

# LDFA REPORT 2021 — 2022

## ANN ARBOR/YPSILANTI SMARTZONE

# ANNUAL REPORT

**229** COMPANIES  
SERVED

**81** JOBS  
CREATED

**36** COMPANIES  
CREATED

**\$468 M** FUNDS  
RAISED  
INVESTMENTS & GRANTS

**\$1.59 M**  
DIRECT SUPPORT

*Photo Credit: Oxford Companies*



Ann Arbor SPARK will advance the economy of the Ann Arbor region by establishing it as a desired place for innovation, business location and growth, and for talented people to live and work. The Ann Arbor region will be recognized for its academic, business, and community resources, and its collaborative culture. For more information visit: [www.annarborusa.org](http://www.annarborusa.org)

# Ann Arbor-Ypsilanti Smart Zone

## Local Development Finance Authority (LDFA)

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*Ann Arbor SPARK Annual Report: July 1, 2021 – June 30, 2022*

### **Contract Period July 1, 2021 through June 30, 2022**

*(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, 2022 (with 'jobs created' 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 and/or SPARK East 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 the previous five years 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, 2022; 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, 2022; and 4) a census of the number and identity of clients for which information regarding job creation is no longer being collected as of June 30, 2022. 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.*

The information below has been reviewed and SPARK certifies that to the best of our knowledge and ability the information below is accurate. However, given the dynamic nature of the metrics being collected this value should be considered a best effort approximation and not an absolute result.



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Bill Mayer  
Ann Arbor SPARK  
SVP, Entrepreneur Services

## Annual Metrics

This year SPARK served 229 companies with a deliberate, customized combination of accelerator services, incubation, scholarship to the Boot Camp course, or involved in the Digital Engagement Clinic (DEC). These companies reported the net addition of 81.2 (with a gross addition of 131.7) full-time equivalent employees (FTEs) from the onset of their engagements to the end of contract year. Currently, these companies employ 983.2 FTEs (see appendix F:1).

This year, SPARK supported the creation of 36 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.

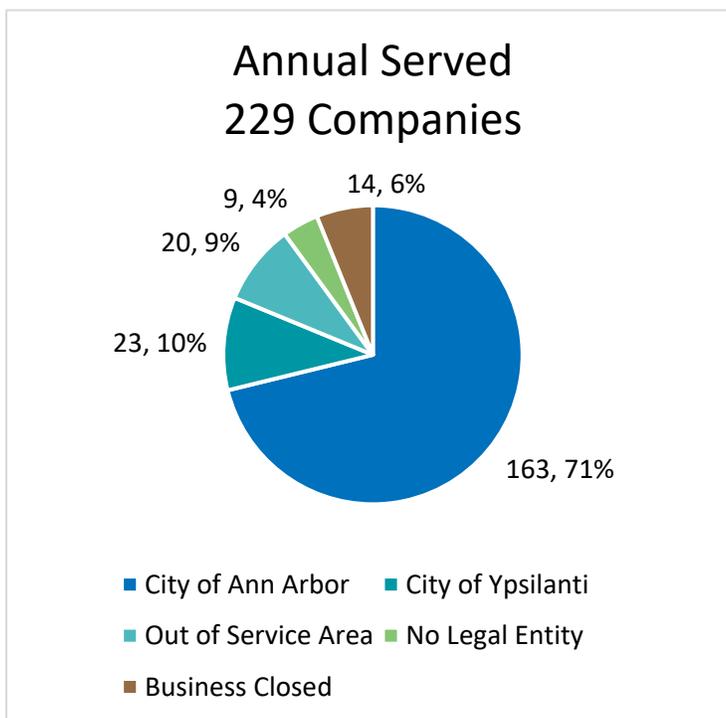
### Companies Remaining in the Service Area

- One hundred eighty-six companies that worked with SPARK this year are still operating within the City of Ann Arbor or City of Ypsilanti.
- These companies reported an addition of 124.2 FTEs from the onset of their engagements to the end of contract year.
- Ann Arbor and Ypsilanti companies SPARK has worked with over the fiscal year have gained, on average, .66 full-time equivalent employees.

### Outside Service Area

Out of the 229 companies that have received LDFA-funded services this year, 20 companies representing 204.5 FTEs are currently located outside the service area.

- Two companies, with 4.5 FTE's, are Boot Camp teams that are initially from outside the City of Ann Arbor or City of Ypsilanti.
- One company, with .5 FTE's, is moving to the service area.
- Five of the companies, representing 163 FTE's, are operating inside the service area but have registered addresses outside the city limits.
- Four companies, with 4.5 FTE's, are incubator clients or BootCamp teams that have stated intentions to move to the service area.
- The remaining 8 companies, with 32 FTE's, have moved from the service area.

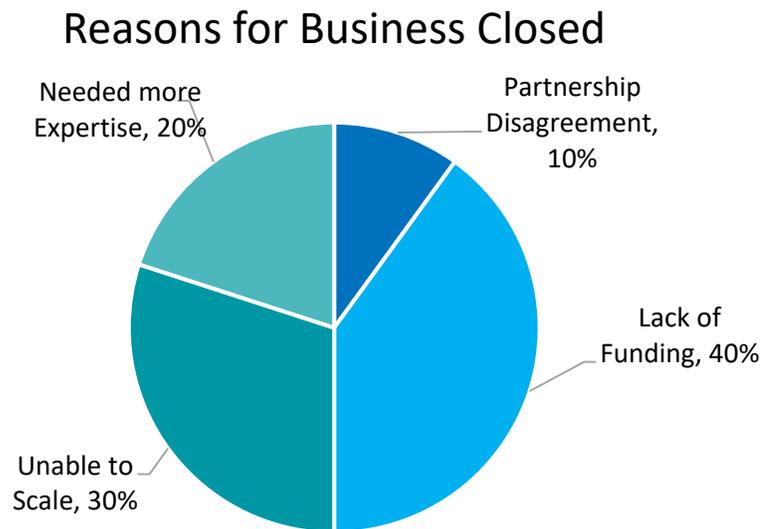


### No Legal Entity

Nine of the companies served this year have not attained legal formation or Michigan registration by the end of the contract year. Entrepreneurial teams at this stage are either focused on validating their business model, e.g. a Boot Camp team, or they are incubator clients that haven't registered their out-of-service area or out-of-state companies in Michigan.

### Closed Businesses

Out of the 229 companies served this year, 14 have ceased operations. Giving the 21-22 fiscal year a 94% survival rate. The termination of these companies represented a decrease of 50.5 FTEs, which has already been deducted from the previously stated annual net addition of 81.2 FTEs.



## Cumulative Metrics

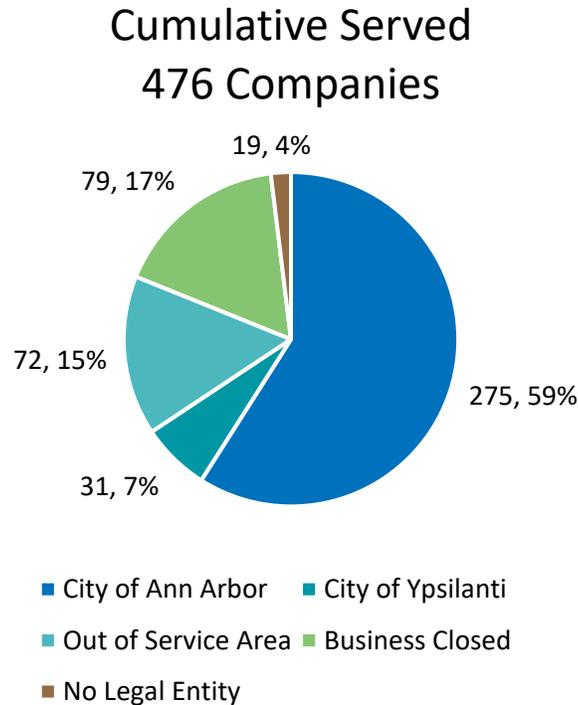
Cumulatively, in the last five years, SPARK provided services to 476 unique companies (see appendix F:2). The subset of these companies who either responded to our survey, or remained in contact with SPARK, reported a net increase of 912 (with a gross addition of 1,088) full-time equivalent employees from the onset of their engagements to the end of this contract year. Currently, these companies employ 2,275.8 FTEs.

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 (2017-2022). 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.

### Companies Remaining in the Service Area

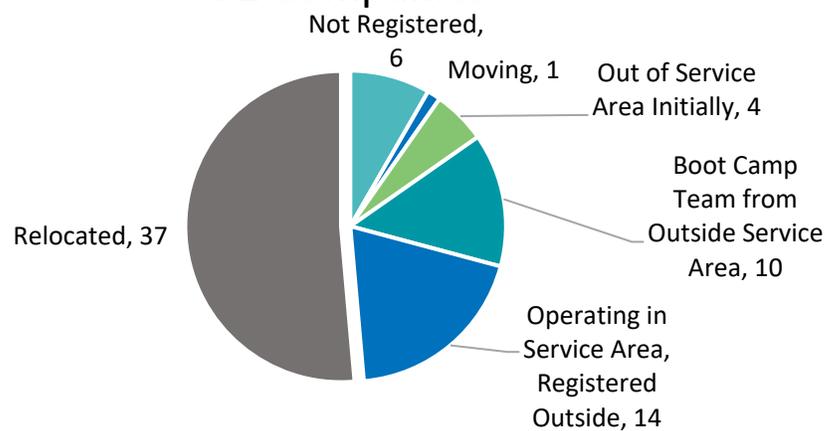
- Three hundred six companies that worked with SPARK over the past five years are still operating within the City of Ann Arbor or City of Ypsilanti.
- Currently these companies employ 1,586.8 FTEs.
- These companies reported a net addition of 821.5 FTEs from the onset of their engagements to the end of contract year.



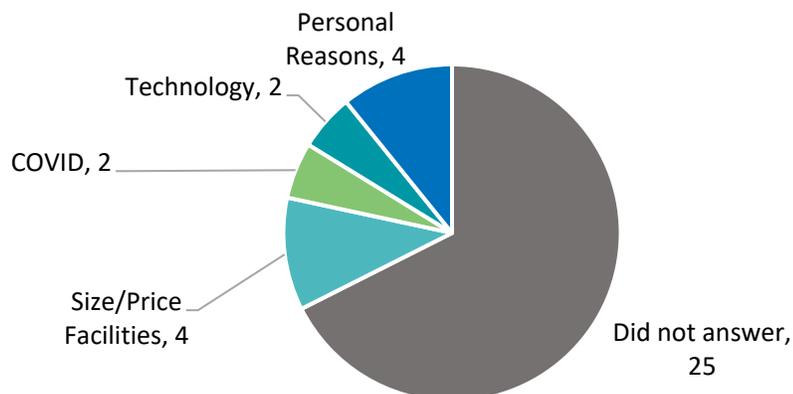
## Outside Service Area

- 72 out of the 476 companies representing 641.5 FTEs that have received LDFA-funded services over the past five years are not currently registered within the service area.
  - Of the 72 companies, 97% of the companies (70 total) are still located within the state of Michigan, with 50% (36 total companies) still located within Washtenaw County.
- Six companies have been acquired by companies outside the service area.
- One company in the process of moving to the service area.
- Four are incubator clients or BootCamp teams that have stated intentions to move to the service area.
- Ten of the 72 companies are Boot Camp teams that are initially from outside the City of Ann Arbor or City of Ypsilanti.
- Fourteen of the 72 companies are operating inside the service area but have registered addresses outside the city limits.
- The remaining 37 companies have moved from the service area, 12 stated a reason on our annual survey.
  - Of the 37 companies, 95% of the companies (35 total) are still located within the state of Michigan, with 59% (22 total companies) still located within Washtenaw County.

### Outside Service Area 72 Companies



### Reason for Relocation



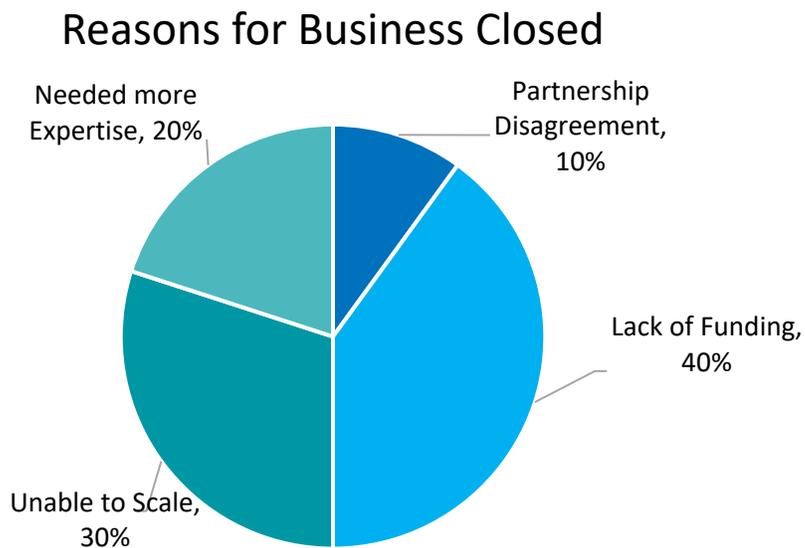
Note: Chart data set is composed of companies that answered a specific question on this year's survey.

### No Legal Entity

Nineteen of the companies served have not attained legal formation or Michigan registration by the time the contract year ended. Entrepreneurial teams at this stage are either focused on validating their business model, e.g. a Boot Camp team, or they are incubator clients that haven't registered their out-of-service area or out-of-state companies in Michigan.

### Business Closed

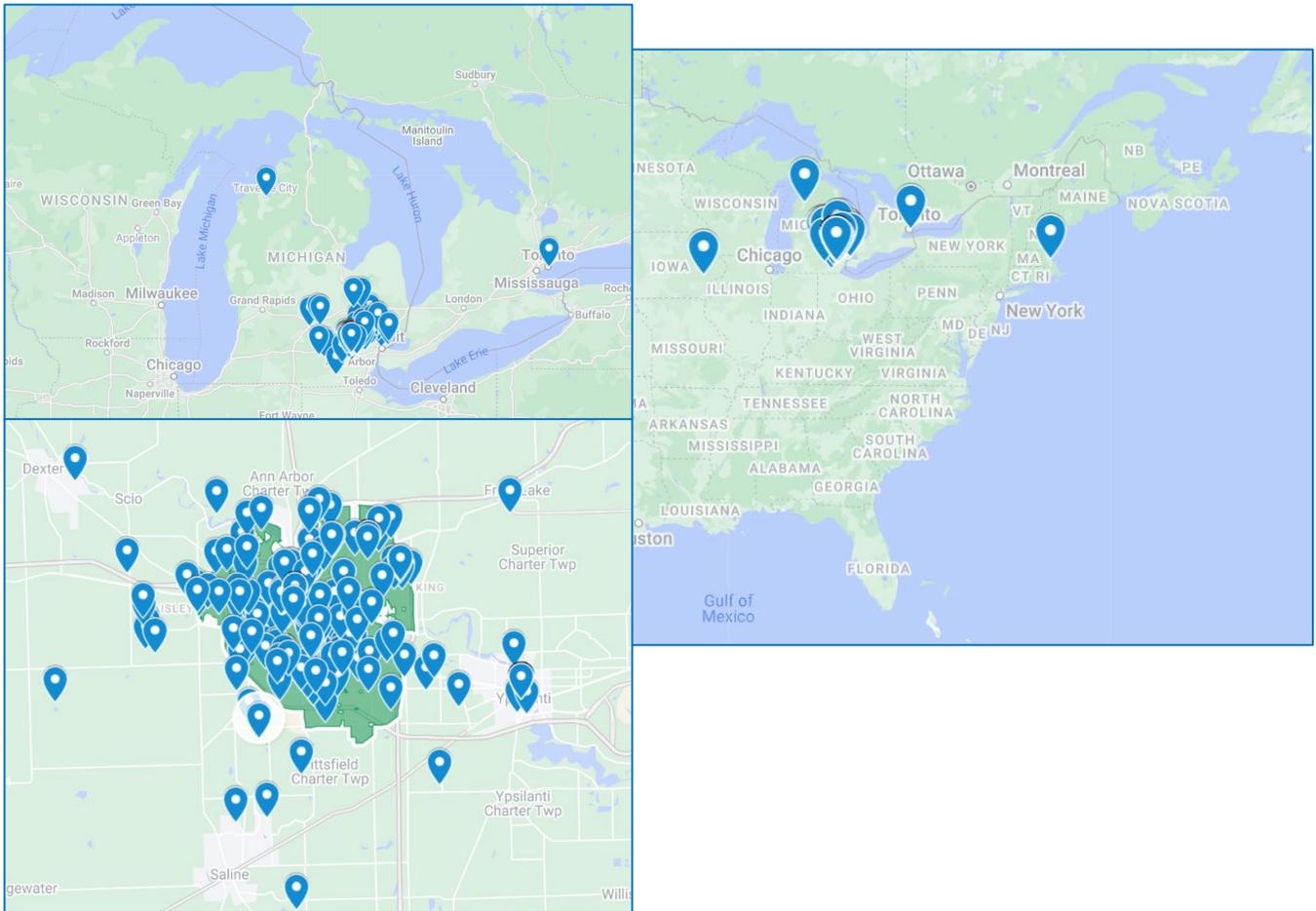
Seventy-nine of the companies that received LDFA-funded services in the last five years have reported ceasing operations, for an 83% survival rate. It is challenging to accurately report the FTE count of these companies because they do not report their employment figures when they close. However, at the start of their last SPARK service, they accounted for 176 FTEs in total.



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

# Geographical Distribution of Served Companies

These maps show the distribution of the 397 companies served in the last five years that are still in business.



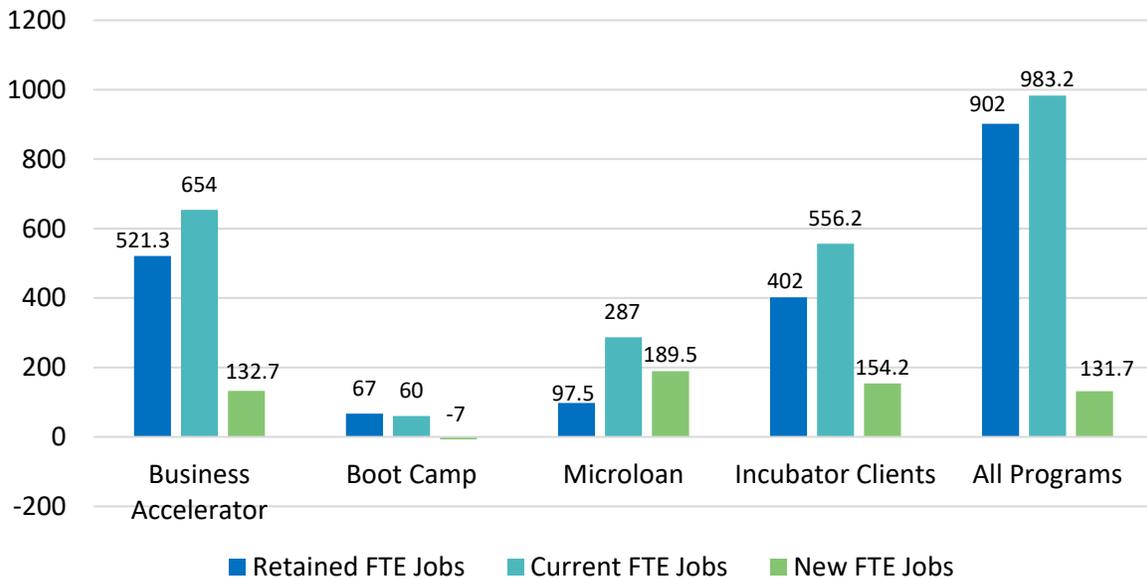
## Jobs Created by LDFA Program

The tables in the appendices serve as a breakdown of services provided during the fiscal year, and the associated job creation reported by the individual clients of each program. Please note the following:

1. There is substantial overlap of programs serving any given company. Many companies receive a variety of services from SPARK as they grow, and therefore they will appear on more than one table. Likewise, their FTE figures will cause the total FTE counts on the below graph to be less than the sum of each program.
2. The 'new' FTEs listed in the below table do not represent the net total of jobs lost due to closed companies. As a result, the total below is 50.5 more than the 81.2 jobs created stated on page two.

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 startup businesses. The 1099 contractors are not represented on the below graph, but they are listed on the tables in the appendices.

### Jobs Created By Program



## Business Accelerator

The table in Appendix A lists the 157 companies that received Business Accelerator services this year. The table comprises business accelerator grants along with the Executive-in-Residence and internship programs. Out of the companies that had Business Accelerator engagements this year, 61% responded to the annual survey.



AT THE INAUGURAL INVEST360 COMPETITION, WINNER DYNAMO METRICS PROVED TO BE A STANDOUT CONTENDER, THE COMPANY'S TRANSFORMATIVE SOFTWARE-AS-A-SOLUTION (SAAS) PLATFORM EARNED DYNAMO METRICS A COMBINED PRIZE OF \$100,000 AS THE WINNER OF BOTH THE INFORMATION TECHNOLOGY SESSION AND THE PEOPLE'S CHOICE AWARD. DYNAMO METRICS' VICTORY FURTHER SOLIDIFIED ITS PRODUCT'S POTENTIAL AND THE COMPANY'S POSITIVE IMPACT ON THE ANN ARBOR TECH LANDSCAPE. THE FUNDING IS CURRENTLY BEING UTILIZED TO EXPAND THE REACH OF THE COMPANY'S PRODUCTS, INCLUDING NEIGHBORHOOD INTEL, WHICH COMBINES THE BEST OF ECONOMICS AND PROPRIETARY DATA SCIENCE TO MAKE PREDICTIVE INSIGHTS AND RELEVANT DATA FROM THE PUBLIC SECTOR MORE ACCESSIBLE TO LOCAL AND REGIONAL GOVERNMENTS.

## Boot Camp

The table in Appendix B lists the 33 teams that attended Boot Camp this fiscal year. The 2021 Summer Boot Camp was held June 21<sup>st</sup> – August 16<sup>th</sup>, the winter Boot Camp session was held December 7<sup>th</sup> – February 15<sup>th</sup>, and the 2022 Summer Boot Camp was held June 14<sup>th</sup> -August 2<sup>nd</sup>. Twelve Boot Camp teams received Business Accelerator services by June 30. In all, 30 teams received an LDFA-funded scholarship to attend Boot Camp. This year’s annual survey had 16 teams respond amongst all Boot Camp teams. Only two teams subsequently raised capital.

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# HELOGENIKA

IN THE LATEST ENTREPRENEUR BOOT CAMP, ANN ARBOR SPARK AWARDED HELOGENIKA ITS \$25K BEST OF BOOT CAMP PRIZE. THE WINNER IS AN ANN ARBOR-BASED PRECISION GENOMICS STARTUP FOCUSED ON CANCER DIAGNOSTICS. IT IS DEVELOPING CUTTING-EDGE SOLUTIONS TO INTRODUCE SPEED AND SCALABILITY TO CURRENT MOLECULAR PATHOLOGY LABORATORY PRACTICES. ITS AIM IS TO REDUCE WORKLOADS FOR BUSY PATHOLOGISTS AND ULTIMATELY CREATE A BETTER EXPERIENCE FOR CANCER PATIENTS RECEIVING GENOMIC TESTING. ACCORDING TO SNEHAL PATEL, FOUNDER OF HELOGENIKA. “WE GAINED INVALUABLE KNOWLEDGE THROUGH FORMAL DIDACTICS ON CRITICAL TOPICS FOR NEW BUSINESSES AND HANDS-ON EXPERIENCE WITH PITCHING AND CUSTOMER DISCOVERY”.

## Incubator Clients

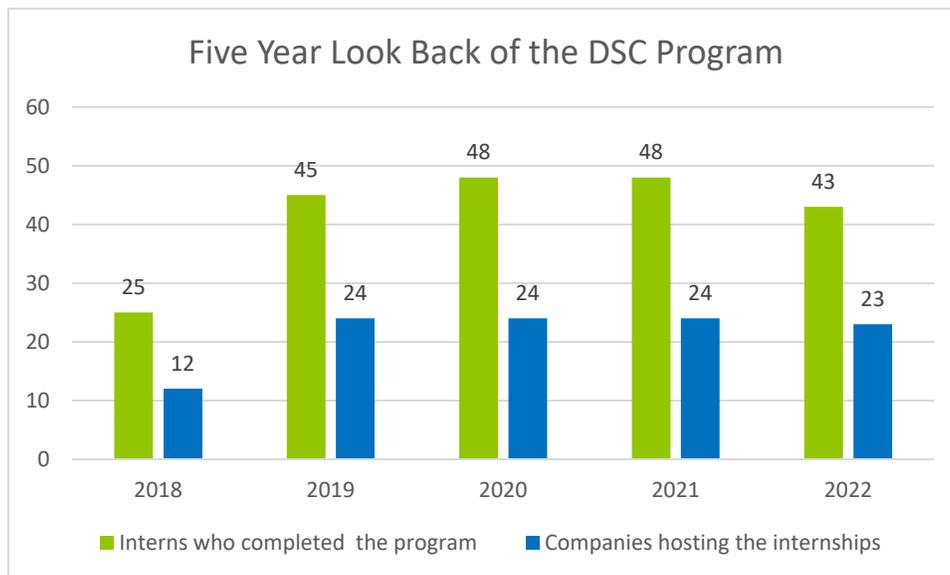
The table in Appendix C lists the 116 companies that are or were incubator clients this year in the SPARK Central Innovation Center or SPARK East Innovation Center. Of this year’s clients, 53% responded to the annual survey.

## Digital Summer Clinic

Twenty-three local startups received a digital marketing boost through a collaborative program between Ann Arbor SPARK and Eastern Michigan University's Center for Digital Engagement over the summer of 2022. The Digital Summer Clinic (DSC) matched 45 undergraduates and recent graduate interns out of 326 applicants with Ann Arbor SPARK clients to accelerate the startups' digital marketing efforts. 48 students were accepted into the program with majors including from Computer Science, Marketing, Economics, PR, Communications, Journalism, Math, Psychology, Graphic Arts, and Linguistics with many students focusing on UX. The startups received hands-on digital marketing, and clinic interns received valuable work experience that built their resumes.

Interns worked in teams of two for companies housed in Ann Arbor SPARK's high-tech incubators. Example projects include; digital advertising, social media, content creation, analytics, web design and development, SEO, video production and graphic design, mobile app development, and project management. The internships were for 10 hours per week and ran from mid-June through mid-August culminating in a graduation ceremony where students were awarded a Digital Media Certificate. For the students to gain their CDE/SPARK Digital Media Certificate, they must complete the 90-hour internship with their assigned local startup, attend weekly panel discussions, and get certified in Google Analytics or AdWords.

One of the main reasons Ann Arbor SPARK and the Center for Digital Engagement continue to grow the summer clinic is to watch students gain insight and experience for jobs in the Ann Arbor area. Local employers find the interns' newly acquired skills and demonstrated proficiency especially valuable as evidenced by the rate at which the interns are hired post-graduation.



## Mobility

Mobility is a driving industry in the Ann Arbor region, with 250 mobility companies of varying sizes located in Washtenaw County. In this last fiscal year, Ann Arbor awarded Business Accelerator services totaling \$209,087.45 to 46 mobility companies that employ 180 FTEs in Michigan. Mobility companies in the region raised a total of \$171,855,525 in capital.<sup>1</sup>

### Company Successes

- Capital Raised: Some examples include May Mobility raised \$83MM in Jan 2022. Skyspecs raised \$80MM in May 2022. Another mobility company (11166) raised \$4.7MM in Aug 2021 and a fourth mobility company (12842) raised \$2.07MM in September 2021.
- Four mobility companies (15378, 15386, 0289, and 16251) chose to establish their U.S. headquarters in Ann Arbor.
- Hyundai America Technical Center completed an expansion of new 66,000 SF building and test track to Hyundai campus which resulted in \$51 million investment.

### Additional Projects and Collaborations

The Mobility Team’s continuous efforts to strengthen cooperation and coordination with partner organizations for projects and help startups better leverage existing resources.

- Provided three Letters of Support for proposals submitted by partner organizations to further mobility efforts within the Ann Arbor region.
- Participating in the Michigan Cities Working Group organized by the Office of Future Mobility and Electrification brings together leaders from Ann Arbor, Detroit, and Grand Rapids.
- The Director of Mobility Programs also sat on partner advisory committees like “The Build Back Better Regional Challenge” application, the Council of Future Mobility & Electrification’s Workforce and Economic Development Working Group, the “Resilient, Equitable & Carbon-Neutral Physical Infrastructure workshop” by University of Michigan, and AARP Ride@50+ Mobility Leadership Circle.
- Participated as a facilitator and grant administrator for A2GO autonomous on-demand shuttle service which launched in Ann Arbor in October 2021 offering free rides for one year.



**Embracing Ann Arbor as a living lab for advancing innovations, May Mobility, SPARK, and Mcity launched A2GO, a new autonomous vehicle shuttle service that is free to the public for one year. The shuttles operate using self-driving technology and connect destinations all around the city. From Oct- July 2022 the A2Go service moved 6531 riders. The project was selected as one of the top 50 smart cities projects at the Smart Cities Connect Conference.**



<sup>1</sup> Source: PitchBook and internal communications with companies

Over the course of 2021-2022, the mobility team saw consistent growth in engagement and outreach through its monthly newsletter and bimonthly mobility meetup that features local startups.

## Growing Engagement & Outreach



## A2Tech360

Three mobility events were organized as part of a2Tech360 2020:

- **Mobility Summit:** The theme of the event was ““Restructuring Mobility Investment” The in-person event engaged 26 speakers from around the country and had 144 registered attendees.
- **In person Mobility Row & Tech Trek:** This year we had combined street fair for Mobility Row and Tech Trek companies on Liberty Street. 40 companies participated out of which 18 were mobility companies. 1,101 total registrants (955 in-person registrants and 146 virtual registrants)
- **Invest360:** Five mobility companies went head-to-head under the Invest360 Mobility Category. Bedestrian was the winner of the pitch showcase.

## National Annual Events

- **South by Southwest (SXSW):** SPARK’s panel, titled “Perfecting Autonomous Delivery in United States” was selected out of the hundreds of sessions submitted for Panel Picker. SPARK also continued its support and participation within the expanded version of Michigan House, now called Midwest House which hosted 4 official panel sessions (one where Paul Krutko, CEO and President of Ann Arbor SPARK was a speaker) and numerous networking events.
- **Ann Arbor House and North American International Auto Show (NAIAS):** Although NAIAS was cancelled in 2021 due to the COVID-19 pandemic, Ann Arbor SPARK is looking forward to supporting this event in 2022 with a booth hosting 13 companies and by organizing a panel.

### Ann Arbor Living Lab: Interactive Project Map

[A new tool](#) was created that displays over 50 publicly announced multi-stakeholder projects and grant-funded mobility testing taking place in the Ann Arbor region between 2017 and 2021. This robust activity is a testament to the innovative spirit of the companies located here and the level of acceptance and enthusiasm the Ann Arbor community and the public sector has for innovation. [See more information.](#)



## Strategic Marketing and Communication Services

The newest addition to the SPARK services which started in August 2019 for our clients is strategic marketing and communication services. This is an in-house marketing strategy and service for our clients through the LDFA, dedicated to helping clients effectively reach their target audience. The services offered through this expansion are marketing needs assessment, marketing referral, marketing resources and educational materials, strategic marketing session, internal account collaboration, content review and edits, and content development. This year there was a total of 189 sessions amongst 39 companies expressed through the data in Appendix D.



SPELLBOUND JUST COMPLETED PHASE ONE SUCCESSFULLY ON THEIR PRODUCT DEVELOPMENT AND THEY ARE STARTING TO COLLECT DATA FROM IT. PHASE TWO STARTED IN JANUARY 2022, AND THEY ARE RECRUITING 120 PATIENTS FOR RANDOMIZED CONTROL TRIALS. THE ANN ARBOR BASED COMPANY WAS AWARDED \$1.8 MILLION IN 2020 BY THE NATIONAL INSTITUTE ON DRUG ABUSE TO STUDY HOW ARISE IMPACTS LENGTH-OF-STAY OPIOID CONSUMPTION FOR POST-SURGICAL CANCER PATIENTS.

## A2Tech360



Ann Arbor SPARK recently announced its popular annual **a2Tech360** programming will be delivered in-person this year, October 7-14, 2022. An Ann Arbor SPARK initiative, supported by LDFA, a2Tech360 promotes the Ann Arbor region as an area of innovation. Offering a week of tech-related events, a2Tech360 creates connections between entrepreneurs, researchers, investors, businesses, educational institutions, nonprofits, job seekers, and the general public to generate discussion, ideas, and new opportunities.

a2Tech360 originated in 2018 as an extension of its Ann Arbor SPARK's Tech Trek event, as a way to deliver broader programming to spotlight the region's innovative people and businesses.



### *Invest360 Investor Showcase - Friday, October 7*

Invest360 showcases a curated group of companies to Michigan's investor community. The companies compete for \$50,000 in one of three categories: information technology, mobility, and healthcare. The three winning companies will then pitch in-person, the morning of Friday, October 14 at the Michigan Theater for a chance to receive the People's Choice award an additional \$50,000.

### *FastTrack Awards - Friday, October 7*

The annual FastTrack Awards honors fast-growing ‘gazelle’ companies headquartered in Washtenaw and Livingston counties. Celebrate their success with us! “Gazelles” are defined as high-growth companies with 20 percent increased average revenue for three years, starting from a revenue base of at least \$100,000. Awardees can range from small companies to large enterprises since gazelle companies are characterized by their rapid growth, rather than their absolute size.

### *MI Angel Summit - Monday, October 10*

The fifth annual Michigan Angel Summit is a great opportunity for individual investors to meet others interested in learning more about this exciting asset class called Angel investing. Whether you are considering becoming an angel investor or have been making angel investments for years, you will meet likeminded people from around the state and learn about the latest trends and opportunities available.

### *Mobility Summit - Tuesday, October 11*

This year, the focus will be on key trends surrounding electric mobility, Vision Zero, workforce, equity, and data, and more. Experts in these fields will share findings from reports and studies, while panels will bring together innovators from diverse sectors to share how they are pushing the boundaries of technological prowess, partnerships, and policies to improve sustainability, safety, and equity in our mobility ecosystems.

### *Entrepreneur Boot Camp Celebration - Tuesday, October 11*

Entrepreneur Boot Camp is an intensive program to help entrepreneurs of early stage, technology-driven companies quickly determine if they have a viable business opportunity and focus on crucial next steps. Our entrepreneurs have worked tirelessly to validate their business concepts. After countless hours spent developing a business model and finding beta customers, the entrepreneurs are ready to present their progress to the community. Join us to celebrate the evolution of our current Boot Camp entrepreneurs as they present their journey with you and our illustrious panel.

### *2032: What the Future Holds - Wednesday, October 12*

Join us for an insightful look into the future as global thought leaders discuss trends and revolutionary products, looking down on us from space, growth of cannabis, IoT, AR/VR, mobility, and other driving industries that have a foothold in the region.

### *Women in Tech - Wednesday, October 12*

Our speakers will discuss their experiences navigating the tech industry and propelling their careers as leaders in the field. They will also share how to build up career experience, maneuver a room of doubters, and discover your personal success story. This program positions established or climbing women in the tech field to create effective and warranted disruption to their industry by addressing gender bias, pay inequality, and overcoming adversity.

### *Emerging Leaders - Thursday, October 13*

Calling all emerging leaders! Mix, mingle, and build your network at the new Ann Arbor Emerging Leaders Happy Hour. Hosted by Ann Arbor SPARK and Kapnick Insurance, this monthly event series is the low-key, low-pressure opportunity you’ve been looking for to meet your peers, share challenges and opportunities,

and boost your career. Emerging leaders are driven, passionate, and have their eyes on becoming a powerful, positive influence on their industries, companies, and communities.

*Tech Talk + Invest360 Finale - Friday, October 14*

From origin stories to behind-the-scenes accounts of the fascinating technologies being developed here, join us for storytelling as we hear from the brilliant minds behind the Ann Arbor region’s innovative companies. Tech Talk features inspiring TED-style talks by leading innovators in their respective fields. Join us for this free event on Friday, October 14th, 10a.m.– noon.

*Tech Trek and Mobility Row - Friday, October 14*

Ann Arbor’s largest, public, and tech-inspired event returns! A2 Tech Trek and Mobility Row is a free community street fair and company open house where regional technology companies showcase their innovations and culture. From robotics and game developers to self-driving shuttles and medical marvels, attendees will gain insight and inspiration on the technological advancements that will define and change the years ahead.



STABILUX WITH ITS INDUSTRY-DISRUPTING HIGH-BRIGHTNESS FLUOROPHORES (DYES) USED IN BIOMEDICAL IMAGING EARNED THE INVEST360 HEALTHCARE SESSION PRIZE AND \$50K IN FUNDING. THE COMPANY'S SIGNATURE PRODUCT, NOVOLUX DYES, UTILIZE ADVANCED CAPABILITIES THAT ALLOW RESEARCHERS TO DETECT WHAT WAS PREVIOUSLY UNDETECTABLE. THE INVESTMENT HAS ALLOWED STABILUX TO PREPARE ITS PRODUCT FOR MARKET AND PROPEL MANUFACTURING DEVELOPMENTS. THE COMPANY WILL ALSO APPLY THE FUNDS TO GROW ITS TEAM, STRENGTHENING THE REGION'S RICH TALENT POOL. CURRENTLY, THE STARTUP HAS SEVEN EMPLOYEES WITH PLANS TO GROW THE TEAM TO 11.



## Software

*8.3 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 \$43,000. 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 with 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. (\$1,497.00)
2. **DocuSign:** Document and signature management software to expedite operations. (\$4,698.76)
3. **eBook Subscription:** Designed for organizations trying to learn more about entrepreneurship, sales, marketing, product launch, competitive analysis, and other topics. (\$3,000.00)
4. **Robin:** Workplace experience software platform. (\$22,320.00)
5. **Salesforce:** Customer relationship management system used to record and track client relationships. (\$5,082.46)
6. **TrueJob:** The backend to our job portal. (\$5,550.00)
7. **Zendesk:** Customer experience tool to help manage the incubators. (\$4,500.00)

**Total:** (\$46,648.22)

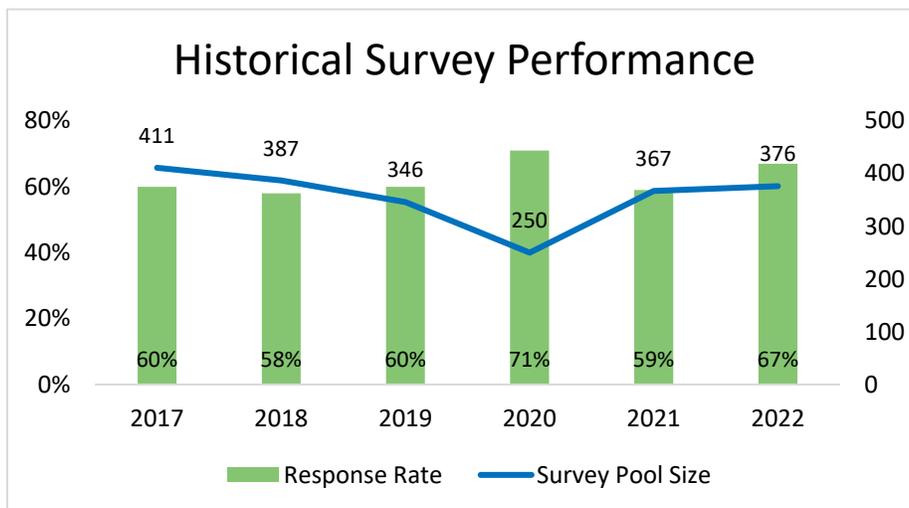
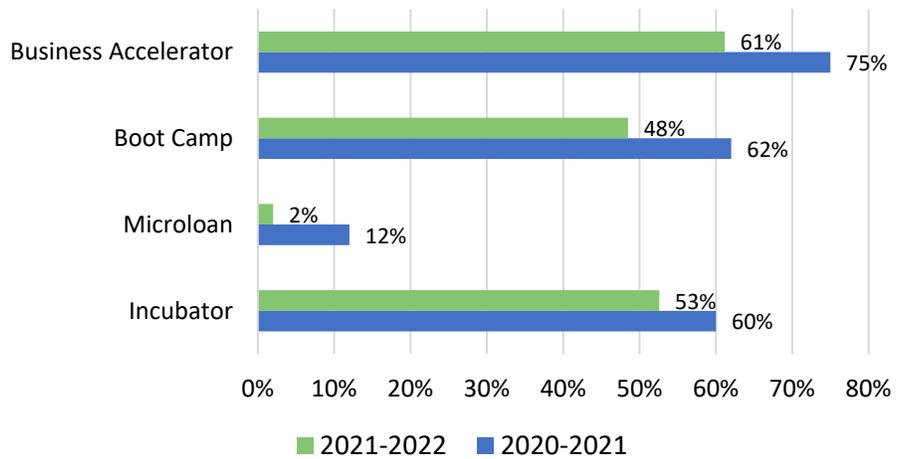
# Annual Census

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.

This year, we achieved an overall response rate of 67%. In 2022, the survey pool increased by 9 companies and the number of responses increased by 35.

Companies served this year responded at a rate between 2% and 61%, significantly higher than the average response rate from last year's companies served. The companies served over the past five years who accessed LDFA funds or services were targeted for the survey pool. The survey pool has decreased over the years due to inactive records being cleaned up and companies that do not fall within the five-year criteria anymore were excluded. 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



## 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 is 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. These values are accurate to the best of Sparks knowledge. However, given the dynamic nature of the metrics being collected this value should be considered a best effort approximation and not an absolute result.

## 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. 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	Account Description	Retained FTE 's	Current FTE 's	New FTE's	1099's
11701M	Mobile application for autonomous vehicles and pedestrians to help avoid collisions.	5.5	5.5	0	1
14736	A low-code cloud software platform which software products can be rapidly built and iterated.	0	3	3	3
15259	A wellness platform that offers a spectrum of human-centered connection for users that can be profoundly impactful to underserved communities.	4	4	0	0
4519	Platform giving independent app publishers technology for customized native ads and access to advertisers.	53	76	23	2
12031MU	Multi-dimensional electromagnetic energy convertor (EMEC) that increases the power density of conventional solar modules.	0.5	0	-0.5	0
11893M	Developing a level 4 autonomous bus platform for vehicle manufacturers and organizers who plan to operate an autonomous fleet.	3	3	0	4
6828U	Software for the analysis of genetic data.	6	7	1	1
16154U	A urinary catheter extension for early UTI detection.	2	2	0	3
8255Y	Communications software for business-to-business or business-to-consumer.	5	10	5	7
15264	A creator financing and NFT marketplace.	3	5	2	2
12128U	An artificial intelligence software platform that uses real-time in the catheterization lab to process conventional angiograms and automate a quantitative clinical assessment of coronary artery disease (CAD) patients.	4	4	0	1
14782U	Wastewater treatment process that is more energy efficient and a smaller footprint.	2	2	0	0
15340M	A type of Li-ion battery capable of high energy density and extreme fast charging.	2	0	-2	0
16152	A physical model that represents the critical anatomy and haptic feedback specific to the targeted procedure and skills.	2	2	0	0
7876U	Wearable graphene nanoelectronic alcohol sensor for real-time alcohol monitoring.	6	4	-2	6
14731MU	Measurement of charged particles present in the solar system.	1.5	1	-0.5	0
12093	Immuno-isolating capsule that promotes the function of implanted ovarian tissue, protects it from immune rejection, and aims to restore ovarian endocrine function in adolescent girls.	0.5	0.5	0	0
16562U	ASKO Holdings is the parent company with ASKO Therapeutics and ASKO Pharma as two entities under it.	3	3	0	0
16547	Develops novel and more effective therapeutics in the areas of cardiovascular, metabolic, and infectious diseases.	3	3	0	0
16563U	Aims to develop novel and more effective therapeutics in the areas of cardiovascular, metabolic and infectious diseases.	3	3	0	0
8636Y	Guided meditation and respiratory biofeedback application.	2	2	0	10
11661M	Industry 4.0, smart inspection for manufacturing.	3	3	0	1
11350M	Autonomous last mile delivery trailer.	3	4	1	0
16407	An all-in-one marketplace and digital platform for end-of-life and after-loss planning.	1	1	0	0
11979	A personalized chat bot that helps moms cultivate resilience through pregnancy and postpartum depression.	1	1	0	2
585	Software development with biostatistics and spatial epidemiology.	4	4	0	3
16271	Dedicated to translating the business potential of breakthrough bioscience technologies in targeted geographies.	1	1	0	1

Uniq ID	Account Description	Retained FTE 's	Current FTE 's	New FTE's	1099's
14698	A music streaming service designed to compensate artists better and deliver fans a uniquely intimate listening experience.	2	3	1	-
11801U	A machine-learning algorithm based on parcel data, historical records, and other data sources to predict service line materials.	0	20	20	4
11986	A cloud-based video studio that allows users to stream live self-produced video content to all the major social media platforms.	1	2	1	2
8912Y	Digital offering that seamlessly transitions Instagram users (who express interest in an item), from a viewer position to a shopping position.	2	2	0	3
12134U	A personal air purification device to solve the problem of people being unable to live active lives in places with unhealthy air quality.	0.5	1	0.5	0
11120U	Cross-MBA trips for students from several universities before their MBA program begins.	2	3	1	1
14685	A self-writing clinical note for doctors based of patient appointments and interactions for insurance purposes.	0	2	2	1
12840MU	An online peer-to-peer marketplace for parking aimed at solving parking availability and affordability problem on college campuses by using empty driveway space.	3	2	-1	3
11791U	Addresses disruptive CO2 emissions convert into hydrocarbon fuels.	1	1	0	0
8769	Automated legal document generation software.	1	1	0	2
15408Y	A portable document and photo scanner.	1	1	0	2
15134U	An artificial intelligence tools that allow users to search videos.	0.5	0	-0.5	1
11954	A platform using progressive web app technology to help pain sufferers navigate a variety of options to better manage pain through self-management and related resources.	3.5	6	2.5	2
12107U	Software and services for patient-specific cardiovascular simulation.	0.5	0.5	0	0
12043	Education platform that allows teachers to upload lessons and projects, monitor progress, and guide students.	4	3	-1	1
11859	Helps companies make employee decisions connecting and analyzing disparate sets of data, particularly from employee surveys and human resources information technology systems.	2	2	0	3
15159	Helps healthcare companies know what germs are growing in their clinical environments.	1	1	0	5
15282Y	A digital identity and vital information storage and exchange platform.	3	2	-1	0
7938	Decision making software that helps users make decisions in a structured, systematic, and dynamic way.	0	3	3	5
10188	Software that integrates patient genetic information into electronic health records.	3	3	0	1
16266	An end-to-end project management tool that consolidates all trip planning processes into one place.	0	2	2	0
15181U	Artificial intelligence-assisted software for real time colonoscopy video analysis that delivers an endoscopic Mayo score that is reliable and reproducible saving time and money to help deliver drugs to market, quicker.	3	1	-2	3
13680	A centralized portal for individuals to action their rights and view the locations in which personal data has been provided to companies.	4	6	2	3
13686U	Medical artificial intelligence to predict the need to go to ER and conditions like COVID-19 with accuracy that is precise to the individual.	5	2	-3	3
8293MU	Low-cost high-accuracy micro electromechanical system (MEMS) gyroscope for space, aviation, and underwater applications.	2	2	0	1

Uniq ID	Account Description	Retained FTE 's	Current FTE 's	New FTE's	1099's
12770	An online marketplace for unique products and fashion items designed by up-and-coming artists and celebrities sold with all profits going to local charities.	2	2	0	1
15281Y	Automated small to medium business loan approval process to accelerate loan approval.	4.5	4.5	0	0
15410M	An "optimized fleet-as-a-service" to commercial fleet managers for multiple, specific purposes/uses.	1	2	1	4
14747	A video game advertising agency that helps businesses and brands promote their products.	3	3	0	3
8419M	Next-generation freight marketplace focused on better user experience, lower freight costs, and regulatory compliance.	6	6	0	1
8393	Business-to-business marketplace where businesses can easily find quality information technology professionals.	2	5	3	2
7117U	Data processing algorithms and curated genetic database software as a service.	27.5	58	30.5	13
11252MY	Two wheeled 'series hybrid' for developing markets.	1	1	0	0
12039U	Analytics tool that generates synthetic big data sets for healthcare.	0	0	0	0
11944M	Application showing the most fuel-efficient and fastest route to a desired destination.	2	1.5	-0.5	3
15335U	A frontline psychoeducation program for pregnancy and early parenting.	2	2	0	3
15272	A prophylactic Pseudomonas aeruginosa (Pa) vaccine created from a proprietary vaccine development platform.	5	2	-3	2
11838	Helps to protect the athlete through a neuromuscular training methodology that immediately provides a player and coach the ability to identify and correct incorrect form at the point of contact.	1	1	0	0
12775	A SaaS solution providing tracking of follow-up care to ensure no patient falls through the cracks. Along with patient engagement to give patients timely information helping them to stay on plan.	4	4	0	0
12120	A population health infrastructure and registry tool that aggregates data from external sources to calculate physician and network performance against sets of clinical guidelines and facilitates.	5.5	5.5	0	2
11540MU	Manufacture and sell steel fiber for ultrahigh performance concrete (UHPC).	2	5	3	4
4341M	Scheduling and dispatch solutions for rural transit systems.	3	3	0	0
15196	A children's app aimed at fostering social and emotional intelligence for three- to seven-year-olds in the U.S.	3	2	-1	2
8366YU	Physiological performance data analytics company.	5	2.5	-2.5	0
15255	Digitization of an existing professional internal auditing methodology.	2	2	0	0
16548	A method of performing a radiological biopsy and associated system includes scanning a living human subject with a CT scanner.	0	0	0	0
11918	Health management platform connecting patients, providers, and caregivers to effectively manage patients with chronic conditions.	2	2	0	16
11110U	Web-based software package that allows patients to complete their personal and family history at home.	5.8	5	-0.8	2
15241	A platform that utilizes biosignals acquired through a third-party wearable device to detect (and eventually anticipate) anxiety and stress in real-time.	0	2	2	3
16251M	Modular hardware platforms robotics and autonomous vehicle companies to run delivery services.	2	2	0	0
12842M	Last mile robot delivery solutions.	4.5	6	1.5	2
11967	Enhance the investment performance of institutional investors through the best execution of securities finance.	1	1	0	1

Uniq ID	Account Description	Retained FTE 's	Current FTE 's	New FTE's	1099's
8197M	Business-to-business automotive software and hardware company.	5	9	4	2
11880Y	In-application music discovery competitions that reward listeners for competing and discovering new music.	0.5	0.5	0	1
15107	An application for peer-to-peer tool and equipment rentals.	2	3	1	0
7282	A Think-Work-Together platform.	2	2	0	3
8658	Builds and hosts complete, professionally designed, mobile-responsive websites.	3	8	5	1
15288	An app aiming to create a life free from sexually transmitted infections.	1	1	0	3
7885	Mobile and web-based applications providing on-demand lawn care and snow removal services.	7	9	2	3
12036U	An automated leasing and marketing for any property management firm to book more tours.	1	1	0	4
14668	Plant-based braiding hair designed to reduce irritation and pollution from synthetic braiding hair.	2	1	-1	1
7531YU	Lactation simulation model and a breastfeeding education application.	18.5	0	-18.5	0
11900M	Meteorological technology intelligence that produces connected vehicle sensor data for improved road safety, improved weather forecasting, and for monetization of data for owners.	3	2.5	-0.5	3
12902Y	A drug formulation to help chronic kidney disease patients.	2	2	0	0
15418	A new style continuous positive airway pressure (CPAP)/bilevel positive airway pressure (BIPAP) mask/liner.	3	3	0	2
12260YU	To reduce medical supply surplus by providing end-to-end supply tracking and management solutions.	2.5	2.5	0	0
14797MU	A hardware, software, and service that assists automated vehicle manufacturers in collecting data needed to develop and test automated driving systems.	3	1	-2	0
12030	English Sign Language (ESL) educational technology platform that includes business culture training.	17	20	3	1
11735U	Live cell imaging using multiple independently controlled modules allowing multiple users at once.	1	1	0	0
14276	Clinical decision tool application streamlining doctor and patient decision making.	1	1	0	1
14687	A portable and effective tool to measure changes in reaction time and executive function for physicians.	1	1	0	1
14236U	A user interface for open source scRNA-seq analysis tools.	1	1	0	0
14689	A multi-functional microscope that reveals fundamental and structural material characteristics.	2	2	0	3
15378M	A company that provides a robotics platform for autonomous mobility solutions in a variety of industries.	0.5	0.5	0	0
8132Y	DNA and bioinformatics analysis and collaboration platform.	2	2	0	1
7375U	Mobile app for tracking and analyzing pain data.	2	4	2	3
289M	Creating an automotive and security technology portfolio.	2.5	2.5	0	2
14712	Automatically adjusting the flow of oxygen to patients using a closed-loop system that delivers precisely the right amount of oxygen based on the patient's real-time bio-metric and activity data.	2	2	0	0
16143	A company that holds the exclusive license to commercialize a novel compound preventing brain cell destruction from Beta Amyloid Protein (BAP).	5	5	0	0
12098M	Indoor positioning technology to provide traffic control and logistics support for hospitals and healthcare systems.	3	12	9	2
11353	Low-cost full-page tactile display for blind people that would enable true digital access to tactile information.	1	1	0	1

Uniq ID	Account Description	Retained FTE 's	Current FTE 's	New FTE's	1099's
11367	Software for school exit loan counseling guidance process.	2	2	0	5
13622	Creation of gaming software and merchandise for female audiences.	3.5	3	-0.5	1
11691U	Focus on bringing the therapeutic benefits of nitric oxide to market.	11.5	8	-3.5	0
8229U	Neuroprotection for retinal diseases.	3	3	0	0
12884	Eco-friendly prescription medication bottle manufacturing.	3	3.5	0.5	3
8806	Turnkey passive home entry module.	10	8	-2	16
14242U	A cloud-based computational teaching and learning platform.	2	1	-1	0
11988	Scalable smart camera system that captures all objects in any sports scene, including players and officials, from multiple points of view including 3-D motion.	1	1	0	4
15339	A disruptive process which will revolutionize and cause standardization of Traumatic Brain Injury (TBI) diagnosis and treatment.	0	1	1	2
16284U	A polymer tongue and voice box/vocal folds simulator made available in a "toolbox" for artists, academics, and physicians.	2	0	-2	1
16184	A means of improving oral care compliance in mechanically ventilated patients in order to reduce the real-world rates of ventilator associated pneumonia.	1.5	2	0.5	0
12937	A self-sanitizing door handle by ultraviolet (UV) light.	3	2	-1	0
12190	Makes control data easy and accessible to build predictive economic models.	1	4	3	0
12109	A marketing company that offers software as a service to facilitate the exchange of ideas and products through relationships.	2	2	0	1
11335M	Method to evaluate the safety of an autonomous vehicle.	1	1	0	1
12903	A holistic financial platform tailored to couples for better expense sharing and payments.	2	2	0	2
8797	Off-the-shelf machine learning applications.	31	50	19	5
11708U	An automation software company that has software algorithm that doubles the speed of 3D printers via vibration compensation.	1	2.5	1.5	1
14265U	An engineering services company specializing in helping companies improve their metal forming material efficiency.	0.5	0.5	0	0
15090	Digital health and education company with a proven program to reduce weight and thus improve non-alcoholic fatty liver disease (NAFLD) for its members.	3	6	3	6
11212	A personal loan assistant that simplifies terms and guides students through lowering their aid package and automatically paying interest while in school.	3	6	3	2
8377	Software to enable companies to detect and respond to ransomware.	2	2	0	0
14704	An artificial intelligence tool to develop traveler profiles for recommended trips.	4	5	1	1
16171	Virtual cybersecurity officer services to small and medium-size organizations.	0.5	6	5.5	3
11736YU	Implantable porous polymeric disc that accumulates metastatic cancer cells in patients who are in remission.	3	3	0	0
10191U	Wireless link that offers fiber-like speeds for the back haul and last-mile connection in the network.	2	2	0	1
8189M	Unmanned aerial vehicles (UAVs) to detect methane at solid waste landfills.	8	16	8	4
15179	Capital and technology enabled platform that will aid tenants, help them preserve their capital, and win landlords more lease deals.	2	6	4	3
11541M	SaaS platform which allows authenticated revenue generating subscriptions to smart road services.	1	2	1	10

Uniq ID	Account Description	Retained FTE 's	Current FTE 's	New FTE's	1099's
15389	A pay-it-forward system to purchase gifts of cheer for their friends and family.	4	2	-2	1
8332	A platform high-brightness dye technology for leading biomedical applications.	8	7	-1	3
8591	Compliance training SaaS platform, primarily focused on safety and security issues, in particular, workplace violence prevention (WPV) and active shooter preparedness.	2	2	0	1
12929MY	A platform for car enthusiasts and auto businesses to experience activities like tours, workshops, events, or adventures around individuals or auto businesses to share their cars, passion, auto skills, or expertise with guests.	1	1	0	5
7131	An education and evaluation application to reduce high diagnostic error rates.	2	1.5	-0.5	0
16183	Linking NFTs to physical objects.	2	3	1	0
12864	Desktop and mobile application for input and output of virtual ensemble performances.	3	3	0	6
16308	Educational mobile app that generates interactive captions for college lectures.	0	1	1	0
12129	Uses data signals and historical patterns to provide a high accuracy labor demand forecast and prescribe optimized scheduling to yield reduced labor expense without compromising service quality.	2.5	2.5	0	0
11862U	A mobile application delivering cognitive behavioral therapy to the hands of the people who need it most.	5	4	-1	1
16274	An augmented reality multimedia hardware and software package designed and patented for patient safety.	2	2	0	6
16351M	Retrofitting kits that give consumers the opportunity to upgrade their gasoline dirt bikes to electric.	2	2	0	0
4185U	Works with manufacturers to choose the right wireless power technology and integrate it with their product.	0.5	0.5	0	0
13621U	An augmented reality solution for the treatment of phobias and other anxiety disorders to provide clinicians with a broad spectrum of stimuli to perform exposure therapy regardless of location and physical resources.	0.5	0	-0.5	0
11147	Autonomous drone designed to find a person overboard and to let them know that help is coming.	1.5	1.5	0	2
15266	A unified multi-facing ecosystem that handles the entirety of an individual's life.	3	4	1	1
11960	Background check for customers who use online services.	2.5	2.5	0	0
11634M	Higher energy density battery that is non-flammable and cost less.	5	5	0	2
11850	A cloud based robo-advisory platform for commodity hedging.	1	1	0	2
11606Y	An exploration application that allows users to collect locations and attractions visited and be presented in the style of a fun game that lets user earn points, level up in eight different categories, and achieve milestones.	2	2	0	2
<b>157 Companies Total (29 Mobility, 15 Ypsilanti, 43 University)</b>		<b>521.3</b>	<b>654</b>	<b>132.7</b>	<b>319</b>

## Appendix B: Entrepreneur Boot Camp Companies Served

Uniq ID	Account Description	Retained FTE's	Current FTE's	New FTE's	1099's
15259	A wellness platform that offers a spectrum of human-centered connection for users that can be profoundly impactful to underserved communities.	4	4	0	0
15256	An autonomous wagon tracks and follows an individual.	1	1	0	0
15407	Real space-time communication through location beacons allows a new user experience, as well as a new capability for any business or government to reach the right customers at the right place at the right time.	1	1	0	1
15201	A platform that enables individuals to send packages from the comfort of their home and wallet.	3	3	0	0
16414	A free-to-use website and mobile platform that uses A.I. to provide personalized gift recommendations.	3	3	0	2
12250	Subscription-based charging solution for electric vehicles.	1	1	0	0
15408	A portable document and photo scanner.	1	1	0	2
16528	A community-based platform that enables instant communication between experienced handymen and self-reliant homeowners to resolve house repair/improvement problems.	3	3	0	0
15159	Helps healthcare companies know what germs are growing in their clinical environments.	1	1	0	5
16566	A proprietary online platform that will utilize blockchain technology to offer micro-denominated bond securities to non-accredited investors.	2	1.5	-0.5	0
15326	Digital fitness technology that relies on data analytics process flows.	1.5	1.5	0	0
15224	An online platform that gamifies investing.	4.5	4.5	0	0
15410	An optimized fleet-as-a-service to commercial fleet managers for multiple, specific purposes/uses.	1	2	1	4
16477	Transforming agriculture waste into Nanocellulose compositions while reducing environmental damages and generating significant economic benefits.	8	2	-6	0
14831	A precision medicine company focused on developing in vitro and digital cancer diagnostic devices.	1	1	0	0
15196	A children's app aimed at fostering social and emotional intelligence for three- to seven-year-olds in the U.S.	3	2	-1	2
15255	Digitization of an existing professional internal auditing methodology.	2	2	0	0
16251	Modular hardware platforms robotics and autonomous vehicle companies to run delivery services.	3	2	-1	0
7282	A Think-Work-Together platform.	2	2	0	3
15288	An app aiming to create a life free from sexually transmitted infections.	0	1	1	3
15314	Leverages drone technology for clients.	1	1	0	1
16538	An online platform that considers an individual's in-depth personal history and journey from a biochemistry perspective.	1	1	0	1
16241	Investment app to help young adults to start investing to achieve their financial goals.	1	1	0	1
15378	A company that provides a robotics platform for autonomous mobility solutions in a variety of industries.	0.5	0.5	0	0
15162	A system of power delivery utilizing second life EV batteries capable of fulfilling commercial and retail needs.	0	0	0	0
12179	Allows enterprises to move data around with complex rules and engineers.	1	1	0	1

Uniq ID	Account Description	Retained FTE's	Current FTE's	New FTE's	1099's
16420	A multitiered building-integrated thermoelectric home energy management system (HEMS) applied at the interior, surface-level of the building envelope.	1.5	1	-0.5	1
16462	Allows content creators to raise funds and monetize their work by selling Web3 Tokens that give their audience perks and participation rights.	3	3	0	0
15245	An enterprise software that collects and analyzes omni-channel data using Artificial Intelligence.	2	2	0	0
16183	Linking NFTs to physical objects.	3	3	0	0
16456	Helps everyday voters by making candidate information easily accessible, having quizzes to understand the democratic process better, and generating new ways to donate and support candidates for small donors in America.	1	1	0	0
16351	Retrofitting kits that give consumers the opportunity to upgrade their gasoline dirt bikes to electric.	2	2	0	0
15266	A unified multi-facing ecosystem that handles the entirety of an individual's life.	4	4	0	1
<b>33 Companies Total (7 Mobility, 2 Ypsilanti, 18 University)</b>		<b>67</b>	<b>60</b>	<b>-7</b>	<b>28</b>

## Appendix C: Incubator Companies Served

Uniq ID	Account Description	Retained FTE's	Current FTE's	New FTE'S	1099's
0289M	Creating an automotive and security technology portfolio.	3	2.5	-0.5	2
0585	Software development with biostatistics and spatial epidemiology.	3	4	1	3
1782M	Laser imaging systems integrator, for combustion diagnostics, materials, and spectroscopic analysis.	7	7	0	1
2203	Online furniture inventory management that allows targeted retailer interaction.	9	14	5	0
4803U	An intuitive integrated display that retrieves medical data.	6	4	-2	2
6835M	Combustion cycle and injection technology.	30	30	0	0
7336MU	Supply chain software.	14	0	-14	0
7617	U-M Startup accelerator.	2	2	0	0
7754U	Sensors and measurement devices for electromagnetic radiation enabling essential technologies.	9	9.5	0.5	3
8122	Platform for pharmacies and physician offices to source prescription drugs.	2	2	0	1
8189M	Unmanned aerial vehicles (UAVs) to detect methane at solid waste landfills.	16	16	0	4
8323M	System for recording, displaying, and interpreting human eye movements, and a method for recognizing emotional reactions to visual content.	1	1	0	0
8384	Application and cloud service to connect dietitians and their clients for efficient, timely interaction.	3	3	0	1
8419M	Next-generation freight marketplace focused on better user experience, lower freight costs, and regulatory compliance.	5	6	1	1
8534	New chemical entity to treat Metabolic Syndrome and Type II diabetes.	2	1	-1	2
8543MU	Novel video analytics capability for public safety and automotive companies to service their video analytics needs.	4	9	5	3

Uniq ID	Account Description	Retained FTE's	Current FTE's	New FTE'S	1099's
8609	Quotation lifecycle management (QLM) applications focused on managing the interaction between our customer companies and their customers and suppliers.	4	4	0	6
8627	TIE Angel Group	1	1	0	5
8645	Personal protection modular system which will protect a person from pistol shots, knife attacks, and tasers.	1	1	0	0
8769	Automated legal document generation software.	1	1	0	2
8797	Off-the-shelf machine learning applications.	38	50	12	5
8806	Turnkey passive home entry module.	6	8	2	16
8862	Mobile learning platforms to help young people combat sexual violence and misconduct.	2	1	-1	2
9923	Software platform that makes augmented reality and virtual reality enterprise content creation and publishing super easy.	2	7	5	10
11105	Do-it-yourself financial planning in a digital platform.	4	5	1	6
11212	A personal loan assistant that simplifies terms and guides students through lowering their aid package and automatically paying interest while in school.	2	6	4	2
11310	Continuous, non-invasive, wearable blood pressure monitoring device.	1	1	0	2
11324M	Human behavior prediction using artificial intelligence.	3.5	3.5	0	0
11476	Postmodern enterprise resource planning (ERP), enabling businesses to run more efficiently and eliminate wasteful activities.	1	1	0	3
11540MU	Manufacture and sell steel fiber for ultrahigh performance concrete (UHPC).	2	5	3	4
11541M	SaaS platform which allows authenticated revenue generating subscriptions to smart road services.	2	2	0	10
11635	A one-stop shop where customers can purchase all their nightlife products in one place.	5	15	10	491
11661M	Industry 4.0, smart inspection for manufacturing.	3	3	0	1
11701M	Mobile application for autonomous vehicles and pedestrians to help avoid collisions.	6	5.5	-0.5	1
11806U	Powerful diagnostic test for prostate cancer that measures levels T2:ERG and PCA3 in urine.	1	120	119	3
11807U	A medical device to treat atherosclerotic calcified plaque (CP) indicated for peripheral artery disease (PAD).	2	2	0	15
11850	A cloud based robo-advisory platform for commodity hedging.	1	1	0	2
11865	Advertising technology platform that makes local advertising faster, less expensive, and more accountable.	3	2	-1	1
11895M	A cloud-based platform that enables automotive companies to effectively manage their pre-production operations, meet customer requirements, and collaborate with suppliers in a single platform.	2.5	3.5	1	0
11918	Health management platform connecting patients, providers, and caregivers to effectively manage patients with chronic conditions.	5	2	-3	16
11954	A platform using progressive web app technology to help pain sufferers navigate a variety of options to better manage pain through self-management and related resources.	3.5	6	2.5	2
11960	Background check for customers who use online services.	2.5	2.5	0	0
11966	Accurately putt using this golf putting aide technology.	2	2	0	0
11967	Enhance the investment performance of institutional investors through the best execution of securities finance.	1	1	0	1
11985M	Self-contained, pre-engineered, and pre-configured, mobile solar nano grids with a variety of solutions inside the nano grid.	5	13	8	5
12040	Performance disposable instrument used in cardiac bypass surgery.	1	0.5	-0.5	0

Uniq ID	Account Description	Retained FTE's	Current FTE's	New FTE'S	1099's
12090U	A sensor, cloud-based data management and analytics system application component for athlete's interaction and communication.	0.5	0.5	0	1
12112	An on-farm mycotoxin monitoring system that will allow livestock and dairy farmers to preemptively detect and remove contaminated animal feed.	2.5	2	-0.5	0
12128U	An artificial intelligence software platform that uses real-time in the catheterization lab to process conventional angiograms and automate a quantitative clinical assessment of coronary artery disease (CAD) patients.	4	4	0	1
12129	Uses data signals and historical patterns to provide a high accuracy labor demand forecast and prescribe optimized scheduling to yield reduced labor expense without compromising service quality.	2.5	2.5	0	0
12179	Allows enterprises to move data around with complex rules and engineers.	1	1	0	1
12842M	Last mile robot delivery solutions.	4	6	2	2
12857	Matches technologists and organizations in need of technological assistance creating projects.	0.5	1.5	1	0
12911	Works with organization's cross-functional leadership teams to translate existing (or enhanced) data, insights, and institutional knowledge into a readily actionable experience design strategy that unleashes new sources of revenue in both the near- and longer-term.	1	1	0	0
12937	A self-sanitizing door handle by ultraviolet (UV) light.	3	2	-1	0
13635	A SaaS company that targets the use of wearable sensors and related data analyses to identify COVID-19 infection early before symptoms are apparent.	1	1	0	8
14242U	A cloud-based computational teaching and learning platform.	2	1	-1	0
14252M	High-definition maps for simulation.	25	25	0	0
14276	Clinical decision tool application streamlining doctor and patient decision making.	1	1	0	1
14668	Plant-based braiding hair designed to reduce irritation and pollution from synthetic braiding hair.	2	1	-1	1
14691	A material innovation company supplying industrial hemp to the automotive plastics market.	2	5	3	2
14698	A music streaming service designed to compensate artists better and deliver fans a uniquely intimate listening experience.	3	3	0	
14712	Automatically adjusting the flow of oxygen to patients using a closed-loop system that delivers precisely the right amount of oxygen based on the patient's real-time bio-metric and activity data.	3.5	2	-1.5	0
14731MU	Measurement of charged particles present in the solar system.	1.5	1	-0.5	0
14774M	Solar modules for low-speed electric vehicles.	1.5	1.5	0	0
14794U	A dynamic standing desk aimed at combating sedentariness and promoting physical activity in the office space.	1	1	0	2
14829	Training tool for medical purposes.	1	0.2	-0.8	1
15090	Digital health and education company with a proven program to reduce weight and thus improve non-alcoholic fatty liver disease (NAFLD) for its members.	0.5	6	5.5	6
15107	An application for peer-to-peer tool and equipment rentals.	2	3	1	0
15113M	Electric bike manufacturer.	1	1	0	0
15159	Helps healthcare companies know what germs are growing in their clinical environments.	1	1	0	5
15179	Capital and technology enabled platform that will aid tenants, help them preserve their capital, and win landlords more lease deals.	2	6	4	3

Uniq ID	Account Description	Retained FTE's	Current FTE's	New FTE'S	1099's
15196	A children's app aimed at fostering social and emotional intelligence for three- to seven-year-olds in the U.S.	3	2	-1	2
15241	A platform that utilizes biosignals acquired through a third-party wearable device to detect (and eventually anticipate) anxiety and stress in real-time.	4.5	2	-2.5	3
15255	Digitization of an existing professional internal auditing methodology.	2	2	0	0
15264	A creator financing and NFT marketplace.	3	5	2	2
15266	A unified multi-facing ecosystem that handles the entirety of an individual's life.	3.5	4	0.5	1
15326	Digital fitness technology that relies on data analytics process flows.	1.5	1.5	0	0
15351	An innovative Operating Room Efficiency Platform that enables the healthcare system to reduce stress in the OR, total cost of treatment, and increase patient wellbeing while achieving optimal quality of care.	1	0	-1	1
15352	A venture capital firm.	1	1	0	0
15378M	A company that provides a robotics platform for autonomous mobility solutions in a variety of industries.	1	0.5	-0.5	0
15386M	Safe battery collection, transport, and storage for highly combustible batteries.	2	2	0	0
15389	A pay-it-forward system to purchase gifts of cheer for their friends and family.	1	2	1	1
15410M	An "optimized fleet-as-a-service" to commercial fleet managers for multiple, specific purposes/uses.	1	2	1	4
15418	A new style continuous positive airway pressure (CPAP)/bilevel positive airway pressure (BIPAP) mask/liner.	3	3	0	2
16143	A company that holds the exclusive license to commercialize a novel compound preventing brain cell destruction from Beta Amyloid Protein (BAP).	7	5	-2	0
16154U	A urinary catheter extension for early UTI detection.	2	2	0	3
16184	A means of improving oral care compliance in mechanically ventilated patients in order to reduce the real-world rates of ventilator associated pneumonia.	1.5	2	0.5	0
16241	Investment app to help young adults to start investing to achieve their financial goals.	1	1	0	1
16247	A comprehensive B2B-e commerce and inventory management platform - focusing on helping grocery stores and restaurants with access to the best wholesale suppliers at the best prices.	4	4	0	0
16248	3D Printing.	1	1	0	0
16271	Dedicated to translating the business potential of breakthrough bioscience technologies in targeted geographies.	1	1	0	1
16274	An augmented reality multimedia hardware and software package designed and patented for patient safety.	3	2	-1	6
16295U	A computer program (cellular automata model, or CA model) to predict the microstructure and properties of the printed metal parts based on the material chemical compositions and additive manufacturing processing parameters.	0	0	0	0
16371	Create satellites that can process large SAR collections on orbit to reduce downlink data volume.	3	3	0	1
16411	A home-based, over-the counter diagnostic wearable that detects early-stage SARS-CoV-2 and influenza related antigens, ESCoT.	1	1	0	2
16436	A software that delivers programming and track progress of athletes for strength coaches in their gym.	0.5	0.5	0	1

Uniq ID	Account Description	Retained FTE's	Current FTE's	New FTE'S	1099's
16566	A proprietary online platform that will utilize blockchain technology to offer micro-denominated bond securities to non-accredited investors.	1.5	1.5	0	0
11252MY	Two wheeled 'series hybrid' for developing markets.	1	1	0	0
11606Y	An exploration application that allows users to collect locations and attractions visited and be presented in the style of a fun game that lets user earn points, level up in eight different categories, and achieve milestones.	3.5	2	-1.5	2
11880Y	In-application music discovery competitions that reward listeners for competing and discovering new music.	0.5	0.5	0	1
12250MY	Subscription-based charging solution for electric vehicles.	2	1	-1	0
12260YU	To reduce medical supply surplus by providing end-to-end supply tracking and management solutions.	2.5	2.5	0	0
12902Y	A drug formulation to help chronic kidney disease patients.	2	2	0	0
13624Y	An application that brings price transparency to the liquor industry.	2	2	0	1
15281Y	Automated small to medium business loan approval process to accelerate loan approval.	2.5	4.5	2	0
15282Y	A digital identity and vital information storage and exchange platform.	3	2	-1	0
15408Y	A portable document and photo scanner.	1	1	0	2
16236MY	a technology company that provides mobility-as-a-service to individual, retail, and commercial customers in need of last mile delivery.	1	2	1	4
6977YU	Human capital management software optimizing hiring, evaluations, and workflows for education and healthcare.	3	5	2	5
7531YU	Lactation simulation model and a breastfeeding education application.	7	0	-7	0
8132Y	DNA and bioinformatics analysis and collaboration platform.	3	2	-1	1
8255Y	Communications software for business-to-business or business-to-consumer.	5	10	5	7
8457Y	A music technology company that provides 24/7 self-service music rehearsal and electronic production rooms studio space.	3	3	0	2
8636Y	Guided meditation and respiratory biofeedback application.	2	2	0	10
8912Y	Digital offering that seamlessly transitions Instagram users (who express interest in an item), from a viewer position to a shopping position.	2	2	0	3
<b>116 Companies Total (26 Mobility, 18 Ypsilanti, 17 University)</b>		<b>402</b>	<b>556.2</b>	<b>154.2</b>	<b>738</b>

## Appendix D: Strategic Marketing and Communication Services

Uniq ID	Marketing Strategy Type	Sessions	New Company
11701M	Marketing needs assessment and strategic marketing session.	2	1
15259	Strategic marketing session and marketing referral.	7	
8255Y	Strategic marketing session and marketing referral.	8	
7591	Marketing referral.	1	
16482	Marketing needs assessment.	1	1
16407	Strategic marketing session.	4	
11979	Marketing referral.	1	
14814	Content development, strategic marketing session and content review, and edits.	11	

<b>0585</b>	Marketing needs assessment, strategic marketing session, marketing referral and content review and edits.	12	1
<b>14698</b>	Strategic marketing session.	2	
<b>11120U</b>	Strategic marketing session, content development, and content review and edits.	8	
<b>8769</b>	Content review and edits.	1	
<b>16414</b>	Marketing needs assessment, content review and edits, and strategic marketing session.	2	1
<b>15408Y</b>	Marketing needs assessment and marketing referral.	2	1
<b>15388</b>	Marketing referral.	1	
<b>15282Y</b>	Marketing referral, content development, and strategic marketing session.	4	
<b>15386</b>	Strategic marketing session, content review and edits, strategic marketing session and content development.	9	
<b>15281Y</b>	Content review and edits, content development, strategic marketing session, marketing referral.	13	
<b>15410M</b>	Strategic marketing session and content review and edits.	3	
<b>8457Y</b>	Strategic marketing session.	7	
<b>11838</b>	Content development, marketing resources, and educational materials.	2	
<b>12775</b>	Marketing needs assessment, content development, and strategic marketing session.	5	1
<b>16247</b>	Marketing needs assessment, strategic marketing session, and marketing resources and educational materials.	5	1
<b>3955Y</b>	Marketing referral.	1	
<b>16251M</b>	Marketing needs assessment.	1	1
<b>11967</b>	Marketing referral.	1	
<b>15107</b>	Marketing resources, educational materials, and strategic marketing session.	2	
<b>7282</b>	Content development and strategic marketing session.	5	
<b>15288</b>	Content development, strategic marketing session, marketing referral and content review and edits.	15	
<b>8777U</b>	Content review and edits and strategic marketing session.	2	
<b>6977YU</b>	Strategic marketing session, content review and edits, and marketing referral.	26	
<b>15244</b>	Marketing referral.	1	
<b>16171</b>	Marketing needs assessment, strategic marketing session, content development and marketing referral.	7	1
<b>2203</b>	Strategic marketing session, content review and edits.	6	
<b>16509Y</b>	Marketing needs assessment and strategic marketing session.	3	1
<b>8591</b>	Marketing referral.	1	
<b>16135</b>	Marketing resources and educational materials.	1	
<b>7131</b>	Strategic marketing session.	1	
<b>16351M</b>	Marketing needs assessment, content development, content review and edits and strategic marketing session.	5	1
<b>39 Companies Total (4 Mobility, 8 Ypsilanti, 3 University)</b>		<b>189</b>	<b>11</b>

## Appendix E: Microloan Program

The table below lists all companies that received a Microloan from the start of the program through June 30, 2022. The Microloan program was discontinued as of June 30, 2017, and we are only monitoring portfolio returns this year.

Out of the 42 companies that have received a microloan, 27 are now out of business. Of the 42 companies, only 1 responded to the annual survey resulting in a 2% response rate.

<b>Number of loans currently outstanding:</b>	<b>6</b>
<b>Current total loan amount outstanding</b>	<b>\$401,190.40</b>
<b>Loan amounts repaid this fiscal year</b>	<b>\$51,961.10</b>
<b>Loans written off this fiscal year</b>	<b>\$15,000.00</b>
<b>Cumulative Jobs retained</b>	<b>98</b>
<b>Cumulative net Jobs created</b>	<b>277</b>
<b>Payment made back to LDFA this fiscal year</b>	<b>\$44,000</b>
<b>Current balance of the microloan account</b>	<b>\$74,464.91</b>

## Appendix F: Tables

### F:1 Annual Served Metrics

FY 2021-2022	Companies Served	Retained FTE	Current FTE	New FTE	Average
City of Ann Arbor	163	577.5	685.2	107.7	0.66
City of Ypsilanti	23	57	73.5	16.5	
Out of Service Area	20	196.5	204.5	8	
No Legal Entity	9	20.5	20	-0.5	
Business Closed	14	50.5			In Business
<b>Total</b>	<b>229</b>	<b>902</b>	<b>983.2</b>	<b>131.7</b>	<b>215</b>
			Net	81.2	94%

### F:2 Cumulative Served Metrics

FY 2017-2022 LFDA	Companies Served	Retained FTE	Current FTE	New FTE	In Business
City of Ann Arbor	275	705.3	1,500.8	795.5	397
City of Ypsilanti	31	60	86	26	83%
Out of Service Area	72	382	641.5	259.5	
No Legal Entity	19	40.5	47.5	7	
Business Closed	79	176			
<b>Total</b>	<b>476</b>	<b>1,363.8</b>	<b>2,275.8</b>	<b>1,088.0</b>	
			Net	912	

## 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 W-2 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

New FTEs or “Jobs Created” are calculated by subtracting the retained jobs for the particular service we provided from the current job count, which gives us the added jobs since that particular engagement started. Quarterly report values are representative of job growth for all time served companies, as pulled by data given within the quarter. Annual report values are representative of job growth for companies served with the fiscal year, as pulled by data given within the year and the annual survey.

### Jobs Retained

Number of jobs retained by the companies that contractor served or are incubator clients. Does not include contract positions. Basically, 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.