI was used to manufacture the ReddyPort Elbow. Modaliti: \$960 - Modaliti was used to finalize design of the ReddyPort Elbow. Rian's Salary: \$40,600 - Rian's Salary went towards preparing the 510(k) and designing the oral care kit.

#### **Spectra Symbol- Smart Well Site**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Spectra Symbol's new technology is based on a patent of thin linear sensing with low power requirements. It is unique because for the oil and gas industry, oil tanks need two levels--both oil and also water. Our sensor can provide two unique locations and is patented for that very application. In addition, the low power requirement gives it an edge over all other technologies available for battery powered wireless applications, extending the battery life over a decade while transmitting in real-time.

**Use of Funds:** The grant funds have been used in getting pilot programs set up for our different customers. We have had 8 different pilot programs and 4 have expanded into more orders with 2 others looking to add more orders. The money allowed us to market, build, deliver, and install this sensor ecosystem. Additionally, with the money we were able to higher more engineering support to make this project a success.

#### **Storj Labs- Cloud Storage**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Storj Labs have a goal to be the world's largest cloud storage provider without operating a data center that uses a decentralized cloud that's accessible by anyone, anywhere.

**Use of Funds:** We have used our funds primarily in hiring employees. The funds came at a crucial time that immediately preceded our token sale and assisted in our successful completion of our token sale in May 2017.

#### **Through The Chords- Airway Management Device**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Through The Cords (TTC) is developing medical devices used when intubating patients when they cannot breathe. Our devices include endotracheal tubes, introducers, and introducers with proprietary features that make intubation easier, and safer.

**Use of Funds:** Milestone 1 was to design control for all devices which is completed, designs are frozen and system is implemented. Milestone 2 was to have safety and biocompatibility testing for three devices, these are ongoing and will be completed before the October 2018 launch date. Milestone 3 was to prep for FDA 510 application. All devices in current portfolio are CLASS 1-510(k) exempt devices, we will notify the FDA before selling as required by law.

#### **Veritas Medical- Lightline**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** This catheter uses a high intensity visible light phototherapy (VLP) to disinfect medical catheters in vivo and prevent hospital acquired infections. Unlike UV light, VLP works through formation of free radicals and has no effect on human cells. Unlike antibiotic treatments and coatings, VLS is not affected by biofilm formation or antibiotic resistant bacterial species.

**Use of Funds:** Grant funds to date have been allocated to achieve overall regulatory, intellectual property and manufacturing milestones. Specifically with respect to regulatory, we have allocated resources to revamp our QMS and have an established 510k regulatory pathway for our first products. Funds were allocated to retain an industry regulatory expert with specific FDA experience for this application to provide an independent regulatory assessment (Milestone #1). Grant funding was further allocated to strengthen and advance the company's IP portfolio furthering protection of the core technology. We prepared and submitted one continuation of our issued patent and converted a provisional application to a utility application which was submitted followed by prosecution. Both the continuation and utility patent were prepared and submitted to the USPTO by Madsen IP, P.C. (Milestone #7 and 8). Manufacturing and automation equipment was purchased for manufacturing of the optical fiber (Milestone #4). Contractors were engaged for input regarding future production and validation activities for optical fiber manufacturing.

**Liyen Inc (Waterbear Life Devices)- The Sidekick****Award Amount: \$75,000****Project Status: Active**

**Overview:** The Sidekick is an award winning, next-generation asthma spacer device that not only serves as a stylish and customizable carrying case for an inhaler, but when engaged into the actuation position, the Sidekick transforms into a functioning spacer device. Now you only have to carry one item instead of two, and the Sidekick is optimized to make fitting the device in your pocket, purse, gym bag, glove box or outdoor pack quite easy compared to the bulky, cumbersome 'pop bottle' style spacers.

**Use of Funds:** Since first reception of grant funding in FY2015, the bulk of our use of funding has gone towards various aspects of development of the Sidekick. In 2015, we essentially had a proof of concept model, so a large portion of funding has gone into: prototyping equipment and supplies, payroll for our engineering and development team, performance testing and validation, small office/workspace, usability studies, etc. to bring the level of development from proof of concept to a minimum viable prototype that is now being put through the final stages of design for manufacture and preparation for tooling.

Additionally, we have used our funding towards regulatory development to build out our quality system and initiating the preparation of our 510k to subsequently progress towards our milestone of getting regulatory clearance to enter the market upon the completion of manufacturing.

Equally, the next largest use of grant funds has gone towards securing our intellectual property and patent work to date. This includes attorney time/team payroll and the necessary filing fees to prepare and draft and file/litigate our IP since 2015.

With IP, Tech Development of the Sidekick, and Regulatory being the largest categories of our grant funding usage, any remaining fund usage comprises necessary expenditures like operational expenses, business fees, marketing, etc.

**Whistic- Whistic****Award Amount: \$50,000****Project Status: Active**



**Overview:** Whistic's platform is the best way for Chief Information Security Officers (CISO) to manage security risk assessments both internally and with third parties, and allows them to gain visibility into the security gaps within their own organizations, as well as their vendors, customers, and partners.

**Use of Funds:** We have utilized grant funds to help us work towards achieving our milestones in the following ways: 1) to pay for legal fees associated with our patent application (CrowdConfidence scoring algorithm), our trademark filing, and general legal fees required to operate the business; 2) to generate sales opportunities to get Whistic ready for our 2nd angel funding round, including attending 3 industry trade shows; 3) to improve the platform in order to facilitate more vendor assessments, on our way to achieving our 1,000 assessments milestone; 4) to hire additional headcount on our way to achieving our goal of hiring 75 people.

## FY18

Solicitation Round	Company Name	Project Name	Project Status	Incremental # Customers/User	Incremental # FTE	Incremental Capital Raised	Incremental Net Income	Incremental Patents	Incremental Payroll	Incremental Revenue
FY2018	Ancestor Cloud Inc	Trace	Active	3,245	0	\$617,032.00	\$98,063.00	0	\$-254,507.00	\$270,200.00
	Dentavations	WaterJet	Active	0	0	\$-700,980.00	\$0.00	10	\$0.00	\$0.00
	ETLrobot	Cloud data pipelines	Active	1	0	\$56,250.00	\$0.00	0	\$0.00	\$0.00
	Homemation	Freshy	Active	750	0	\$100,000.00	\$-385,381.00	5	\$-2,630.00	\$52,881.00
	Incorporate Massage	Booking Application	Active	106	2	\$435,000.00	\$-192,691.00	0	\$-76,447.00	\$30,148.00
	Indigo Industries	Matic SLT	Active	9	2	\$273,983.52	\$-437,158.06	1	\$40,400.00	\$81,973.06
	Inertial Sense, LLC	Tightly Coupled GPS SYSTEM	Active	16	1	\$1,579,300.00	\$0.00	1	\$-207,333.00	\$208,136.00
	IsoTruss Industries	IsoTruss	Active	1	2	\$230,000.00	\$-10,000.00	0	\$-26,147.50	\$21,481.00
	Mindshare Ventures	AtlasRTX	Active	13	34	\$0.00	\$111,133.00	0	\$183,399.00	\$45,819.00
	Neiybor Inc.	P2P Storage Marketplace	Active	2,319	2	\$1,160,000.00	\$0.00	0	\$-112,000.00	\$47,207.00
	Novi Security, Inc.	Smart Home & Business Security	Active	878	-2	\$411,963.84	\$-7,294,471.00	-1	\$1,782,402.00	\$320,725.00
	Nozzle	SEO Keyword Rank Tracker	Active	-4	1	\$-232.00	\$43,479.00	0	\$651,050.00	\$359,567.00
	OTEC LLC (Held by Aero Med Design Tec.	Aero collar	Active	4	1	\$-28,900.00	\$-53,661.00	1	\$7,250.00	\$17,976.00
	Pura Scents, Inc.	Pura Smart Subscription	Active	20,000	0	\$175,000.00	\$-1,875,015.00	0	\$3,500.00	\$258,284.00
	Q Therapeutics, Inc.	Clinical Trial of Q-Cells	Active	0	0	\$400,000.00	\$-663,014.00	0	\$122,997.00	\$57,810.00
	Recyclops	Rural Recycling Initiative	Active	0	0	\$-2,581,800.00	\$2,610,300.00	0	\$92,780.08	\$1,000,000.00
	Simplicity Airway Inc	ReddyPort NIV Access Elbow	Active	514	1	\$0.00	\$181,363.32	0	\$-6,030.00	\$225,103.88
	SimplicityMD Solutions, LLC dba U-Tube	U-Tube Catheter Control Device	Active	0	0	\$625,000.00	\$-110,695.03	0	\$-9,562.29	\$0.00
	Sixth Sensing LLC	Radio Frequency Vitals Monitor	Active	10	-2	\$-2,000.16	\$119,931.31	0	\$5,833.00	\$0.00
	Teaching It Right, LLC	Multi-sensory therapy program	Active	0	1	\$-70,000.00	\$60,818.34	0	\$131,944.00	\$75,000.00
	Through The Cords, LLC	Airway Management Devices	Active	0	-1	\$100,000.00	\$67,795.00	4	\$102,841.11	\$300,238.00
	UthiSync, LLC	UthiSync	Active	0	2	\$-170,372.80	\$-188,490.41	0	\$-61,554.00	\$301,500.00
	Wagmar Enterprises DBA SNO-GO	GO S.L.A.T. Technology	Active	3	0	\$146,773.00	\$129,656.34	1	\$5,000.00	\$346,237.53
	Waterbear Life Devices (LIVEN Inc.)	The Sidekick Asthma Spacer	Active	360	4	\$-66,320.00	\$-123,446.00	1	\$19,537.00	\$37,588.00
	Wooly, Inc.	Social Journey & Attribution	Active	0	-1	\$201,750.00	\$0.00	0	\$3,025.00	\$0.00
	ZipBooks (Phlo, Inc)	ZipBooks Marketplace	Active	6	2	\$0.00	\$-274,488.42	0	\$750,452.00	\$132,712.00
	nview medical	4D Scanner	Active	0	2	\$90,000.00	\$-675,873.81	0	\$1,243,635.00	\$17.44

### Ancestor Cloud (Trace)- Trace

**Award Amount: \$150,000**

**Project Status: Active**

**Overview:** Trace is an online research platform that combines the expertise of nearly 4,000 professional genealogists, researchers, archivists and private investigators. Through sophisticated project management tools, Trace delivers an affordable and simple customer experience to help people discover their roots. We connect customers with boots-on-the-ground professionals to help them solve unanswered questions, tackle challenges and find their family.

**Use of Funds:** We have successfully completed Milestone 3 from our contract. We have adjusted our fundraising milestone by decision of the board to instead of raise more in the future we decided to raise less now. We closed in the month of June \$552,000 in new capital. This replenished our balance sheet and gives us all the capital we need

over the next 18 months to exceed our growth goals. This capital was in addition to the 2nd awarding of \$150,000 from TCIP and we're in a very healthy capitalized place. The majority of the grant has been allocated and will be allocated to customer acquisition and revenue growth for the rest of the year. Will attach board approved budgets and growth plans.

#### **Dentavations- Waterjet**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Dentavations' Waterjet technology takes the proven water cutting technology and deploys it in a manner that is safe and effective for dentistry. Waterjet benefits the patient by eliminating noise and pain associated with cavity preparation. Most importantly, Waterjet replaces traditional dental drills, which produce heat and vibration that can create further micro-cracks and lead to more cavities. Waterjet eliminates this side effect and creates a quiet, pain-free environment for patient and practitioner.

**Use of Funds:** Milestone 1. Research, test and optimize the abrasive media for cutting zirconia. This will consist of testing several different media in our abrasive mixture, various sizes and shapes (where available), nozzle orifice sizes and pressures.

Milestone 2. Optimize pulsation for cutting zirconia. We have successfully shown that pulsation can have a dramatic effect on the removal rate of our technology. We have also shown that various materials require different pulsation to be optimized. For this milestone we will vary amplitude and frequency of our pulse curve to determine the best parameters for cutting zirconia.

Milestone 3. Strengthen our IP portfolio. In this milestone we will review, draft and file at least five provisional patents on key aspects of our technology. Having additional IP work completed not only helps protect the jobs that we will create here in Utah but also help us commercialize the technology through protecting our markets.

#### **ETL Robot- Cloud Data Pipelines**

**Award Amount: \$75,000**

**Project Status: Active**

**Overview:** ETLrobot.com is an iPaaS (integrated platform-as-a-service) technology designed to manage complex data extractions and integrations for businesses. ETLrobot extracts, aggregates, de-duplicates and structures the data, loading it directly to a company's data warehouse of choice. A company can be up-and-running with their data in minutes without installation or writing a single line of code. ETLrobot fully manages and monitors the data pipelines, upgrades, API changes, alerts, duplicates, aggregations and notifications. Save time and money, and get all your data where you want it.

**Use of Funds:** Marketing Website Dev: \$1,624, Webapp Dev: \$4,806, API Dev: \$2,880, Domains: \$44, GitHub: \$14, Training: \$10, Shipping: \$10. Funds used to officially launch with 6 total integrations, funds will help with marketing and google analytics and slowly growing our MRR.

#### **Homemation- Freshy**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Homemation's Freshy will change the way we keep private and public restrooms smelling fresh. Using an array of sensors that are calibrated to the toilet in which it is installed, Freshy dispenses a liquid onto the surface of the water as it is in use. The liquid is an essential oil mix designed to trap waste odors beneath the surface and prevent them from spreading.

**Use of Funds:** The TCIP Grant has enabled us to create an amazing marketing campaign; specifically, we have created a video that has garnered and will yet enable us to attract customer attention. The marketing video we have used is attached. The additional funds we have used for development of tooling the product and purchasing inventory.

**Incorporate Massage- Booking Application**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Incorporate Massage has created the first fully-automated purchase experience for corporate massage events. Corporate massage events are shown to boost company morale, decrease employee healthcare costs, and increase employee productivity.

Incorporate Massage's platform automates the consumer purchase process on the client side, and the staffing process and scheduling process on the administrative side, making it possible to create a smooth-running, fully-customized massage event for your team. Incorporate Massage is in the process of expanding the platform to in-home personal massage a rapidly-growing arm of the massage industry.

**Use of Funds:** We migrated from a co-lo to an AWS cloud server to stabilize the platform and brought on a monthly server monitoring service. We hired 3 more software engineers.

**Indigo Industries- Matic SLT**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Indigo's matic quick-release system utilizes the properties of magnets and locking power of mechanics to optimize engineering design. Used so far for scuba gear, the innovative system increases ease of use and overall mechanical strength to ensure product reliability and user safety. The matic system is just one of the company's technologies under development to enhance products available to meet the needs of military, rescue and commercial diving. All Indigo Industries products have provisional patents on mechanics, design and use and are proprietary to the company.

**Use of Funds:** Applicant Response: Milestone 1 - TCIP \$78,000 grant - Milestone one included conception, design, engineering, initial model contraction of Tactical fins, BCD, DPV and Mask. TCIP funds allocated to beta design adjustments, engineer, tooling and testing. Indigo Industries match funds for initial concept, design and final completion. Target completion date 6/30/2018. Target completed. Milestone 2 - TCIP \$21,300 - Milestone two - tooling, molds, stamps and fixtures. Indigo match funds - to complete tasks. Milestone target date 5/30-8/30 - Target completed Milestone 3 - Production orders target date 9/15/2018 Targets have all been meet per milestones: Tactical fins will be available in the market 8/15 BCD hit the market 6/23 - units are shipping weekly DPV hit the market 5/30 - units are shipping bi-weekly Mask - available in the market - 2/15 - units shipping weekly - Added an additional technology which is undergoing testings now.

**Inertial Sense- Tightly Coupled GPS Systems**

**Award Amount: \$195,350**

**Project Status: Active**

**Overview:** Tightly-coupled GPS inertial navigation technology fuses GPS, gyro, accelerometer, and other sensor data in a manner that improves GPS reliability and accuracy when GPS signals are weak or not available in areas such as urban canyons, highway overpasses, and tunnels.

The Inertial Sense is able to rely on fewer visible satellites to establish an accurate position. This technology exists in

larger, more expensive systems used in research and military applications, but Inertial Sense has designed a product for low-cost mass production.

**Use of Funds:** The grant funds have been used to progress towards the development of our Tightly Coupled GPS solution. Primarily funds have been utilized for engineering salaries directly applicable to the GNC engineer assigned to the project. We have also purchased hardware for testing and evaluation.

**IsoTruss Industries-** IsoTruss

**Award Amount: \$75,000**

**Project Status: Active**

**Overview:** IsoTruss is a ultralight composite structure that uses state-of-the-art material and optimized geometry to achieve the best strength-to-weight ratio. It has greater strength or lower weight than expensive aerospace materials, but is less expensive to manufacture than traditional steel and composite tubes. As validated by NASA, IsoTruss is 12x stronger than steel, 1/12 the weight of steel, non-corrodible and eco-friendly, emitting 70 percent less CO2 at manufacture than steel.

IsoTruss was invented by MIT Ph.D. Dr. David Jensen during his time teaching at Brigham Young University, and the technology has seen a major increase in demand from the military. The goal of IsoTruss Industries is to replace structural steel, wood and composite tubes with lightweight, strong, more affordable IsoTruss. The IsoTruss Industries product portfolio includes over 40 patents.

**Use of Funds:** Milestone 1 - Design and Model a Small Scale Manufacturing Cell -Labor \$10K (mandrel design work, rope design, plus development on consolidation process) Milestone 2 - Purchase Materials and Fabricate Manufacturing Cell -Material \$18K (carbon fiber tow preg for samples and testing) -Mandrel Parts \$3K (5ft and 20ft adjustable 80/20 mandrels) - Oven \$0.3K (8 foot used composite oven) Milestone 3 - Post-Processing Development -Testing labor \$12K (building and testing small scale IsoTruss structures - inner-node, outer-node, rope, interwoven, fully-consolidated) Milestone 4 - Marketing- ConnectX Trade Show \$3.5K (meetings with American Tower, Crown Castle, Tillman, and other large tower companies)

**AtlasRTX (Mindshare Ventures)- AtlasRTX**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** AtlasRTX combines artificial intelligence chatbots with live humans to create real-time, engaging experiences, 24/7, in any language. Messaging has vastly higher open and response rates over email, and people spend 91 percent of their mobile time in messaging apps. These channels are one of the best ways to engage clients for better results.

At AtlasRTX, we believe chatbots can optimize response time, data collection and accuracy, and that combining their use with real people has the power to humanize schools, governments, businesses and other organizations and make them more inclusive, equitable and responsive to the needs of communities and customer bases.

**Use of Funds:** AtlasRTX hired a Sr. Engineer/Developer to enhance its platform to support the required scale from 2,000 messages a minute to 2,500 messages a minute. AtlasRTX salesperson rolled out a new education client, Early Light Academy. AtlasRTX signed on three referral partners with strong connections and experience in the education industry. These three new partners include Randy Favero, Jon Doney and Kurtis Linton.

### **Neighbor- P2P Storage Marketplace**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Often called “the Airbnb of self-storage,” Neiybor is an online platform that connects renters in need of self-storage to individuals who have extra space. “Hosts” can create a listing for their space—like an empty garage, RV pad or driveway space—to be searchable by location. Neiybor conveniently processes all payments and protects hosts and renters through verified identities, clearly defined liability and conflict resolution assistance.

Neiybor is built upon the belief that communities come together as neighbors provide a helping hand. Why build more concrete storage facilities when the space is available nearby? As an added bonus, Neiybor rentals, on average, provide storage at half the price of traditional self-storage services.

**Use of Funds:** We have received \$75,000.00 in grant funds thus far. The funds have been used for important budget items to advance our project, namely:

\$13,452.38 in iOS engineer payroll\*

\$37,448.47 in Software Engineers payroll\*

\$5,500.00 in design and rebrand work

\$18,599.15 in marketing to bring customers to our product

\*Only payroll from NEW employees hired was used in this number. Existing employees before the grant were not included.

### **Novi Security- Smart Home & Business Security**

**Award Amount: \$200,000**

**Project Status: Active**

**Overview:** Novi Security made a splash in affordable, user-friendly security with its first product: the ceiling-mounted 4-in-1 Sensor providing motion detection, smoke detection, an HD camera and siren. The sensor syncs with the Novi app, allowing you real-time updates on your cell phone. Novi is working to expand its offerings to additional types of innovative sensors and cameras with long battery life. With a 10-minute install at one-fifth the price of traditional security, Novi provides peace of mind that anyone can afford for their home or business.

**Use of Funds:** Three milestones are completed by internal employees we already had. As a result the bulk of the funds were used in OpEx (primarily payroll) to allow us to complete them. Milestone 1 was to integrate an additional Smart Sensor into Novi Security Ecosystem - Launch an additional sensor that integrates with the existing Novi Security system and sell \$25k in revenue of the new Smart Sensor. We did this at the end of March of 2018 and have sold over \$1k in product. Milestone 2 was to create integration with COPS Monitoring - Integrating Novi's system with COPS Monitoring's platform will allow Novi to sell to COPS' 3,300 dealers who service over 2.5 million accounts. We completed this recently in April. Milestone 3 which was to decrease COGS for our Main Kit from \$138 to \$118 (a decrease of \$20 or 14.5%) by implementing automation into our manufacturing processes is still a work in progress. We have decreased it to \$130 by \$8 dollars and look to decrease it an additional \$12.

### **Nozzle- SEO Keyword Tracker**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Nozzle provides budget-friendly brand monitoring within search engine results, tracking top 100 search results per keyword for businesses and brands of all sizes. Nozzle's customized reports help clients understand their search results vs. competitors and shows them product and/or company mentions in industry blogs, trending social

media and articles across the web. Clients can use this information for further targeted marketing and public relations outreach. Nozzle can conduct tracking monthly, weekly, daily, or hourly--depending on client need and budget. Similar tools either don't provide enough data or are too expensive and inflexible to be cost effective.

**Use of Funds:** Grant funds have been used to hire two additional employees (one software engineer and one marketing employee), accelerate product development, grow monthly recurring revenue, and market & demo product to new potential customers.

#### **nView Medical- 4D Scanner**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** nView's AI-reconstruction algorithm compares prior information more than 200 times per second to X-ray measurements from our proprietary and open-geometry X-ray scanner to provide accurate and instant 3D images during the surgical procedure. nView's process reduces the amount of information required from the imaging system, thereby reducing data acquisition time and creating the real-time 3-D imaging. Importantly, this reduces the amount of radiation exposure for the patient by approximately 50 percent, and increases procedure accuracy.

**Use of Funds:** Personnel: \$18,471.69 Use of funds is across the three Milestone, none of which has been complete yet but are in process.

#### **OTEC- Aero Collar**

**Award Amount: \$75,000**

**Project Status: Active**

**Overview:** OTEC's Aero cervical collar is a unique design, comprised of ripstop nylon and air to create structure. All other devices used to immobilize suspected cervical injuries have static form and design. Current cervical collars, which are big and bulky, are not carried into resource-challenged environments where space saving and weight saving is a premium. The Aero Collar packs small, is lightweight and easily deploys in all scenarios, from car crash to climbing accident.

**Use of Funds:** Grant Funds received to date: \$56,041

\$31,800 - Manufacturing Expenses - Payment to Utah Company Klymit for our initial product order of 3,000 cervical collars. These deliver in August and we've pre-sold 550 collars.

\$ 4,690 - Marketing - Trade Show Booths - Payment to attend two conferences: Soma (Special Operations Medical Association) we attended in April and EMS World (Emergency Medical Services which we'll attend in November).

\$14,927 - Intellectual Property Protection and Legal Consulting - We've spent significant funds on utility and design patents for the cervical collar. This includes filing a PCT application giving us the ability to file for patents in most countries globally within the next 18 months.

\$ 4,624 - Fees paid to register the cervical collar with the FDA.

#### **Zipbooks (Phlo Inc.)- ZipBooks Marketplace**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** ZipBooks is web-based accounting software for small businesses, integrating additional software solutions for business owners such as invoicing, merchant services, invoice financing, business intelligence, payroll, lead generation, review management, time tracking and project management.

ZipBooks builds other operations beyond accounting, such as customer reviews, into its streamlined workflow so that small business owners can manage these value-adding operations that are frequently overlooked for being too complex. Eighty percent of ZipBook users are service-oriented businesses, which live and die by lead flow. The public profiles provide a strong access point for new customers. Our current success with search engine optimization allows Zipbooks to provide low-cost leads to our customers.

**Use of Funds:** Due to grant funding our full time equivalent has grown from 7 to 11 as of June 30. We expect to add 2-3 more full time equivalents in the next 30 days. The grant enabled this which has allowed us to accelerate our milestones. As of June 30, we have met 2 milestones and working towards other two milestones:

Milestone 1. Launch of Lead Generation Tool & Review Management. Adoption metric: 8500 public profiles available for customer searches and reviews for small businesses. Target: May 2018 STATUS = 14,489 as of July 15  
Milestone 2. \$50,000 MRR (monthly recurring revenue). Target: July 2017 Status = April 30, 2018 hit 50,040 MRR

### **Pura Scents- Pura Smart Subscription**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Pura is a subscription-based service for home fragrances that are used with a “smart” IoT (Internet of Things) fragrance dispenser. Upon sign up, a customer receives a smart dispenser and fragrance of choice. The customer then receives two fragrances a month for a monthly fee. Pura’s platform includes software that learns a user’s preferences, usage history, demographic variable and ingredient likes, dislikes, etc. This allows the company to recommend fragrances personalized for each user.

Pura’s technology is the world’s first platform that integrates remotely controllable, IoT fragrance dispensers that are compatible with fragrances from multiple brands. Pura’s software can configure Pura dispensers to automatically adjust the heating temperatures to match the properties (e.g., flash points) of the fragrances that are being used. This provides customers freedom of choice in the \$6 billion U.S. home fragrance market.

**Use of Funds:** Funds used to finalize the Molds, and Software for the app. We’re waiting on the remaining 25% to finalize the firmware.

### **Q Therapeutics- Clinical Trial of Q-Cells**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Q Therapeutics has produced a groundbreaking product for the treatment of neurodegenerative and demyelinating conditions such as MS and ALS. When placed in the brain and spinal cord (central nervous system, or CNS), Q-CELLS™ produce two distinct cell types, astrocytes and oligodendrocytes, that perform the support and repair tasks essential for healthy nerve cell function.

Q-CELLS™ replace damaged or destroyed cells to help patients experience improved function and longer life. Q-CELLS™ is the only commercial-grade GRP cell product shown to be effective and has received FDA clearance for testing.

**Use of Funds:** The Grant funds have been used to advance the Q-Cells product toward commercialization. Specifically, the funds have been used to complete FDA requested testing and characterization of the cells. The tests were conducted by the University of Utah Cell Therapy and Regenerative Medicine (CTRM) facility as well as

contracted testing labs. These tests indicated that the product met all required characteristics required for product use.

### **Recyclops- Rural Recycling Initiative**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Recyclops recycles millions of pounds a year. Its platform creates effective route and pick up services to serve customers at a more affordable rate. Recycling options are not always readily available to many residents--especially those in apartments and condos. The company is expanding its operations into a model similar to Uber or Lyft, with local contracted workers picking up recycled waste and transport it to a larger drop-off points for later removal.

Historically recycling in rural areas has been prohibitively expensive and therefore not implemented. This expanded service will target rural communities especially, increasing recycling and supporting the environment.

**Use of Funds:** With the help of TCIP funds we've been able to exceed our milestone of entering 5 new markets by July 31, 2018. We have have entered Vernal, Naples, Maeser, Cedar City, Enoch, New Harmony, Price, Helper, and Wellington, as well as Preston, ID for a total of 10 new markets. We've also continued expansion in existing markets within Utah County. Grant funds have been used for marketing efforts in these areas, website improvement, payroll, and to meet equipment needs.

-Marketing Efforts: Funds have been use for digital ads, flyers, and door-to-door sales.

-Website Improvement: Funds have been used to redesign our website as well as adding new pages for new markets.

-Payroll: As we've entered new markets funds have been used to help support initial payroll needs as we work to reach profitability in these areas. Three of our new markets are currently profitable.

-Equipment Needs: Funds have been used to purchase and maintenance trucks & containers.

### **Simplicity Airway- ReddyPort NIV Access Elbow**

**Award Amount: \$125,000**

**Project Status: Active**

**Overview:** The ReddyPort Elbow is a proprietary elbow connector that provides access to a patient's airway directly through a CPAP/BiPAP mask during non-invasive positive pressure ventilation (NIV/NPPV). ReddyPort has a platform of products that work with the ReddyPort Elbow and allow ICU clinicians to care for ventilated patients without taking the mask off. These adapters include voice amplification, oral care, nebulization (drug delivery), capnometry (CO2 monitoring) and endoscopy. The ReddyPort system will decrease hospital associated infection rates, improve patient comfort, and lower healthcare costs.

ReddyPort will be the only system on the market that has a patient microphone or an oral care solution that can be performed directly through the mask while pressure is maintained. These features are made possible by the ReddyPort elbow, which has a large valve that uses the ventilator pressure to automatically seal itself.

**Use of Funds:** The grant funds have been used to manufacture first turn of the ReddyPort Patient Microphone Kit as well as to re-design the handle and yankauer for the ReddyPort Oral Care Kit to prepare it for manufacturing. The major uses thus far for the TCIP funds are listed below. Motoforza (Rick Kreifeldt): \$11,800 - Rick Kreifeldt was used to design the layout for the board for the ReddyPort Patient Microphone Kit as well as develop the software that it ran.



3D Printer, Granite School District: \$1,293 - The 3D Printer at Granite School District was used to prepare the oral care kit for manufacturing through manufacturability analysis. Implementing Ideas: \$1,913 - Implementing Ideas was utilized to manufacture the electrical board for the ReddyPort Patient Microphone Kit. Salary, Rian Wendling: \$40,600. Rian Wendling worked on preparing the oral care kit for manufacturability.

#### **SimplicityMD- U-Tube Catheter Control Device**

**Award Amount: \$127,500**

**Project Status: Active**

**Overview:** The U-Tube Catheter Control Technology (U-Tube) standardizes and controls a typical bend in a Central Venous Catheter (CVC), improving patient comfort and reducing dressing changes.

U-Tube redirects the CVC ports away from a patient's face, neck and hair and facilitates adherence to the CVC dressing – decreasing unnecessary dressing changes. U-Tube also decreases the occurrence of kinking and accidental removal of the CVC, which may result in life-threatening emergencies in ICU patients. The U-Tube increases the comfort of patients with IJ CVCs.

**Use of Funds:** Evaluations - \$47,837.77

We have used grant funds for samples, travel, educational materials, and salaries for our 1099 contractors doing inservice at facilities. We have also used the funds for trade shows and marketing materials which have helped us get a list of over 400 contacts which we are now using to generate interest in U-Tube and schedule additional evaluations.

Regulatory - \$14,194.74

Because getting our CE mark is crucial to our success in Europe we have made it a priority. We have used funds to complete the audit process and to make necessary packaging changes. We have also used funds to conduct additional product testing required to meet CE Mark standards.

White Paper/Data - \$18,717.61

We have used contracted time to outline the parameters for our study and have begun the collection of data. We have also used funds for samples, educational materials and travel. A portion of the funds have been used for trade shows. Attendance at the trade shows has generated interest at facilities interested in conducting long-term evaluations and contributing to our white paper.

#### **Sixth Sensing- Radio Frequency Vitals Monitor**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Sixth Sensing's system uses two radio transceivers, on different sides of a bed, as a non-contact breathing monitor. The person's inhalation and exhalation cause changes in the radio channel, which are measurable by standard commercial wireless devices. One device transmits a low-power wireless signal, and the other receives it and makes a measurement of the radio channel. The changes in these measurements over a few seconds are used to determine the breathing signal and the rate of breathing.

Other non-contact breathing monitors tend to use radar, which is more expensive and less reliable. Sixth Sensing seeks to take advantage of advances in wireless technology to produce a low-cost, accessible alternative. e and technology advances in wireless over the past 20 years.

**Use of Funds:** Planned use of grants are as follows. We are still in the early stages of receiving funding from TCIP.

\$20,000 – Complete FDA verification and validation testing

\$20,000 – Optimize multiple frequency data acquisition

\$50,000 – Complete development of testable mobile application interface

\$25,000 – Complete stakeholder and market assessment for sales

### **Teaching It Right- Multi-sensory Therapy Program**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Autism Spectrum Disorder is a neurodevelopmental disorder that impairs a child's ability to communicate and interact with others. Current solutions are disjointed, time consuming, and costly as parents, educators, occupational therapists, speech pathologists and behavioral therapists provide "teacher taught" interventions with inconsistent results. Teaching It Right (TIR) has a unique solution to this problem: a research-based, multi-sensory program for smart mobile devices. The skills that each therapist, teacher, or parent would teach separately, can now be taught into a single, 10-minute a day program.

The program unites the learning experience and enhances teachers and therapist outcomes.

TIR's first product, "Making Eye Contact," was sponsored through an SBIR National Science Foundation (NSF) grant.

**Use of Funds:** Milestone 1: Legal Task 1: Copyright and trademark all materials- Teaching It Right has not completed this task yet. Task 2: Second filing of the patent- Teaching It Right has paid the second filing of their patent. Documentation is attached

Milestone 2: Launch the product by April 2019. Task 1: Finalize the program- Teaching It Right is working on this task. Teaching It Right has been testing the app, developing, recording and editing training videos, and adding aesthetic design. Task 2: Prepare for Launch- Teaching It Right is working on this task. Teaching It Right is currently improving the graphic design of the website and marketing materials.

Milestone 3: Bring in \$20,000 of revenue by December 2019 Task 1: Increase our email list using social media- Teaching It Right plans on working on this test next month. Task 2: Sell the Program- Teaching It Right will work on this task after milestone 1 and 2 is complete.

### **Through The Chords- Airway Management Device**

**Award Amount: \$200,000**

**Project Status: Active**

**Overview:** Through The Cords (TTC) has developed medical devices used to intubate patients when they cannot breathe. Devices include endotracheal tubes, exchange catheters, stylets and introducers with proprietary features that make intubation easier, and safer.

TTC's proprietary airway tools solve common problems associated with other intubation methods, including inability to steer devices into the windpipe and lack of intuitive depth control. TTC devices solve these problems intuitively and inexpensively, saving in medical costs and saving lives.

**Use of Funds:** Milestone 1 Set up and certify our FDA and CE compliant quality system.

Quality System is set-up, audited 2x by BSi; certification is pending BSi internal review (normal process). funding provided quality consultant, independent audit, BSi fees, salaries. Milestone 2 Set up and transfer manufacturing and assembly operations to Zien Medical. Verification and validation of this manufacturing process for our rigid introducer and exchange catheter. TRANSFER TO ZIEN IS ONGOING. OQs ARE COMPLETE. EQUIPMENT PURCHASED. VERIFICATION LOTS PRODUCED. TESTING ONGOING. Milestone 3 Set up and transfer manufacturing and assembly operations to Zien medical. Verification and validation of this manufacturing process for our articulating introducer. TRANSFER IS ONGOING. EQUIPMENT HAS BEEN PURCHASED. VERIFICATION LOTS ARE IN PRODUCTION. Milestone 4 Preparation of FDA market notifications for all three Class 1 medical devices NOTIFICATION SOON FOR RIGID, ARTICULATING NOTIFICATION IS TARGETED FOR OCT 1.

**UtiliSync LLC- UtiliSync****Award Amount: \$140,000****Project Status: Active**

**Overview:** UtiliSync is a cloud platform providing inspection automation for public works. With UtiliSync, a municipality can integrate their utility mapping data, manage documents and ultimately streamline inspections for utilities including manholes, water valves, fire hydrants, water sampling, water main breaks, signs, lights, street sweeping, snow plowing, material testing, etc.

UtiliSync automates the very time-consuming process required of field crews to document their activities. Field crews have reported an average of 300 percent increase in efficiency with UtiliSync.

**Use of Funds:** We are using the TCIP grant to increase annual recurring revenue by: 1) improving sales and marketing and 2) developing an offline version of our application. We are making great progress in each of those areas (see attached document for details of expenditures). Most of our expenditures have focused on marketing up to this point, but we are now engaging with a firm to assist with sales and we have a development firm that is assisting us with the offline version of the application.

**SNOGO (Wagmar Enterprise): SNO-GO S.L.A.T. Technology****Award Amount: \$75,000****Project Status: Active**

**Overview:** SNO-GO strives to stay ahead of the curve in the ski bike industry. S.L.A.T. (Synchronized Lateral Articulation Technology) makes all three skis edge in parallel so that when you lean side to side, the skis move in a completely synchronized manner.

In addition, SNO-GO has a chairlift hook and smart engineering to make for an easy chairlift ride. SNO-GO's quick release system allows for simple disassembly into three parts that fit into the trunk of any car. SNO-GO provides a smooth, safe and fun ride down the mountain.

**Use of Funds:** 1-Because of the grant funds, we were able to prototype and test our "kid version" of the SNO-GO before the season was over. It was a successful test and we have since taken the prototype to our factory to have them make a test run of 50-100 units. We spent a total of \$10k on this milestone. We will be rolling the kid bike out on a soft launch next season to then do a full production run the following year, all thanks to this grant money!

2-We are in progress of hiring 5 employees by Nov 1st so we can be prepared for the winter season and the growing demand we are seeing. We are about to officially hire our Engineer at \$40k, and our east coast rep for \$35k. They will be starting August 1st. From there we will be hiring 2 warehouse/QC/fullfillment employees and 1 office manager at \$30k each. They will start on Oct 1st. This grant money has provided us the cash flows to be able to afford payroll until we get to our busy season!

3-We are projecting to hit \$1m in revenue by Feb 1st. We truly believe that this grant money has been a huge factor in us being able to hire the right personnel, and get production underway to be able to achieve the \$750k goal we set as our milestone.

**Waterbear Life Devices (Liyen Inc.): The Sidekick Asthma Spacer****Award Amount: \$200,000****Project Status: Active**

**Overview:** The Sidekick is an award winning, next-generation asthma spacer device that not only serves as a stylish and customizable carrying case for an inhaler, but when engaged into the actuation position, the Sidekick transforms

into a functioning spacer device. Now you only have to carry one item instead of two, and the Sidekick is optimized to make fitting the device in your pocket, purse, gym bag, glove box or outdoor pack quite easy compared to the bulky, cumbersome 'pop bottle' style spacers

The Sidekick is a better product for better breathing, so asthmatics can feel empowered not embarrassed or inconvenienced.

**Use of Funds:** Since first reception of grant funding in FY2015, the bulk of our use of funding has gone towards various aspects of development of the Sidekick. In 2015, we essentially had a proof of concept model, so a large portion of funding has gone into: prototyping equipment and supplies, payroll for our engineering and development team, performance testing and validation, small office/workspace, usability studies, etc. to bring the level of development from proof of concept to a minimum viable prototype that is now being put through the final stages of design for manufacture and preparation for tooling.

Additionally, we have used our funding towards regulatory development to build out our quality system and initiating the preparation of our 510k to subsequently progress towards our milestone of getting regulatory clearance to enter the market upon the completion of manufacturing.

Equally, the next largest use of grant funds has gone towards securing our intellectual property and patent work to date. This includes attorney time/team payroll and the necessary filing fees to prepare and draft and file/litigate our IP since 2015.

With IP, Tech Development of the Sidekick, and Regulatory being the largest categories of our grant funding usage, any remaining fund usage comprises necessary expenditures like operational expenses, business fees, marketing, etc.

### **Wooly- Social Journey & Attribution**

**Award Amount: \$100,000**

**Project Status: Active**

**Overview:** Wooly helps companies identify real, paying customers among social fans or followers. Wooly matches customer's email addresses to publicly available information, including social profiles. Top brands might use CRMs or social media management software to track clicks and purchases or listen and engage with fans and followers, but they have no way of knowing if followers are "bots" or real people.

Wooly bridges the gap, and brands can use this information to 1) identify and collaborate with influencers, 2) create ambassador programs, 3) target people similar to their best customers, and 4) deliver highly personalized experiences. Wooly understands that customers are not just usernames or email addresses--they are real people providing real opportunities.

**Use of Funds:** 1) Hires sales person by Feb 2018 at \$65,000 base to deliver \$500,000 quota pro-rated to 2018. We hired 1 full-time sales person at a base of \$80,000 who started in March 2018 and 1 intern in June. We are on pace to exceed the sales person's quota for 2018.

2) Explore patent application and submit summary report on next steps in March 2018.

In late March Facebook announced major changes to their API and Instagram's API. These changes impacted the IP we planned to patent. We plan to complete this milestone by September 2018 after Facebook's changes are finalized and our system adjusts accordingly.

3) Build self-service pricing August 2018 at \$30,000 for the development of self-service on-boarding to scale sales. Despite high interest from SMBs, we've found that our best product-market fit is with large SMBs to mid-market companies. Our evolution is trending more toward an enterprise-focused solution than a SMB, self-service software.