

Annual Report

2016-2017



\$1.175 M
Direct
Support*



163
Companies
Served*



262
Jobs
Created*



38
Companies
Created*



**Funds
Raised**
\$110.3 M
investments & grants

*These figures are representative of a subset of the work Ann Arbor SPARK does to support the entrepreneurial community; only companies within the LDFA contract service boundaries are included.

Ann Arbor SPARK works to advance the economy of the Ann Arbor region by establishing the area as a desired place for business expansion and location... by identifying and meeting the needs of business at every stage, from those that are established to those working to successfully commercialize innovations.

For more information visit: www.annarborusa.org



Ann Arbor-Ypsilanti Smart Zone Local Development Finance Authority

Ann Arbor SPARK Annual Report: July 1, 2016 – June 30, 2017

Contract Period July 1st, 2016 through June 30th, 2017

3.3 The Contractor shall provide a written Final Program Progress Report to the LDFA no later than sixty (60) days after the end of the Project Service Term. The Final Program Progress Report shall disclose: 1) a census of the annual and cumulative number of jobs created within the Service Area (as defined in Attachment A) as of June 30, 2017 (with jobs defined as the incremental increase in the number of Full Time Equivalent employees (FTEs) beginning with the date a Business Accelerator proposal is signed, or a loan is provided, or when a SPARK Central Incubator agreement is first executed, or when participation in a Boot Camp session occurs); 2) a census of the annual and cumulative number of jobs related to Business Accelerator, SPARK Central Incubator, and Boot Camp attendees that have left the Service Area because of relocation, merger, acquisition, or business failure as of June 30, 2017; 3) a census of the number and identity of current and past clients the Contractor deems no longer eligible for LDFA funded services as of June 30, 2017; and 4) a census of the number and identity of clients for which information regarding jobs creation is no longer being collected as of June 30, 2017. The Contractor shall track companies for a period of five years through an annual survey and make efforts to achieve as high a participation rate as possible. The survey will not only include questions that update standard economic development data but also ask companies who leave the area why.

SkySpecs expands to four countries, leads market

Thanks to a successful sales effort that resulted in the award of several large contracts, SkySpecs autonomous aerial vehicle technology has taken to the sky in the U.S. and Europe ramping from zero commercial inspections last year to becoming the market leader this year. In fact, SkySpecs' autonomous inspection technology has allowed it to break the world records for inspections per day. Since its launch in 2012, Ann Arbor SPARK has helped SkySpecs through the Entrepreneur Boot Camp, Michigan Pre-Seed Capital Fund, Michigan Angel Fund. Previously a SPARK Central Innovation Center client, SkySpecs also received grant support to develop a tradeshow booth that's been an important sales tool for the company.



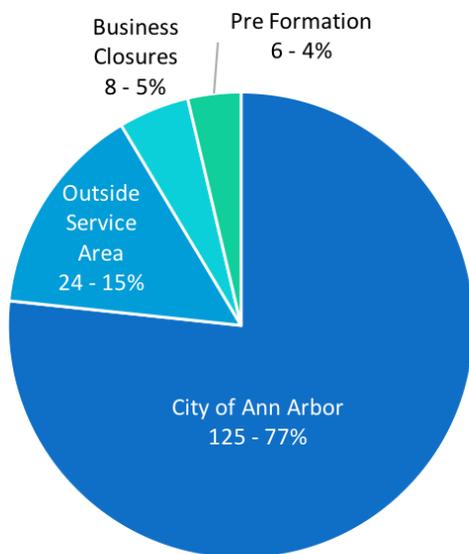
SKYSPECS

Annual Metrics

This year SPARK served 163 companies with a deliberate, customized combination of accelerator services, incubation, microloans, or scholarship to the Boot Camp course. These companies reported the net addition of 262 full-time equivalent employees from the onset of their engagements to the end of contract year.

This year, SPARK supported the creation of 38 companies. Through assistance in business model development, management coaching, legal advice, and other critical startup services, SPARK has created strong companies that have the resources and viability to foster our future economy and sustain job growth.

Annual Served 163 Companies



- Ten of the 24 are Incubator Clients who have not yet changed their registered address to Ann Arbor.

Business Closures

Out of the 163 companies served this year, eight have ceased operations. The termination of these eight companies represented a decrease of 15 FTEs. The loss of these FTEs due to business closure has already been deducted from the previously stated annual net addition of 262 FTEs.

Pre-Formation

Six of the companies served this year have not attained legal formation by the time the contract year ended. Entrepreneurial teams at this stage are usually still in their idea stage of growth, focused on validating their business model. The companies in this category are Boot Camp teams from this year's cohorts. SPARK continues to offer them support as they grow.

Companies Remaining in the Service Area

- 125 companies that worked with SPARK this year are still operating within the City of Ann Arbor.
- These companies reported an addition of 180.5 FTEs from the onset of their engagements to the end of contract year.
- Ann Arbor companies SPARK has worked with over the fiscal year have gained, on average, 1.44 full-time equivalent employees.

Outside Service Area

- Out of the 163 companies that have received LDFA-funded services this year, 24 are currently out of the service area representing 198 FTEs.
- Twenty of those companies are still registered in southeast Michigan; six of the 20 are located within Washtenaw County.
- Three of the 24 are Boot Camp teams initially from outside of Ann Arbor.

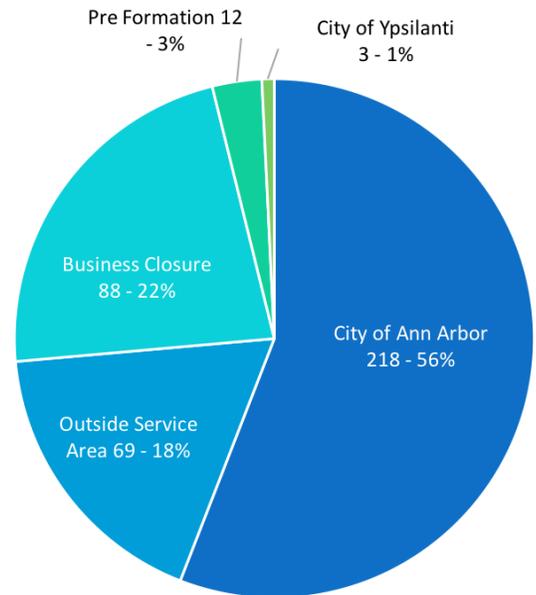
Cumulative Metrics

Cumulatively, in the last five years, SPARK provided services to 390 unique companies. The subset of these companies who either responded to our survey, or remained in contact with SPARK, reported a net increase of 929.5 full-time equivalent employees from the onset of their engagements to the end of this contract year.

This report of jobs created is the net of reported gains and reductions in staffing for companies that received LDFA-funded services within the time period discussed below.

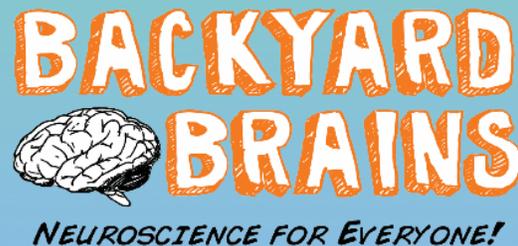
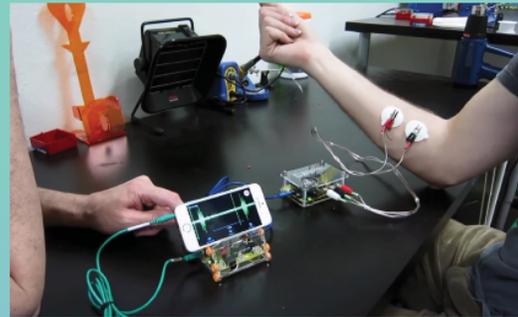
For the purposes of this report, 'cumulative' is defined as a five year period including this fiscal year. The quality of our data diminishes sharply for companies served before this threshold due to the above-mentioned trend in survey responses; we lack sufficient data to accurately account for the success of our former clients as measured by employment.

Cumulative Served
390 Companies



Backyard Brains featured in TED talk, awarded SBIR grant

Backyard Brains has developed an entry-level signal recording kit for students to learn about the brain. Backyard Brains' technology is perfect for DIY neuroscientists, students, high school teachers and professors. Since 2010, Ann Arbor SPARK has helped the company by providing grant funding for accounting, sales, legal support as well as interns through the Digital Engagement Clinic with Eastern Michigan University. In the last year, Backyard Brains was a featured TED Talk and received a \$2.4 million Small Business Innovation Research grant from the National Institute of Health.



Companies Remaining in the Service Area

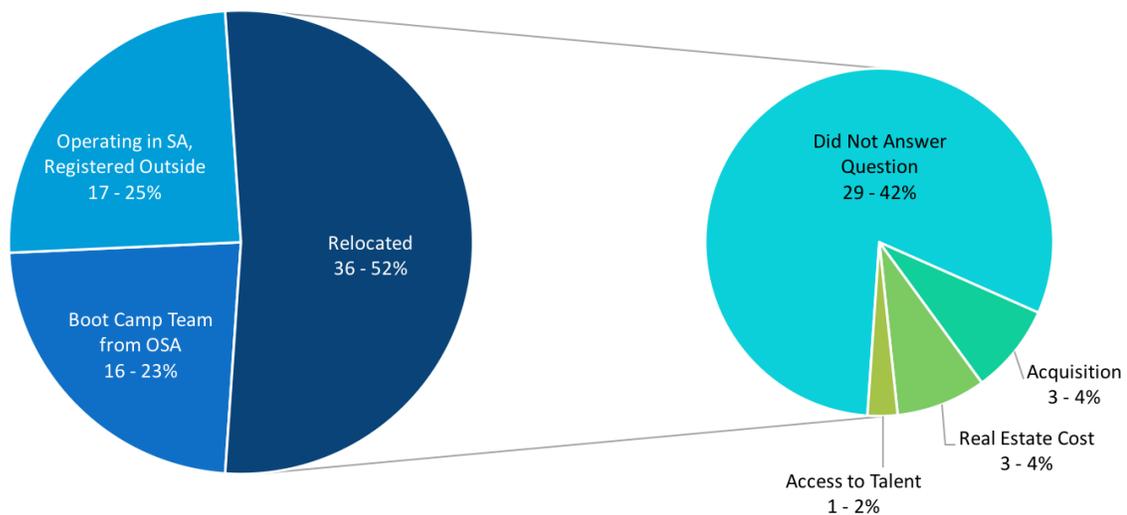
- 218 companies that worked with SPARK over the past five years are still operating within the City of Ann Arbor.
- Three companies served in the period are now registered within the City of Ypsilanti, and are therefore eligible for service, and not marked as having left the service area.
- Currently these companies employ 1,368.5 FTEs.
- These companies reported a net addition of 830 FTEs from the onset of their engagements to the end of contract year.

Outside Service Area

- Sixty-nine companies representing 1,753 FTEs are not currently registered in the City of Ann Arbor.
- Seventeen of the 69 are operating inside the City of Ann Arbor, but have registered legal addresses outside the City. All 17 companies are current or former incubator clients.
- Thirty-six of those companies have moved from the area, seven stated a reason on our survey.
- Twenty-six of the 36 relocated companies are located in southeast Michigan.
- Ten of the 26 are located within Washtenaw County.
- Sixteen of the 69 are Boot Camp teams initially from outside of Ann Arbor.

Outside Service Area (OSA)

69 Companies

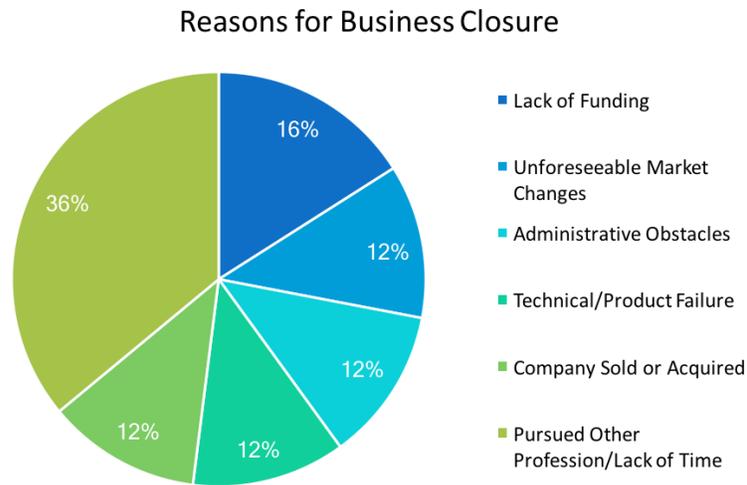


Pre Legal Formation

Twelve of the companies served in the last five years have not attained legal formation by the time the contract year ended. These are likely still in their idea stage of growth, focused on validating their business model.

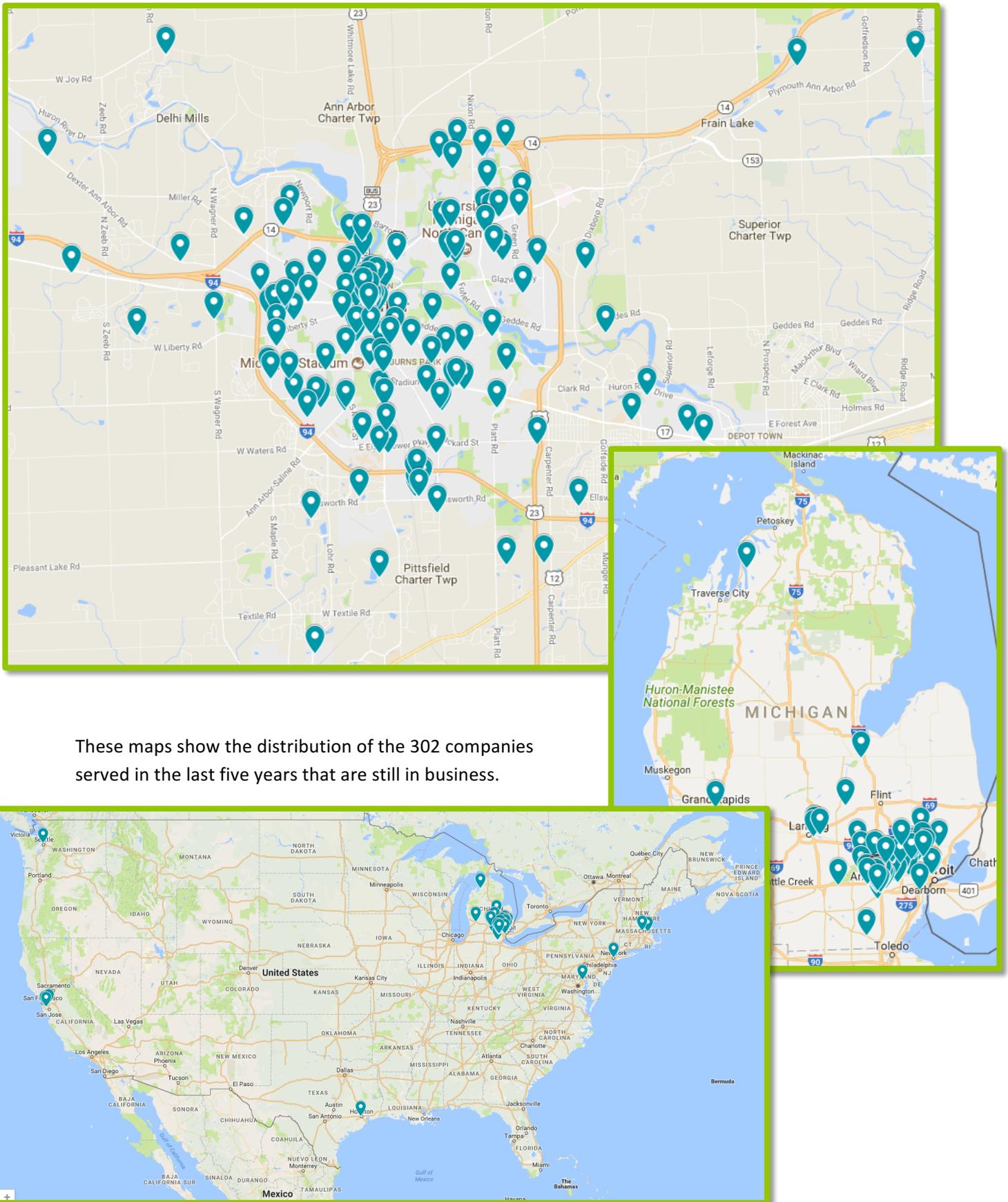
Business Closures

Eighty-eight of the companies that received LDFA-funded services in the last five years have reported ceasing operations. It is challenging to generate an accurate figure of the jobs lost by these companies, as they do not report their employment figures at the time of their closure. However, at the time of the initiation of their last engagement, they accounted for 159.5 FTEs in total.



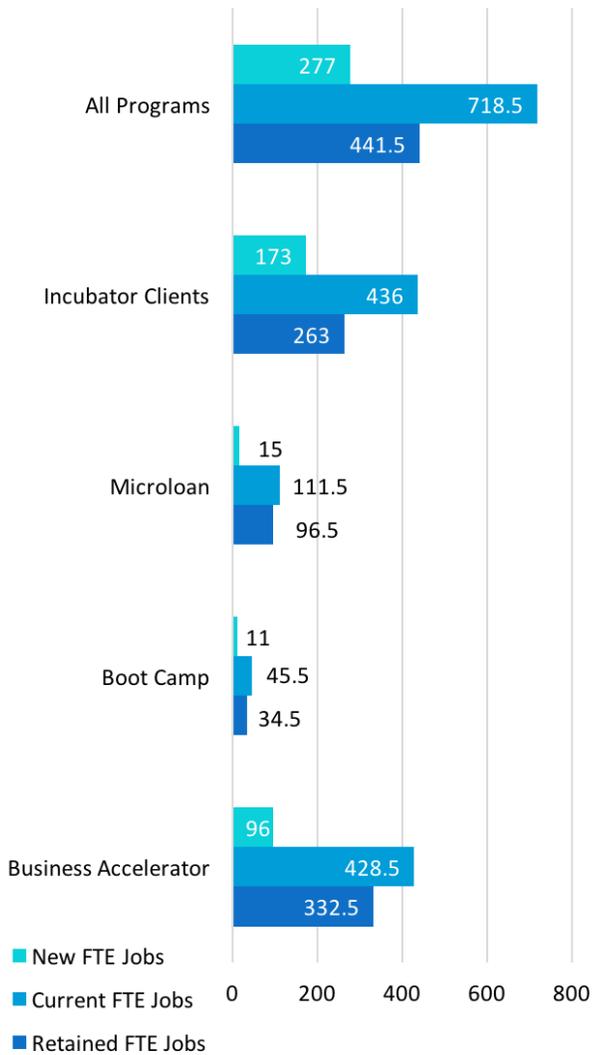
Note: Chart data set is only companies that answered a specific question on this year's survey.

Geographical Distribution of Served Companies



These maps show the distribution of the 302 companies served in the last five years that are still in business.

Jobs Created by LDFA Program



The tables in the Appendices serve as a breakdown of services provided during the fiscal year, and the associated job creation reported by the participants of each program. It is important to note the substantial overlap of programs serving any given company. Many companies receive a variety of services from SPARK as they grow, and therefore may appear on more than one of the tables.

Retained FTEs are those that the company reported at the time of the initial engagement of service. Current FTEs are updated through recent contact with the company or the annual survey conducted in July. New FTEs are the difference between retained and current. FTE, for reporting purposes, means Full Time Equivalents: All W2 employees and founders, plus full-time workers compensated in equity. All part-time employees count as 0.5 FTE. Interns and independent contractors (1099) are not included in this definition.

We also asked companies about the number of independent contractors with whom they engage. Although this figure is not required to be reported by SPARK, we believe it reflects a more accurate economic impact by the startup business.

LawnGuru enters six new markets, hits revenue milestone



LawnGuru's mobile and web based applications provide on-demand lawn care and snow removal services to consumers. In the past year, the company has expanded its services outside of the Ann Arbor region to six new markets, including out of state. Ann Arbor SPARK helped the company through the internship program with the Eastern Michigan University Digital Engagement Clinic as well as grants for legal services and mentoring through the Entrepreneur in Residence program.

Business Accelerator

The table in Appendix A lists the 114 companies that had Business Accelerator engagements this year; this list comprises all grant support along with the Executive in Residence and Internship programs. Out of the companies that had Business Accelerator engagements this year, 83% responded to our Annual Survey.

Nostrum Energy awarded first OEM contract, launches new products



Nostrum Energy, LLC launched 17 new products in the last year and was awarded its first OEM contract. The company's application specific development with a top Le Mans racing team, a major aftermarket supercharger company, and a European OEM advanced engine project are being led from the SPARK Central Innovation Center. Nostrum also tapped in to support available through Ann

Arbor SPARK to develop its ecommerce website.

"Beyond the funding opportunities that arise through SPARK, such as BAF, SCIP, FCP and TCA, we have found that the eco-system at SPARK central is an essential element to start-up life. Benefits include the ability to seek advice, discuss financial terms or lending strategies, network investor opportunities, as well as the camaraderie of other start-ups. SPARK training and education sessions (marketing, channels, sales, social media) also allow employees to grow, which is imperative to retaining top talent."



MySwimPro named by Apple as the Watch App of the Year

This year, MySwimPro launched world's first Apple Watch App for swimming – an app that was named by Apple as the Watch App of the Year. It also launched a version for the Android Wear. The company successfully executed a crowdfunding campaign that raised more than \$100,000 and also received \$40,000 grand prize from the Michigan GreenLight Business Model Competition and an additional \$25,000 through the Innovation Fund of America. Ann Arbor SPARK has supported MySwimPro since its launch in 2016, helping the startup negotiate a strategic relationship with Garmin as well as developing the resources it needed to launch its crowdfunding support. MySwimPro also worked with an intern provided through Ann Arbor SPARK's Intern Program.

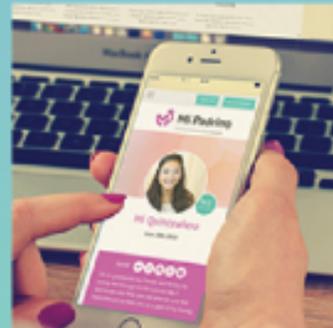
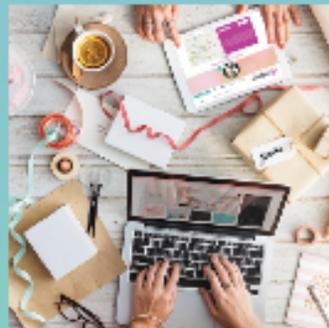


Boot Camp

The table in appendix B lists the 22 teams that attended Boot Camp this fiscal year. Fall Boot Camp was held November 17th and 18th. The spring Boot Camp session was held May 22nd and 23rd. Thirteen Boot Camp teams received Business Accelerator services by June 30th. Nine teams were affiliated with the University of Michigan. In all, 19 teams received an LDA-funded scholarship to attend Boot Camp. This year's annual survey had a 91% response rate among these Boot Camp teams. Four of the teams have subsequently raised capital.

MiPadrino attends Boot Camp, grows team in Incubator

MiPadrino, a crowd-gifting platform designed specifically for Latin Americans and their families, launched after its founder participated in Ann Arbor SPARK's Entrepreneur Boot Camp in fall 2016. Now live with users all around the U.S. and Mexico, MiPadrino is on its way to profitability after raising its first round of capital. Currently a tenant at the SPARK Central Innovation Center, the company received grants for website, sales, and user experience work and also benefitted from interns provided through the SPARK Intern Program as well as the Eastern Michigan University Digital Engagement Clinic.



Incubator Clients

The table in Appendix C lists the 82 companies that are or were Incubator clients this year. Virtual clients, and clients seated on the first, third, and fourth floors are reported together. Of this year's clients, 72% responded to our annual survey.

Groundspeed raises capital, graduates Incubator

Founded in 2016, Groundspeed Analytics, Inc. recently graduated from Spark Central Innovation Center in to their new office space in downtown Ann Arbor. Specializing in data collection for insurance brokers via machine learning, this nimble start up closed its Series A funding round and raised \$2 million. Through Entrepreneur Boot Camp to their investments from the Michigan Angel and Tappan Hill Ventures, Ann Arbor SPARK is truly proud to list Groundspeed as a successful graduate and partner of our award-winning start up program.

"Ann Arbor Spark was instrumental in our success. They were a true partner and helped us every step of the way."

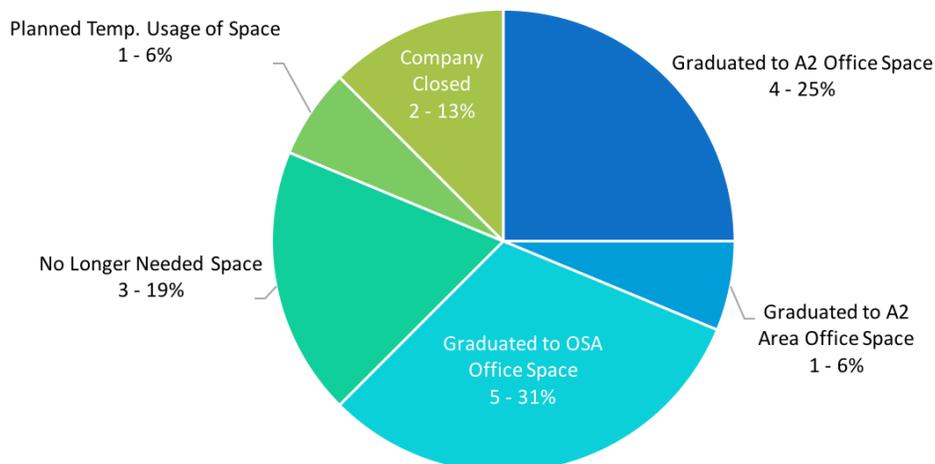
Jeff Mason, Founder and CEO



Groundspeed

Over the year, 16 companies have left the incubator. Ten have "Graduated" to their own office space and continued to grow rapidly. Five of the graduates have settled in the immediate Ann Arbor area and currently employ 57 people.

Reason for Departure
from Incubator
16 Companies



Microloan

The table in Appendix D lists all companies that received a microloan from the start of the program through June 30, 2017. During the fiscal year, five new loans were issued for \$25,000 each totaling \$125,000. The total principal of all loans provided to date is \$1,498,460. The total repayments during the fiscal year were \$106,400. Eight companies went out of business necessitating a write off of their principal.

Out of the 42 companies that have received a microloan, 20 are now out of business. Of the 25 remaining companies, 72% responded to the Annual Survey.

On April 18, 2017, the LDFA approved the amended TIF Plan Extension for the Ann Arbor/Ypsilanti SmartZone which includes the following:

“The SmartZone will immediately discontinue issuing new microloans and will wind-down the existing portfolio by allowing existing loans to be repaid under their existing terms without an early prepayment request from the LDFA.”

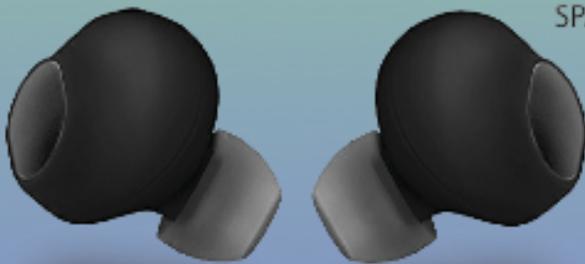
At the same meeting, it was agreed that SPARK would return the existing funds in the microloan account, less the amount necessary to maintain a free bank account for collecting future payments, by June 30, 2017, the end of the current fiscal year, and future receipts of loan interest and repayment amounts be remitted back to the LDFA annually each June.

On June 30, 2017, \$162,455 was transferred to the LDFA. Going forward, we will report the balance in the microloan account on a quarterly basis, and transfer any balance over \$10,000 to the LDFA each June until all portfolio companies have paid amounts due.

Ascape Audio launches two products, joins Desai cohort

Ascape Audio's protective smartphone case features built-in wireless earbuds and delivers 80 percent extra battery life. This past year, the company brought its product to market and direct to consumer sales are gaining momentum after being awarded one of the final microloans. Evolved Audio, which was recently accepted in to the Desai Accelerator program, has benefitted from support from Ann Arbor

SPARK since its launch in 2016, including grant funding for patent work. The company, a tenant at the SPARK Central Innovation Center, also had help this summer from interns provided through the Digital Engagement Clinic with Eastern Michigan University.



 **ASCAPE**

Marketing

Annual goals were met or exceeded demonstrating effective use of marketing tactics and budget to achieve substantive results as measured below:



Metric	Actual	Goal	Percent	Rationale for Annual Goal
Average Newsletter Open Rate*	21.5%	20%	Above by 1.5%	Beat industry standard (18%) by 2%. *Not cumulative
Entrepreneurial Services Webpage Views	89,528	59,211	151%	Increase Page Views to ES by 3,000 annually above 2013-2014 fiscal year.
Webpage Visits by Ann Arbor Residents	71,906	74,072	97%	Increase visits to the website from Ann Arbor overall by 5,000 annually over 2013-2014 fiscal year.
Social Media Referrals	7,301	4,297	170%	Increase visits from Ann Arbor to website from social media by 500 visits above 2013-2014 fiscal year.
Video Views	10,313	5,506	187.3%	Increase video plays from Michigan by 500 annually above 2013-2014 fiscal year.
PR Views & Hits	37,168	25,000	149%	Increased mentions of Ann Arbor startups in local, regional, and national news publications.

Software

2.3 Licensed Software. Contractor may obtain licensed software products or services that allows for improved data collection or metric reporting, and/or offer clients improved productivity tools. Contractor shall submit invoices for actual cost to the LDFA on a monthly basis with the annual expense not to exceed a gross amount of \$20,000. Contractor shall report the program or service acquired in the next following quarterly report including the type and purpose. A summary of usage shall be included in the Final Program Progress Report consistent with Article 3.3 of the agreement.

Usage

The software line in our budget was used to support ongoing operations, and improvements to data collection and storage infrastructure as detailed below.

1. **Clicktools:** Online survey creation and distribution apparatus that automatically inputs responses into our CRM. We use this instrument to conduct the annual survey.
2. **In4Grants:** Quarterly payment. Grant research, application, and coordination platform available to clients for free.
3. **DocuSign:** Document and signature management software to expedite operations.
4. **Salesforce:** Customer Relationship Management system used to record and track client relationships.

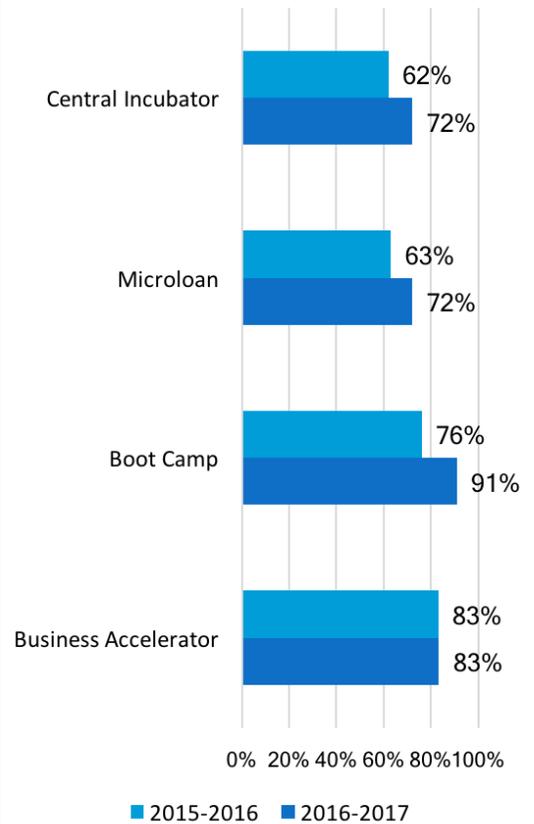
Annual Census

The online survey functions as a way of demonstrating programmatic efficacy. The survey produces evidence of job creation and retention, business activity status, as well as company location by capturing employment data through FTE counts and updates on basic profile information. In addition, the survey retrieves insightful explanations and comments regarding these topics.

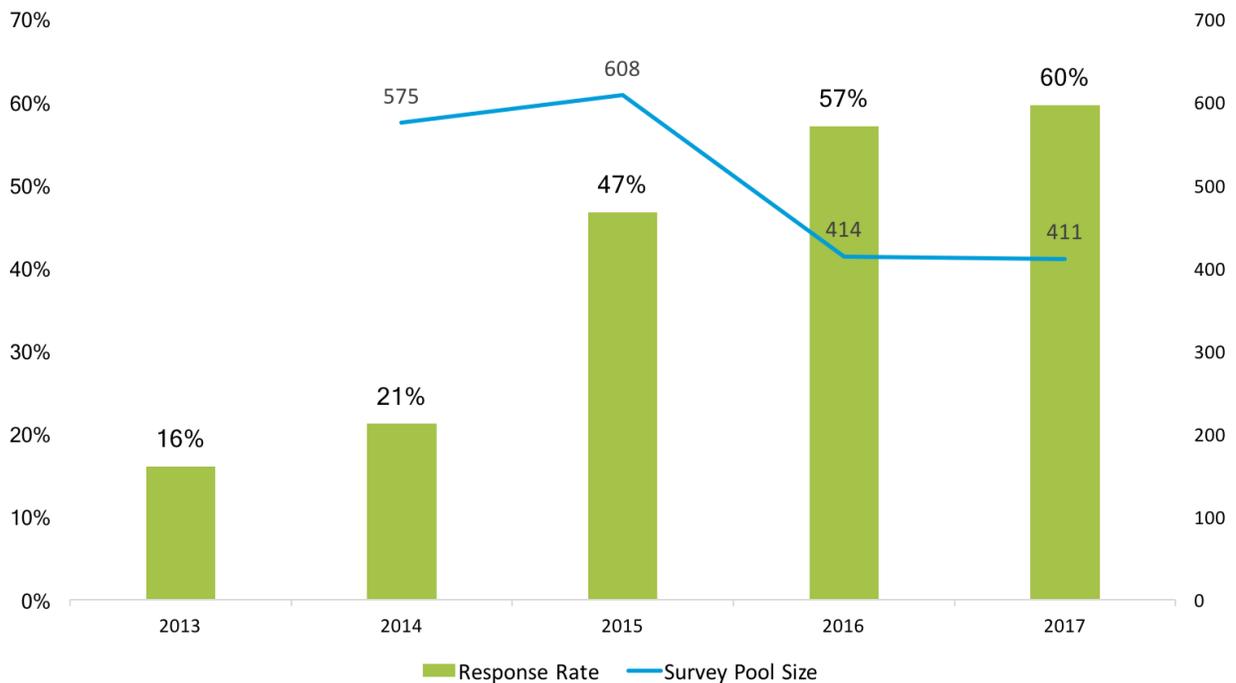
The 2016-2017 survey was the most successful census in SPARK history in terms of response rate. This year, we achieved an overall response rate of 59.6%. This represents a 2.5% increase in response rate from last year, which was the previous record. We attained this increase by building off the success of last year's survey changes that included research-based survey language improvements, pre-populated fields, and a follow-up call program.

Companies served this year responded at a rate between 72% and 91% by program, significantly higher than the average response rate for all time companies served. A full description of the methodology utilized in conducting the census is included in the next section of this report.

Annual Survey Response Rate by Program



Historical Survey Performance



Census Methodology

Ann Arbor SPARK collects and reports data from its clients over and above what is required by the contract. Salesforce.com is employed as our Customer Relationship Management system to record company data. Information about all companies is gathered through several methods as described below. Ann Arbor SPARK continues to refine procedures to capture, store, and report data more efficiently, accurately and timely.

Initial Data Entry

A procedure was implemented in late 2008 requiring all entrepreneurs requesting assistance of Ann Arbor SPARK for Business Acceleration services, incubator space, or Boot Camp to fill out an online form that could be accessed through the SPARK website. Basic information including name, address, phone, email, and brief description of company are required. This information is automatically fed into Salesforce. An effort is made to connect with all inquiries within 48 hours. In an initial communication, additional data gathered by SPARK personnel determines if the entrepreneur meets minimum criteria to warrant further discussion and assistance. At that time, a better description of the applicant's needs are captured and input.

Retained FTEs

We capture the number of FTEs that a company had at the start of an engagement of any kind. This number becomes our retained jobs number and is not altered. However, for reporting purposes it is possible the retained jobs number can change for a company if that company takes advantage of multiple services and their FTE count changes between those services. For example, when a team attends Boot Camp there may be only one FTE - the entrepreneur. When that team returns for Business Accelerator services there may be additional FTEs - co-founders or initial hires. When reports are generated on Boot Camp attendees, the team's retained FTE number would be one. When reporting on Business Accelerator clients, the retained FTEs would be more than one.

Current FTEs

Throughout the year 'current jobs' is collected from entrepreneurs through three methods. When SPARK staff meets with entrepreneurs, FTE updates are gathered and recorded in the CRM system. Additionally, written documentation is obtained from every company at the start of each engagement. This document is attached to their file to corroborate the FTE count listed as start of engagement.

Annual Survey

All current and former clients are surveyed annually using Clicktools, an online survey tool that synchronizes with Salesforce. Our survey asks for data including current employment and other vital company information. Unfortunately, the response to our surveys has been less than 100%. The response rates for each of the four programs are listed in each section. If an entrepreneur sends SPARK data via the survey that does not pass a visual inspection they are contacted and asked to verify the data. If an adjustment is made to the CRM data, written documentation from the entrepreneur is attached to the file.

Appendix A: Business Accelerator Companies Served

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
1041	Core lasers, and laser-based systems that can provide the necessary light source for directed infra-red countermeasure systems, explosive detection devices, and intravascular diagnostic tools.	5	5	0	0
1282	Technologies for integrated and standardized assessments of blood damage/red blood cells.	3.5	0	-3.5	0
1646	Software integrating patient data for billing and quality management; and a system to manage the use of drugs in patients.	2.5	3.5	1	1
2203	Online clothing inventory management that allows targeted retailer interaction.	3	4	1	3
2752	Entry-level neurophysiology (brain signal recording) kits for students to learn about the brain.	12	11	-1	10
3151	Wireless sensing, analysis and optimization of residential and commercial electricity use.	2	2	0	0
3476	Solid state lighting combining organic and inorganic materials, that mimics sunlight; less costly than other LEDs.	4.5	5	0.5	15
3987	Software for the debt collection industry and large companies with delinquent accounts.	3	10	7	2
4132	A medical device for the field of histology that automates a process used in tissue diagnostics.	4	8	4	3
4228	Advanced gamma ray detection and imaging devices based on wide band-gap semiconductor materials.	9	20.5	11.5	0
4432	Life Science research recruiting software.	2	4	2	1
4471	Software that optimizes reward program participants' behaviors.	1	7	6	3
4519	Platform giving independent app publishers technology for customized native ads and access to advertisers.	7	9	2	3
4522	Tissue engineered ligament replacement for dogs.	2	2	0	3
4586	Heat technology generates nonelectric, reusable heat on demand.	5	5	0	3
4791	Consolidated event planning and management software platform.	8.5	12	3.5	0
4821	Medical imaging platform for ophthalmologists.	1	1.5	0.5	0
5634	Multi-sided reviews platform that allows users and restaurants to discover and engage each-other.	3	3	0	20
5640	Interactive tablet menu for restaurants.	2	2.5	0.5	1
6285	Autonomous aerial vehicle software.	13	13	0	10
6287	Quantitative multiplexed protein biomarker analysis kits and services.	3.5	0	-3.5	0
6518	Creator of an eye drop assist device.	1	2	1	0
6522	Development and implementation of online negotiation systems for courts and constituents.	6	9	3	2
6535	Solar energy customized solutions.	2	2.5	0.5	3
6545	Software platform applies predictive analytics to strategic decisions regarding IP management.	2	2	0	4
6558	Technical consulting, mechanical analysis, and design services.	7	7	0	1
6615	Career management and recruitment SaaS platform for professionals within the diversity community.	1	3.5	2.5	1
6835	Combustion cycle and injection technology.	9	6	-3	0

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
6947	Malware detection software.	4	5	1	1
6977	Human capital management software optimizing hiring, evaluations, and workflows for education and healthcare.	6	6	0	3
7176	Stair climbing wheelchair.	1.5	0.5	-1	0
7201	Provides quality analytics and initiative programs for improved compliance to accepted standards of clinical care.	1	1	0	1
7202	Sports fandom competition, tracking and social media integration smart phone app.	2	2	0	5
7275	Online personal family assistant and organization / coordination tool.	4.5	4	-0.5	0
7336	Supply chain software.	8	8	0	3
7362	Digital content marketplace and book sourced content provider.	2	2	0	4
7374	Augmented reality app for immersive digital experiences based on children's books.	1	1	0	10
7375	Mobile app for tracking and analyzing pain data.	3	1	-2	1
7440	Joint brace that will lock and emit an electrical shock for use in police and military training.	2	1	-1	0
7448	Private interactive 24-hour assistance to those with substance abuse disorders.	2	9	7	11
7484	Products serving the legal eco-system.	6	5	-1	5
7493	HCIT product to help individuals define their purpose and manage their willpower to change their behavior.	7	20	13	2
7531	Lactation simulation model and a breastfeeding education app.	1	4	3	0
7586	Application to track and coordinate IVF procedures to assist patients.	1	3.5	2.5	0
7625	An enzyme-linked immunosorbent assay (ELISA) used in technology for biological/biomedical research, pharmaceuticals, and clinics.	2	2	0	4
7651	Services to help students take action on their passions and interests.	2	3	1	1
7656	Platform matching corporations and law firms with vendors who provide ancillary legal services.	2	2	0	8
7674	Platform of sensors, software, and analytics that will harvest key data from manufacturing machines, processes, and people, and translate it to actionable intelligence.	1	1	0	2
7680	Big data intelligence-as-a-service platform built for credit unions & community banks.	3	3	0	0
7681	High-purity silica from biogenic waste streams.	4	0	-4	0
7694	Automated management of actionable investment ideas.	1	2	1	1
7699	Automates data science for business decisions through source connectivity capabilities and a business data marketplace.	2	2	0	0
7704	Computer vision-based phone or tablet-based application for construction workers' safety and ergonomics monitoring/analysis.	1	1	0	0
7714	Customized intelligence system - intelligent personal assistants for custom applications.	2	6	4	3
7728	Motion based simulator products, including racing and flight simulators.	1	5	4	3
7749	Visualization and marketing platform for the event industry.	1	2	1	2
7754	Sensors and measurement devices for electromagnetic radiation enabling essential technologies.	1	2.5	1.5	2
7772	Cloud computing that runs parallel libraries resulting in large	2	4	2	0

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
	speedup.				
7796	Mobile game developer.	3	3	0	2
7815	Online learning platform for contract lawyers.	1	1	0	1
7816	Application to detect, quantify, and in many cases automatically fix inefficiencies in large-scale, enterprise software systems.	1	1	0	0
7885	Mobile and web-based applications providing on-demand lawn care and snow removal services.	4	13	9	0
7888	Device which clips onto strength training equipment, capturing and interpreting strength training data in real-time.	4	5.5	1.5	0
7929	Platform to enable people with dietary restrictions to discover places, recipes, and products that fit their lifestyle.	2	5	3	1
7938	Decision making software that helps users make decisions in a structured, systematic, and dynamic way.	1	2.5	1.5	3
7940	Engine technology uses a helical drive to convert the linear motion of a piston into rotary motion.	1	3	2	2
7954	Diagnostic platform which measures a patient's immune function in less than 30 mins from one blood drop.	3	2	-1	0
7957	Video on demand service for local sports.	1	0	-1	0
7975	Smartphone case with built-in wireless earbuds and 80% extra battery life.	1	3	2	2
7982	Drug discovery SaaS product.	5	5	0	0
7983	Dementia-friendly public transportation services.	2	3	1	0
7997	Water bottle that can flip inside-out.	2	2	0	1
8001	Radiation measurement and display enabled by modern technologies.	1	1	0	7
8026	E-Commerce universal discount at point of purchase system.	2	2.5	0.5	1
8028	Online platform for festivals, vendors and attendees to share data and ideas.	2	2	0	3
8029	Med device to fight obesity.	1	1	0	1
8035	Software company combining VR and autonomous vehicles for commercial, industrial and military applications with precision payloads.	4	4	0	1
8037	Mobile software that provides reassurance of the safety and wellbeing of aging loved ones living independently.	1	3	2	0
8041	Proprietary process for joining of dissimilar materials (aluminum-to-advanced high strength steel).	3	5	2	2
8050	Employee engagement SaaS app.	4	4	0	2
8054	Synthetic nanodisks that improve vaccine performance.	1	1	0	0
8064	High energy density lithium-ion flexible batteries.	1	0	-1	0
8076	Mobile giving app for non-profits.	4	4	0	1
8081	Clothes for small men.	2	2	0	0
8088	Automated biomechanical analysis system anchored by advanced imaging technology.	7	7	0	3
8090	Cell-based assays designed for drug screens for carcinoma drug R&D.	1.5	3	1.5	0
8122	Platform for pharmacies and physicians' offices to source prescription drugs.	1	2	1	1
8132	DNA/bioinformatics analysis and collaboration platform.	2	1.5	-0.5	0

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
8133	Virtual private networking as a service.	2	1	-1	0
8155	App that helps swimmers achieve their fitness goals.	2	3	1	1
8187	Disintermediated, app and web based, entity-to-entity trading platform for transportation services.	1	2	1	2
8196	Website that tracks homework and practice tests for people who are preparing for the LSAT.	1.5	1.5	0	0
8205	Quantitative, non-invasive digital knee assessment tool that improves accuracy of traditional subjective tests.	2	2	0	0
8206	Personality testing insights for kids aged seven to 13.	3	1	-2	0
8209	Crowd-gifting platform designed specifically for Latin Americans and their families.	2	4.5	2.5	4
8228	Medical software for secure storage and artificial intelligence driven retrieval of radiologic images.	1	1	0	0
8230	Shared mobility on-demand by granting electronic access and multimodal management through smartphone-based platform.	1	2	1	1
8248	Vacuum powered accessory mounting base for use on aluminum truck roofs.	2	2	0	0
8255	Communications software for B2B or B2C.	2	2	0	5
8271	Evidenced Health Risk Appraisal (HRA) program and services.	5	5	0	11
8286	Website built to match job seekers with startup jobs they are qualified for.	2	2.5	0.5	0
8302	Global platform to connect, educate, and enable athletes and coaches.	1	1.5	0.5	2
8343	Software application that allows restaurants to efficiently take customer orders over text message.	3	3	0	2
8359	Device identification technology to help the digital display advertising more effectively target audiences.	7	13	6	2
8368	Remote PT training, education and tracking solution.	2	2	0	2
8377	Software to enable companies to detect and respond to ransomware.	2	2	0	0
8384	App and cloud service to connect dietitians and their clients for efficient, timely interaction.	2	2	0	3
8424	An augmented reality platform that empowers individuals, and organizations to solve problems, explore, and share with VR/AR.	3	4	1	2
8434	Instruments for single molecule detection of DNA, RNA and proteins.	0.5	0.5	0	0
8436	Two-sided mobile platform that connects travelers with trusted locals, matching travel interests and personalities.	3.5	3.5	0	0
8519	Provides manufacturing data analytics and related IT services to small and medium size manufacturing firms	2	2	0	3
8543	Novel video analytics capability for public safety and automotive companies to service their video analytics needs.	2	2	0	1
8574	Specialized disposable toothbrush for people living with motion disorders.	3	1	-2	0
8610	Product to improve Inventory management, waste reduction, foam reduction, and precision carbonation control of draft beverages.	5	2	-3	0
Totals (114 Companies)		332.5	428.5	96	236

Appendix B: Entrepreneur Boot Camp Companies Served

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
8187	Disintermediated, app and web based, entity-to-entity trading platform for transportation services.	1.5	2	0.5	2
8189	UAVs to detect methane at solid waste landfills.	1	2	1	0
8190	Virtual reality software suite for EMDR therapy.	1	0	-1	0
8090	Cell-based assays designed for drug screens for carcinoma drug R&D.	3	3	0	0
8192	Smart device for elderly people to help them age in place.	4	2	-2	0
8193	Mobile construction camera that ties in computer vision and augmented reality to transform the construction camera into progress monitoring, collaboration and marketing tool.	1	1	0	0
8194	Mobile application to conduct kid friendly surveys and help kids learn about the research process through in-app educational games and content.	1	1	0	0
8196	Website that tracks homework and practice tests for people who are preparing for the LSAT.	1.5	1.5	0	0
8133	Virtual private networking as a service.	2	1	-1	0
8209	Crowd-gifting platform designed specifically for Latin Americans and their families.	1	4.5	3.5	4
8028	Online platform for festivals, vendors and attendees to share data and ideas.	2	2	0	3
8228	Medical software for secure storage and artificial intelligence driven retrieval of radiologic images.	1	1	0	0
8302	Global platform to connect, educate, and enable athletes and coaches.	1	1.5	0.5	2
8364	Programming language for Computer Numeric Control manufacturing.	1.5	1.5	0	0
8377	Software to enable companies to detect and respond to ransomware.	1	2	1	0
8422	A new process to manufacture custom orthotic devices by connecting orthotists with 3D printing through the cloud.	1	1	0	2
8436	Two-sided mobile platform that connects travelers with trusted locals, matching travel interests and personalities.	2	3.5	1.5	0
8437	Wellness rewards network that connects people with local businesses to drive healthy change and cut single-use waste.	1	1	0	0
8040	Content gaming platform with rewards, recognition and personal social branding.	1	1	0	0
7982	Drug discovery SaaS product.	3	5	2	0
8424	An augmented reality platform that empowers individuals, and organizations to solve problems, explore, and share with VR/AR.	1	4	3	2
8447	Web-based application for business management system catering towards small and mid-sized manufacturers, that integrates all facets of the business.	2	4	2	0
Total (22 Companies)		34.5	45.5	11	15

Appendix C: Incubator Companies Served

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
8090	Cell-based assays designed for drug screens for carcinoma drug R&D.	1	3	2	0
492	Internet-based business intelligence for independent book stores	18.5	18.5	0	0
4519	Platform giving independent app publishers technology for customized native ads and access to advertisers.	7	9	2	3
8255	Communications software for B2B or B2C.	2	2	0	5
7275	Online personal family assistant and organization / coordination tool.	2	4	2	0
7143	Games to discover the rules of organic chemistry.	1	7	6	0
4803	An intuitive integrated display that retrieves medical data.	3	4	1	1
7374	Augmented reality app for immersive digital experiences based on children's books.	1	1	0	10
4132	A medical device for the field of histology that automates a process used in tissue diagnostics.	1	8	7	3
6545	Software platform applies predictive analytics to strategic decisions regarding IP management.	2	2	0	4
8133	Virtual private networking as a service.	3	1	-2	0
7667	Precise gene editing for the development of human disease models, as well as regenerative medicine.	2	2	0	1
8001	Radiation measurement and display enabled by modern technologies.	1	1	0	7
8035	Software company combining VR and autonomous vehicles for commercial, industrial and military applications with precision payloads.	4	4	0	1
8060	Renewable electric generation system for large trucks that converts the kinetic energy of a moving vehicle into electricity.	1	6	5	0
2203	Online clothing inventory management that allows targeted retailer interaction.	7	4	-3	3
8235	New technology process for the brazing of automotive aluminum core piping.	0.5	0.5	0	0
7656	Platform matching corporations and law firms with vendors who provide ancillary legal services.	1	2	1	8
8196	Website that tracks homework and practice tests for people who are preparing for the LSAT.	1	1.5	0.5	0
7943	COPPA compliant family organization and security application for families with children under age 13.	1	1	0	2
7982	Drug discovery SaaS product.	2	5	3	0
8142	X-ray, electron-beam (ebeam) and plasma product technologies for a diverse range of industrial applications.	1	1	0	0

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
7830	Promotes employment and social enterprise in the state's most distressed urban areas.	1	1	0	0
7362	Digital content marketplace and book sourced content provider.	2.5	2	-0.5	4
8037	Mobile software that provides reassurance of the safety and wellbeing of aging loved ones living independently.	1	3	2	0
338	Information and news aggregator and filter.	1	1	0	1
8116	Social media listening and analysis software utilizing machine learning.	9	9	0	0
7651	Services to help students take action on their passions and interests.	1	3	2	1
6615	Career management and recruitment SaaS platform for professionals within the diversity community.	1	3.5	2.5	1
7988	Mobile app that facilitates trucking pick-ups and deliveries by allowing facility access.	1	3	2	2
7341	Conversational IVR platform that combines voice, mobile messaging, and location-based services.	2	9	7	0
7728	Motion based simulator products, including racing and flight simulators.	4	5	1	3
8305	Self-serve ETL platform, which enables data cleansing with no IT involvement.	3	5	2	0
7975	Smartphone case with built-in wireless earbuds and 80% extra battery life.	2	3	1	2
7927	Mobile platform for connecting people with the same chronic conditions.	2	2	0	1
6356	A new marketing-based, platform-agnostic, real-time media alert solution.	1	1	0	0
7713	High accuracy high precision maps of road networks for use in autonomous driving vehicles.	3	40	37	2
8040	Content gaming platform with rewards, recognition and personal social branding.	1	1	0	0
7696	SaaS claim analytics, administrative support and dashboard for insurance brokers.	6	16	10	1
7940	Engine technology uses a helical drive to convert the linear motion of a piston into rotary motion.	2	3	1	2
7466	App for helping millennials create savings plans with banks.	1	5	4	1
3221	Advanced software solutions for sewer modeling to municipalities and engineering consultants.	3	4	1	0
7666	Platform to provide video conference for patient care by medical providers.	5	4.5	-0.5	2
8366	Commercializer of digital health and sports performance technology from Universities across the US into individual technology firms.	4	4	0	0
7336	Supply chain software.	1	8	7	3
8047	Industrial Internet of Things software suite.	1	1	0	0
8206	Personality testing insights for kids aged seven to 13.	2	1	-1	0

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
8026	E-Commerce universal discount at point of purchase system.	2	2.5	0.5	1
7681	High-purity silica from biogenic waste streams.	2	0	-2	0
7620	Software and simple hardware to integrate, retrieve and update personal identity information.	2	2	0	0
4791	Consolidated event planning and management software platform.	6.5	12	5.5	0
8209	Crowd-gifting platform designed specifically for Latin Americans and their families.	3	4.5	1.5	4
5634	Multi-sided reviews platform that allows users and restaurants to discover and engage each-other.	3	3	0	20
7692	Brain-computer interface for cognitive assessment.	5	5.5	0.5	0
7153	Brain imaging service for development of medications or devices for the central nervous system.	1	1	0	0
7747	Help experts with differentiated value proposition to commercialize and monetize their IP.	1	1	0	0
7748	Proprietary Web-based reporting platform to build analytical, predictive reporting tools.	23	47.5	24.5	1
6835	Combustion cycle and injection technology.	8	6	-2	0
7586	Application to track and coordinate IVF procedures to assist patients.	3.5	3.5	0	0
8007	Bamboo composite materials.	3	3	0	2
5601	Digital content aggregation and distribution.	1	0	-1	0
8359	Device identification technology to help the digital display advertising more effectively target audiences.	2	13	11	2
8028	Online platform for festivals, vendors and attendees to share data and ideas.	2	2	0	3
8205	Quantitative, non-invasive digital knee assessment tool that improves accuracy of traditional subjective tests.	1	2	1	0
6680	Digital entertainment company, focused on creating dynamic stories with an emphasis on female characters.	1	2	1	4
8122	Platform for pharmacies and physicians' offices to source prescription drugs.	2	2	0	1
6600	Medical device for vision enhancement in persons with partial loss of sight.	1	2	1	1
3637	Therapeutic for treatment of retinal diseases.	2	4	2	8
8134	Real estate SaaS product.	3	3	0	0
3568	Software that monitors camera system performance on assembly lines.	9	16	7	0
2821	Firmware app for collecting/analyzing multiple patient parameters in a real-time ICU.	2	0	-2	0
7254	SaaS offering that formalizes the business impact / risk analysis processes.	2.5	4	1.5	3
8574	Specialized disposable toothbrush for people living with motion disorders.	3	1	-2	0
8189	UAVs to detect methane at solid waste landfills.	1	2	1	0

Uniq ID	Company Description	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
7924	Educational music app for classical musicians; providing the orchestral accompaniment to any solo piece.	1	2	1	0
7777	SaaS enabled ride-sharing platform.	1	14	13	10
7749	Visualization and marketing platform for the event industry.	2	2	0	2
8187	Disintermediated, app and web based, entity-to-entity trading platform for transportation services.	1	2	1	2
8323	System for recording, displaying and interpreting human eye movements, and a method for recognizing emotional reactions to visual content.	27	27	0	0
7680	Big data intelligence-as-a-service platform built for credit unions and community banks.	3	3	0	0
7448	Private interactive 24-hour assistance to those with substance abuse disorders.	2	9	7	11
8088	Automated biomechanical analysis system anchored by advanced imaging technology.	7	7	0	3
Totals (82 Companies)		263	436	173	152

Appendix D: Microloan Program Companies Served

Uniq ID	Account Description	Debt at Cost	Date of Initial Investment	Return	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
338	Information and news aggregator and filter.	\$29,000	6/17/10		1	1	0	0
1585	Educational software engines.	\$30,000	9/8/09		4	0	-4	0
1585	Educational software engines.	\$20,000	4/27/10					
1885*	Commercializing dental appliance - mouth guard.	\$15,000	5/27/10	\$17,195	1	23	22	1
1982	Web site design and social media.	\$50,000	11/9/09	\$65,958	5	7	2	5
2153	Designer, manufacturer, sales and marketer of specialized video equipment for shooting sports and outdoors industry.	\$25,000	4/13/10	\$17,300	2	0	-2	0
2181	Web-based marketing services for education organizations and related non-profit and government entities.	\$25,000	12/14/09	-	1	0	-1	0
2578	Manufactures and develops solid state lighting systems for commercial and industrial applications.	\$25,000	5/9/11		3	0	-3	0
2610	Online management system for automotive incentives.	\$25,000	3/16/11	-	3	0	-3	0
2679	Development of therapies for treatment of bone-related conditions in animals.	\$28,000	8/31/11	\$6,720	3	0	-3	0
2804	Assessment tool for determining a corporation's capability to be successful in strategic partnering with another organization.	\$10,000	10/22/09		1	0	-1	0
2838*	Software for tracking vehicles using mobile phone GIS.	\$45,000	11/1/10	\$57,600	2	0	-2	0
2868	Online community that sells access to musicians in the form of virtual shares.	\$45,000	8/13/10	-	3	0	-3	0
2880	SaaS for independently practicing therapists(SaaS).	\$47,000	2/24/11	\$47,000	3	2	-1	3
3010*	Faster and more effective Integrated Circuit (IC) design quality control software.	\$45,000	10/12/11	\$155	3	8	5	2
3045	Software and business management services connecting buyers and sellers with shorter, transparent supply chains.	\$10,000	1/8/10	\$13,326	2	0	-2	0

Uniq ID	Account Description	Debt at Cost	Date of Initial Investment	Return	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
3045	Software and business management services connecting buyers and sellers with shorter, transparent supply chains.	\$40,000	7/20/10	\$50,906				
3105*	Electrical test and measurement instrumentation.	\$35,000	3/4/10	\$18,400	2	0	-2	0
3105*	Electrical test and measurement instrumentation.	\$15,000	1/28/11					
3151*	Wireless sensing, analysis and optimization of residential and commercial electricity use.	\$25,000	9/10/15	\$4,500	2	2	0	0
3176	Web-based system that measures the confidence behind what students learn to increase knowledge retention.	\$25,000	6/22/10		1	0	-1	0
3418	Children's financial learning program.	\$50,000	9/15/10	\$10,000	2	0	-2	0
3476*	High quality, solid state lighting combining organic and inorganic materials, that mimics sunlight; lower cost than other LEDs.	\$50,000	10/22/14	\$31,750	2	5	3	15
3600	A web-based, toll-free superhighway for the multidirectional exchange of Intellectual Property, Technology and Products.	\$25,000	12/20/10	\$18,841	2	3	1	4
4141	Creator of online portal to connect care consumers and care providers.	\$10,237	10/10/11	\$3,718	4	0	-4	0
4141	Creator of online portal to connect care consumers and care providers.	\$9,223	12/15/11					
4425	Mobile loyalty system for quick service restaurants which creates a cross promotional platform with customized deals.	\$40,000	1/19/12		1	2	1	0
4472*	An online platform that empowers college students to showcase their work and skills to startups.	\$50,000	6/11/12	\$61,448	7	4	-3	0
4519	Platform giving independent app publishers technology for customized native ads and access to advertisers.	\$50,000	7/26/13	\$11,766	2	9	7	3
4552	Child Care facility backend and customer facing software.	\$25,000	9/10/12		3	0	-3	0
4591	Web-based and mobile attendee matchmaking software and mobile conference guide for professional events.	\$50,000	11/6/12	\$6,000	1	0	-1	0

Uniq ID	Account Description	Debt at Cost	Date of Initial Investment	Return	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
4791	Consolidated event planning and management software platform.	\$50,000	4/18/14	\$2,500	2	12	10	0
5091	Field survey and data collection software.	\$50,000	7/23/13	\$2,000	2	0	-2	0
6287	Quantitative multiplexed protein biomarker analysis kits and services.	\$30,000	3/10/16		4.5	3.5	-1	1
6358	Developer of a smart phone case that retracts and stores a user's headphones/earbuds within a slim profile case.	\$30,000	4/18/14		3	1	-2	0
6358	Developer of a smart phone case that retracts and stores a user's headphones/earbuds within a slim profile case.	\$20,000	10/29/14					
6545	Software platform applies predictive analytics to strategic decisions regarding IP management.	\$25,000	7/26/16		2	2	0	4
6680	Digital entertainment company, focused on creating dynamic stories with an emphasis on female characters that push far beyond typical stereotypes.	\$25,000	2/19/14		1	2	1	4
6680	Digital entertainment company, focused on creating dynamic stories with an emphasis on female characters that push far beyond typical stereotypes.	\$25,000	11/21/14					
6778	Network that allows startups to access crowd-sourced Product-Market Fit Solutions.	\$15,000	4/9/14	\$4,000	2	1	-1	3
6800	Smart bike providing bike sharing solutions to communities.	\$50,000	6/9/14	\$5,000	2	2	0	0
6804	Supply chain decision making platform that can visualize and compare supply chain ideas in real-time.	\$40,000	3/3/15	\$49,200	2	1	-1	1
7349	Medical device integrator that is developing solutions to improve surgical safety and productivity.	\$40,000	5/27/15	\$43,653	1	1	0	1
7374	Augmented reality app for immersive digital experiences based on children's books.	\$25,000	9/26/16		1	1	0	10
7448	Private interactive 24-hour assistance to those with substance abuse disorders.	\$25,000	6/1/16	\$28,000	2	9	7	11
7466	App for helping millennials create savings plans with banks	\$25,000	2/1/17		2	5	3	1

Uniq ID	Account Description	Debt at Cost	Date of Initial Investment	Return	Retained FTE Jobs	Current FTE Jobs	New FTE Jobs	Independent Contractors
7656	Platform matching corporations and law firms with vendors who provide ancillary legal services.	\$25,000	9/27/16		2	2	0	8
7975	Smartphone case with built-in wireless earbuds and 80% extra battery life.	\$25,000	12/9/16		2	3	1	2
Grand Totals		\$1,498,460		\$576,936	96.5	111.5	15	79

*Denotes UM technology

Blue loans are paid in full

++ denotes new loan this year

Glossary

In an effort to reduce unnecessary complication, SPARK and the LDFA keep definitions of terms consistent with MEDC. Included for reference are applicable definitions provided by the MEDC:

Companies Served

The number of tech companies that contractor provided services to, including accelerator grants, incubator space, mentoring, consulting, training, etc.

Full-Time Equivalent

All W2 employees and full time workers compensated in equity. All part time employees count as 0.5 FTE. Interns and independent contractors (1099) are not included in this definition.

Jobs Created

Number of jobs created by the companies that contractor served or are incubator clients; does not include contract positions, only full-time equivalents.

Jobs Retained

Number of jobs retained by the companies that contractor served or are incubator clients; does not include contract positions. Includes the number of positions or employees at the companies that have been retained because of the funding from the incubator or because of the services that the incubator provided.

New Companies Created

Number of new companies created as a result of contractor's involvement. Companies can be defined as sole proprietorship, LLC, Corp, etc. Involvement can mean: 1) contractor provided services or funding to the company, 2) the company is located in contractor's incubator, 3) the company is a university spin-out, 4) contractor spoke with the newly formed company and provided them help with the next steps in building his/her company for example other resources, training classes, etc., or 5) contractor spoke with the CEO/CTO prior to the company formation. A company is only counted as 'new' if it is incorporated within the subsequent 12 months of the service provided.

Tech Company

A business in which research and development brings forth an innovative product or process. The innovation typically involves intellectual property that contributes to a strong competitive advantage in the marketplace, and serves as a foundation for a high rate of growth.