

THE CHARLOTTE REGIONAL FUND FOR ENTREPRENEURSHIP

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Mapping the Ecosystem

An in-depth look at the Charlotte region's entrepreneurial ecosystem and the programs that impact high growth entrepreneurs.

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EXECUTIVE SUMMARY

The City of Charlotte and Foundation For The Carolinas (FFTC) have come together to sponsor a review and recommendations on the Charlotte USA region entrepreneurial ecosystem. After a year of coordination and educational meetings with stakeholders in the ecosystem, the City agreed to participate financially with a \$500,000 contribution to a public-private fund that will be used to assist local nonprofit service providers scale their capacity to assist startup and early stage companies and entrepreneurs. The fund, the Charlotte Regional Fund for Entrepreneurship (CRFE), will be managed by FFTC and the city's money will require matching contributions from the private sector.

Before the CRFE Fund can be administered, the City and the FFTC co-sponsored this report to better understand how the fund's money could best be used to achieve the City's goals of supporting high growth entrepreneurial startups in order to grow and attract high quality innovation based jobs. The purpose of this study is:

- Map the entrepreneur ecosystem assets of the Charlotte USA region
- Note best practices and emerging practices in ecosystem development
- Look at industry cluster activity and the impact and opportunities such activity offers entrepreneurs
- Make recommendations for administering a grant fund that addresses ecosystem weaknesses, and strengthens the capabilities of the region in supporting high growth entrepreneurs

In addition to a review of current writings and studies in the entrepreneurial and economic development space, fifty individual stakeholders were interviewed as a means of gathering current thinking from a broad cross section of the regional business, government, education and service provider community.

A Focus on High Growth Entrepreneurs

While all entrepreneurs are important, the spotlight in economic development is on entrepreneurs starting high growth enterprises (HGEs). These companies are characterized as using innovation-based methods, having scalable business models, growing 30-50% or more per year in revenue and with potential for hiring large numbers of employees. According to the Kauffman Foundation, the world's preeminent foundation for entrepreneurship and innovation, existing companies lose 1 million jobs per year, and new firms average creation of 3 million jobs per year.¹ A recent study by Kauffman found that these so-called "gazelle" firms (HGEs that are 3-5 years old) comprise less than 1 percent of all companies, yet generate roughly 10 percent of new jobs in any given year.² Therefore, the City's focus is in creating and enabling the region's growth environment to support these firms.

A Complex Environment

A review of studies by the experts in the field reveals that entrepreneurial ecosystems are vast and complex. They are made up of relationships and connections between entrepreneurs, mentors, large businesses and their support associations, venture capitalists, financiers, angel investors, educational systems, networking and support

¹¹ Job Growth in US Driven Entirely by Startups, According to Kauffman Foundation Study, Kauffman press release, July 7, 2010

² High-Growth Firms and the Future of the American Economy, Dane Stangler, Kauffman Foundation, March 2010

organizations, government agencies, economic development agencies, workforce training programs, foundations, policy makers, researchers and scientists, incubators, and more. There are certain characteristics that an area has to develop to be highly entrepreneurial: a culture of risk taking and entrepreneurial understanding, a high degree of personal trust between stakeholders in the community, great leadership, community engagement, celebration and communication around entrepreneurial activities, and skills and talent development. Charlotte has many of these characteristics, but must continue to invest in these capabilities in order to be more effective.

Nationally there is a boom occurring in funding and support of entrepreneurial programs. National, State and local governments and public-private partnerships are spending large sums to attract entrepreneurs to their area, and make it easier for them to connect, grow and do business. Programs this study reviewed were helping smaller companies commercialize their technology developments with university research partnerships; some were investing in advertising campaigns or new incubator programs meant to attract entrepreneurs and skilled talent from other areas. Yet others are focused on promoting collaboration and funding between startups and established companies or investing in partnerships that increase science, technology, engineering and math (STEM) programs in K-12 schools.

The Charlotte Entrepreneur Ecosystem

Ecosystems are unique to a community; no two communities will have the same blend of assets, skills and culture. In mapping Charlotte's entrepreneurial ecosystem, this report has identified the following domains of expertise: Existing Business Clusters, Entrepreneur Support Organizations, Academic Institutions, Capital Resources and Government Agencies. A detailed map of all the subcategories and assets within each domain has been developed. It can be found on page 20 of this document.

Community Interviews

A broad cross section of the stakeholders that work with and support entrepreneurs, and the entrepreneurs themselves, were widely interviewed for an understanding of the strengths and weaknesses of the local region in supporting entrepreneurial growth. Transcripts from 50 interviews were analyzed for common observations and to identify trends within the ecosystem. From these interviews a list of ecosystem gaps were identified. Some of the largest challenges that face the entrepreneurs and the HGEs are shown in the following chart:

SUMMARY OF HIGHLIGHTS

GAPS IN ECOSYSTEM	FINDINGS
Culture	1. It is widely viewed that there is a lack of understanding and appreciation for what entrepreneurs bring to the community
	2. The community does not celebrate/recognize the success of entrepreneurs
	3. The community does not seek to understand the reasons for failure of certain ventures
	4. In some sectors the region is viewed as patriarchal and not sufficiently collaborative
	5. The community has made strides in building the entrepreneurial ecosystem, but we are still in the early stages of development and have much further to go to be “competitive”
	6. The ecosystem must develop the means of identifying the true Gazelle’s in the community and develop programs that provide them the best opportunity to succeed
	7. The community desires more activities and interest in promoting innovation and creativity
	8. Promotion of entrepreneurial thinking must begin in K-12
Talent Availability and Development	1. Tech companies are experiencing a big skills gap between their needs and what the schools in general, and UNC Charlotte in particular are graduating, so the community is setting up its own training and with increasing frequency, not requiring college degrees for professional positions in technology
	2. The community must develop K-12 curricula that support skill development for software coding and STEM training so students are better prepared to take advantage of the opportunities available in tech industries
	3. The community must develop a national campaign to attract technical workers; businesses will leave if Charlotte does not improve its technical workforce, which is already experiencing/anticipating shortages
	4. Educators are trying to develop more employer facing training programs, but still may not be teaching the right things.
Networking and Mentoring	1. The region must attract higher quality angels and mentors who have actually had success in entrepreneurial endeavors
	2. Entrepreneurs require a variety of ways to reach out and meet others for collaboration; not always easy to find
	3. There is no aggregated list of startups for the region
	4. The Charlotte Region must implement a structure for matching the right mentors with the startup companies at the appropriate life cycle stages
	5. The region must raise its profile by bringing more thought leaders, VCs and business leaders to Charlotte for presentations and speaking engagements
	6. The region must become more active and visible with national and global networks

Media	1. The entrepreneurial and business community asserts that there is little understanding or coverage of the local entrepreneurial market in the news
	2. The community must raise visibility of the Region on an national scale as a place friendly to and supportive of entrepreneurs
Open Participation	1. The City leadership and CRFE should deal with entrepreneurs in an open, grass roots system that is accessible by entrepreneurs and led by entrepreneurs.
	2. Newer efforts are emerging for women, rural and marginalized individuals who want to be entrepreneurs; they should not be excluded from the “system”
Venture Capital and Funding	1. This is one of the most mentioned deficiencies (opportunities); as entrepreneurs and service providers alike do not find financing/funding past the seed round readily available.
	2. The community must connect with more angels, strategic investors, syndicates, etc.
	3. Deal flow, or the number of potentially fundable business opportunities, is low - possibly because regional entrepreneurs are not strong enough.
Higher Education Partnerships	1. UNC Charlotte gets credit for tech transfer initiatives and the Charlotte Venture Challenge, but they are not seen as particularly relevant or integral to entrepreneurship by technology entrepreneurs.
	2. Industry feels <i>they</i> must drive the creation of partnerships for training at UNC Charlotte.
	3. UNC Charlotte recognizes they must do a better job partnering with industry and continuing to improve on employer facing initiatives.
Large Company Partnerships and Clusters	1. Entrepreneurial companies feel completely disconnected from exploring opportunities to partner or develop solutions with large companies.
	2. Manufacturing appears to be a large potential area for increased partnership and innovation.
	3. Large companies would benefit from understanding the capabilities and initiatives of entrepreneurial companies in the region.
The Chamber and Economic Development	1. Entrepreneurs say the Chamber is not focused on them.
	2. The Chamber believes that their resources are limited in being equipped to support entrepreneurs; believes Ventureprise and BIG are better able to focus and will coordinate activities with them.
The Need for CRFE and Unified Coordination	1. Members of the ecosystem see a need for centralized coordination and communication, not control
	2. The City should put skin in the game.
	3. There exists concern for how some parties in the ecosystem will play together in leading strategy.
	4. A methodology must be developed for measuring the Ecosystem’s output of value – data for grants, ROI, and program effectiveness.

Recommendations for the Charlotte Regional Fund for Entrepreneurship (CRFE)

The CRFE is a programmatic and funding committee of Foundation For The Carolinas that will promote and enable high growth entrepreneurial development in order to increase innovation jobs and quality of life in the region. A priority of the CRFE is to establish and manage a fund that can be accessed through grants to strengthen the nonprofit service providers that assist entrepreneurs. In cross referencing those qualities that the highest performing ecosystems have, and the Charlotte community gaps identified on the previous page, this study recommends “fundable opportunity areas” that would bring the highest value to the region’s ecosystem. Ten “opportunity areas” that will help service organizations to bridge the most crucial gaps in the ecosystem are recommended for funding consideration. They are:

Potential Fundable Opportunities

Community Strategies	Fundable Opportunity Areas	Fundable Opportunity Areas
Build Entrepreneurial Culture	Improve Community Understanding	Promote Innovation and Creativity
Enhance Ecosystem Connections	Improve Structured Mentoring	Enable Partnerships between HGEs and Large/Med Companies
Improve Visibility for Charlotte with Entrepreneurs, Funders and Media	Promote Charlotte as a Hub for Entrepreneurial Development	Promote success stories within the Region
Build Technical Skills	Enable Skills Collaboration between Universities/Colleges and Technical Employers	Promote STEM training in K-12 and for women
Develop a Capital Continuum	Improve quality of/and access to Local Angels	Build connections with Silicon Valley VCs and other VCs

A process for grant making, along with a set of evaluation criteria that proposals should meet, has been recommended in this study. A process for garnering community input and evaluating the effectiveness of programs funded has also been outlined. With a deeper level of knowledge about the ecosystem, and the kinds of activities that are needed for effectiveness, the CRFE should now be in a position to offer strong, collaborative support and strategically focused funding to its ecosystem partners.

Summary of Findings

In conclusion, this study has identified the perceived weaknesses and gaps found in the area’s entrepreneurial ecosystem. Reviewed in context with best practices, addressing these weaknesses will encourage accelerated and robust development of the Charlotte-region’s high growth entrepreneurial environment.

Key Findings

- There has been an acceleration of entrepreneurial activity since 2010 that is seen as very positive
- The capacity of the ecosystem has grown much larger over this time frame
- Although Charlotte has increased momentum, they still appear to be significantly behind second tier markets such as Nashville, Indianapolis, and Milwaukee

- Entrepreneurs are generally happy living in Charlotte, but don't feel understood or appreciated by Charlotte
- Across all segments, the Charlotte community is viewed as risk adverse, not trusting or creatively open enough to culturally fit with an entrepreneurial environment
- There is a growing technical skills gap that threatens not only the startup community, but the large and mid-size companies as well
- There is little interaction between entrepreneurial companies and the larger more successful companies in the region
- Investors say that deal flow in Charlotte is weak
- Entrepreneurs feel that funding options, especially through VCs are weak
- Entrepreneurs want more visible and stronger Angels
- Entrepreneurs also want more sophisticated and seasoned mentors that have actually been successful in their own right
- Charlotte is poor at promoting itself within and beyond the region as a startup location
- There are many volunteers in the system that want to help entrepreneurs, but the ecosystem may not have the structure to match them in a way that best benefits entrepreneurs
- Although it is improving, there still exists a need for better communications around how to enter the ecosystem, and how the members collaborate within it
- Changes in the workforce require that Charlotte improve education, career knowledge and training options for students of all ages (K-12 and college)
- There is a need to measure the value, growth and development of the ecosystem
- The region's media outlets are inattentive about covering entrepreneurship and local startups
- Charlotte lacks the robust funding of focused entrepreneurial programs in leading innovation cities
- Charlotte lacks the concerted and collaborative focus to attract more research and development dollars to the region

Ecosystem participants – entrepreneurs, government officials, corporate business leaders, capital funding partners, non-profits and educational institutions – can directly impact the health of the entrepreneurial ecosystem through culture building, education, mentoring, access to research and business services and access to capital. The key to long term success is significant additional funding and development of a focal organization that promotes collaboration and a framework for efficient best practices program delivery to the entrepreneurial market.

INTRODUCTION

STUDY FOCUS

This study takes a 10,000 foot view of the regional structure of Charlotte's entrepreneurial ecosystem. The premise of this report is that by aligning entrepreneurial resources serving the area, the region can make more efficient use of those resources and realize value added synergies.

In the wake of the recent recession, Charlotte leadership seeks a growth model that can produce and accelerate the development of entrepreneurship in the region and the development of high-growth entrepreneurial businesses. As such, this commissioned study delves into recent research to identify the success factors associated with entrepreneurial development and growth, including understanding the complex and dependent relationships between community stakeholders, entrepreneurs and service delivery professionals within the region. By identifying innovative and effective national and global initiatives, the study provides insights into successful initiatives that can be adaptable to the Charlotte region.

The scope does not include detailed statistical analysis of the region's workforce, industry productivity measures or income and demographic statistics.

Utilizing a consulting firm to analyze the region's ecosystem is a purposeful way to acquire a viewpoint outside that of the "power players" and key institutions. This opens the community dialogue to include conversations not "about the entrepreneurs," but "of the entrepreneurs."

Objectives established at the onset of this project were:

- Map the entrepreneur ecosystem assets of the Charlotte USA region
- Note best practices and emerging practices in ecosystem development nationally and globally
- Look at industry cluster activity and the impact and opportunities such activity offers entrepreneurs
- Consider this a snapshot in time, understanding this is a living document that members of the ecosystem will further develop over time
- Make recommendations for administering a grant fund that addresses ecosystem weaknesses

This endeavor provides an inclusive overview of entrepreneurial thinking throughout different industries and varying locations; companies with differing growth strategies, life cycle stages and of varying sizes. The study addresses non-profits, social ventures and public sector views.

The primary objective of this study is that the information and recommendations presented lead to the development of a cohesive strategy for entrepreneurship, built with community consensus, and providing a framework for understanding growth of the region's ecosystem. Recommendations of this report hone in on strategic community needs that, when solved through infrastructure and programs, will provide growth and sustainability over the long term.

Ecosystems are complicated and dynamic. They evolve constantly, players interconnect, and elements change. Due to the tidal flows within ecosystems, this study at best represents a snapshot in time. This effort will shed light on both intangibles and tangibles that make up the ecosystem. How does a community develop human capital that inculcates an entrepreneurial mindset and a system that inspires innovative ideas? Fostering entrepreneurial social capital is about connecting people within an ecosystem and encouraging connections between people in other ecosystems. The Charlotte region must have entrepreneurs that are connected on a national and global front, not just locally. Importing and exporting ideas is as important as importing and exporting products.

This study takes the first step in mapping the ecosystem, listening to factions and individuals within it and providing germinations those ecosystem participants can develop into a community entrepreneurship strategy. From here, the movers, shakers and shapers of the ecosystem must come together to work on alignment, metrics, additional mapping and a method for continual feedback of information from the ecosystem and its stakeholders.

As an economic development tool, the City hopes to stimulate the development of entrepreneurs, the creation of networks and the inspiration of ideas, inventions and innovations. The end result is to create an environment capable of generating more jobs.

Jeff Finkle, president and CEO of the International Economic Development Council observes,

*"Research needs to assess the intangible aspects of growth; including the effect successful entrepreneurs have on others who are thus encouraged to launch their own companies. A broader evaluation of entrepreneurship support programs is important not only for those operating them, but also for elected officials, local governmental executives and the public so they can be educated about the nature and impact of these programs."*³

The goal in developing and executing a community entrepreneurial strategy is to incubate the next generation of entrepreneurial leaders. Research shows that successful entrepreneurs who build their own companies and go on to exit, very frequently become investors and mentors in other companies and start all over again. If the Charlotte community develops an intentional entrepreneurial strategy now, they can pay it forward for generations to come.

APPROACH

Study Methodology

The approach to gathering data for this report includes these steps:

- Conduct a review of national, state and local programs accessible by local entrepreneurs
- Review a broad range of literature to identify current thinking, trends, best practices in the area of entrepreneurship and related areas of innovation, education and economic development
- Research the industry clusters that serve as platforms for economic strength in the community, and identify strategies for catalyzing business and jobs growth by providing clusters with support
- Conduct a qualitative survey with representatives of the entrepreneurial ecosystem (entrepreneurs, support organizations, educational institutions, government and more) for key insights into the local environment

Every region is a blend of its own distinct assets. Research shows that communities have more sustainable success by carefully weighing and understanding the unique human capital, financial and material assets that already exist, as opposed to just copying what is being done somewhere else. Communities do learn from each other, but executing programs with a context and understanding of a community's unique nature are required for maximum success.

³ Entrepreneurial Support Programs Must Function Within a Regional Vision, Meet Entrepreneurs' Core Needs, the Kauffman Foundation, Sept. 25, 2008

Regional Approach

Robert E. Litan, director of research at Bloomberg.com states, "Entrepreneurial support programs will be most effective if they are part of a broader regional vision that promotes partnerships among key community players that help sustain global competitiveness."⁴

Since Charlotte and the region already take a collaborative approach to economic development, known as Charlotte USA, information and interviews were culled from this geographic region of about 2.7 million people living in 16 counties in two different states.⁵ The geographic coverage for this ecosystem includes the following North Carolina counties: Alexander, Anson, Cabarrus, Catawba, Cleveland, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly and Union. It also includes the following South Carolina counties: York, Chester, Lancaster and Chesterfield.

While this review includes assets from outside the Charlotte city limits, it is beyond the scope of this project to comprehensively evaluate every member of the regional ecosystem. This study includes some of the most visible, but acknowledges that every entity within the region was not contacted due to time and budget constraints. This is a living document, and as such it is hoped that a member of the ecosystem will assume responsibility for documenting and updating the region's ecosystem map as the system evolves and grows.



Community Interviews

In an effort to build an ecosystem map that fairly represents the state of the region today, Turning Point Advisors interviewed fifty individuals representing industry, education, entrepreneur support organizations, government, economic development, investment firms, research organizations and high growth entrepreneurs. These in-depth interviews, along with best practice research, have resulted in a holistic identification of those domains that make up the Charlotte ecosystem and an understanding of its strengths and gap opportunities within. (Detailed quotes from community interviews are found in the Appendix section of this report.)

⁴ Entrepreneurial Support Programs Must Function Within a Regional Vision, Meet Entrepreneurs' Core Needs, the Kauffman Foundation, Sept. 25, 2008

⁵ Charlotte Regional Partnership website

BEST PRACTICES IN ENTREPRENEURSHIP DEVELOPMENT AND GROWTH

This section highlights the current study of entrepreneurship globally. This study has increasingly focused on what makes entrepreneurial ecosystems thrive, thereby contributing to a healthy environment for the care and feeding of entrepreneurs. This section will also highlight a few successful initiatives that other communities across the country are undertaking. The breadth of activity in this space – from new entrepreneurship institutions to new seed funding options to increased use of taxpayer funds to unlock commercialization practices - is truly staggering.

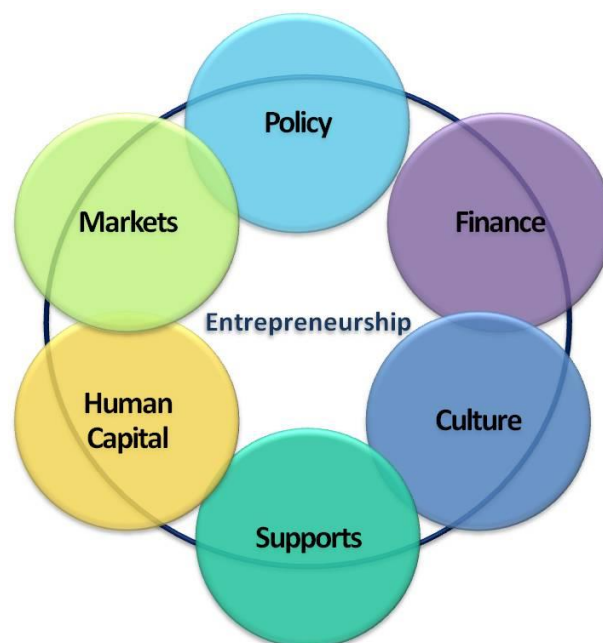
What is an Entrepreneurial Ecosystem?

Any economy is an ecosystem. So an entrepreneurial ecosystem is an economy that fosters entrepreneurial activity. There is no one accepted understanding of what an entrepreneurial ecosystem looks like and is made up of, but after reviewing numerous writings, some commonalities emerge. Stakeholders in an entrepreneurial ecosystem may include government, schools, research centers, foundations, nonprofit support organizations, students, corporations, business leaders, financiers, investors including venture capitalists, and of course the entrepreneurs themselves. In addition to the stakeholders and their organizations, the ecosystem also contains a number of “intangible” domains or characteristics.

Those intangibles include the existence of an entrepreneurial culture, or as Professor of Entrepreneurship Norris Krueger describes it, the ability to “nourish” an “entrepreneurial mindset.”⁶

According to Daniel Isenberg, head of Babson University’s Entrepreneurship Ecosystem Project, high growth entrepreneurship is born of ecosystems that contain the domains shown in the model in Figure 1. His research shows that communities must holistically view and work on all the relevant domains within the ecosystem simultaneously. Isenberg asserts that you must have a dedicated team with the skills to activate the local stakeholders by impacting, in a coordinated manner, all six of the domains of the ecosystem.

Likewise, the Monitor Group, who advises governments on economic competitiveness, wrote “There is no one best way to foster entrepreneurship: it requires practical, targeted strategies, based on an understanding of the specific conditions faced by entrepreneurs in a particular area or region.”⁷



⁶ So What Is an “Entrepreneurial” Ecosystem, Norris Krueger, February 14, 2012, <http://entrepreneurshipidaho.blogspot.com/2012/02/so-what-is-entrepreneurial-ecosystem.html>

⁷ Paths to Prosperity, Promoting Entrepreneurship in the 21st Century, Monitor Group, January 2009, p. 3

The Monitor Group analysts add that often governments try to facilitate entrepreneurship by easing administrative burdens, building incubators or increasing access to venture capital. While those are important, their study indicates that other policy areas are *more* important to entrepreneurial success. In particular, they note:

Mindset: Entrepreneurial values, attitudes and motivations have a disproportionate impact on levels of entrepreneurial activity throughout the world.⁸

Skills Development: The teaching of entrepreneurial skills at all educational levels is a strong and often neglected determinant of successful new business formation.⁹

Corporations and economic business clusters also are an important part of ecosystem “markets” and “human capital networks”. When new and established businesses cooperate, the former are often tapped for their creativity, innovation and efficiency.

There are numerous opportunities to cross pollinate mid and large size corporations and startups, with advantage to each. According to Michael Simmons, founder of Empact, a nonprofit that facilitates a culture of entrepreneurship in communities around the world:

“Large corporations spend billions of dollars on supporting, investing in, marketing to and donating to small businesses, startups and the organizations that support them. These numbers are rising dramatically as interest in the entrepreneurship ecosystem rises.”¹⁰

The advantages for corporations to work with entrepreneurs are:

- Increased innovation
- Customer acquisition
- To help grow the industry with new solutions
- Encouraging platform development
- Diversifying procurement
- Being philanthropic

The advantages to the entrepreneurs are equally compelling:

- Collaboration to accelerate solutions development
- New customer, increased revenue
- Industry guidance and knowledge sharing

With these broad perspectives in mind, this study will attempt to catalog the programs and activities that are impacting the formation and growth of entrepreneurial companies in the Charlotte region. The study will include not only the tangible programs, but also the “mindset” or culture-building elements and those programs that contribute to skills development and network building.

⁸ Ibid, p. 6

⁹ Ibid p. 6

¹⁰ What Start Ups Need to Understand About the Booming Corporate Entrepreneurship Ecosystem, Michael Simmons, Forbes.com, April 25, 2013

Definitions and Concepts in Entrepreneurship

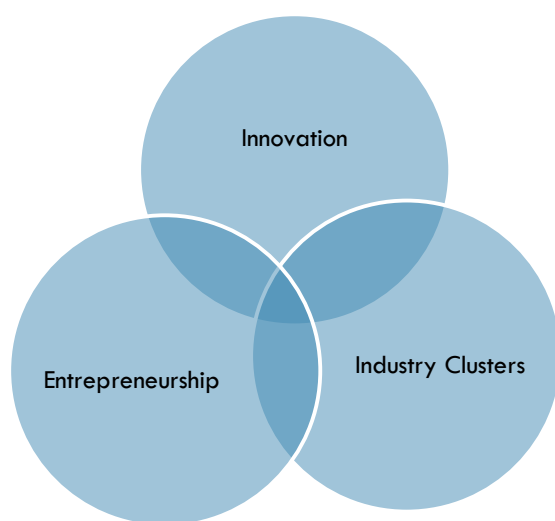
Before examining “best practices” in entrepreneurship a few definitions must be covered.

The presence of industry clusters and innovation activity in a community have been proven in the research to be associated with increased entrepreneurial success. Innovativeness and industry clusters provide opportunities for increased entrepreneurial activity; therefore these elements have been added to this study’s list of important assets in the region’s entrepreneur ecosystem. A quick definition of the terms innovation, entrepreneurship and industry clusters is necessary here because they are so tightly linked.

One of the many **definitions of entrepreneurship** is having the capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit.

Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries and associated institutions in a particular field that compete but also cooperate. Clusters have been shown to cultivate entrepreneurship and provide advantages in productivity and the capacity to innovate. Clusters provide natural opportunities for networking and linkages that fosters additional entrepreneurial activity.¹¹

Innovation is about the manifestation of novel ideas, but innovation without entrepreneurship may be an idea that does not create value. Delia Smith of Green Field Ventures notes, “If innovation is the creation of new capacities for wealth creation, entrepreneurship is the exploitation of these capacities.”



One way to describe the interrelatedness of these concepts is that entrepreneurship is the creation of new organizations, which have been shown to impact the formation of clusters that in turn drive innovation and can also influence the onset of entrepreneurship itself.

Within the realm of entrepreneurship, three types exist, in addition to the entrepreneurship and innovation that occurs in large companies:

Small business (also known as a “solo entrepreneur” or a “lifestyle” business) is independently owned, does not

dominate locally or nationally and tends not to engage in innovative practices. It is generally started as an income source and remains relatively small, with fewer than 25 employees.¹² These are the most common type of entrepreneur, but these are not the focus of this study.

¹¹ H.O. Rocha and R. Sternberg, “Entrepreneurship: The Role of Clusters Theoretical Perspectives and Empirical Evidence from Germany”, *Small Business Economics*, vol. 24, 2005, 267-292.

¹² Entrepreneurship and Start-Ups in the Boston Region: Factors Differentiating High Growth Ventures from Micro-Ventures, John Friar and Marc Meyer, *Small Business Economics*, 2003, Volume 21, pages 145-152.

Social entrepreneurship refers to the practice of combining innovation, resourcefulness and opportunity to address critical social and environmental challenges. Social entrepreneurs focus on transforming systems and practices that are the root causes of poverty, marginalization, environmental deterioration and accompanying loss of human dignity. In so doing, they may set up for-profit or not-for-profit organizations with a primary objective to create sustainable systems change. They are discussed here as a part of the Charlotte-region's ecosystem.

A **high-growth entrepreneur** (also called a "Gazelle" or HGE), has the primary goals of profitability and growth, uses innovative strategic practices and creates value. They create more jobs and more wealth than micro businesses and can grow at 50% or more per year. Over the years, economists have studied the impact of new business formation on economies. The research shows that "fast-growing new firms, not new firms in general, accounted for most of the new job creation by small and medium enterprises in advanced countries."¹³ It is this group of entrepreneurs that the City of Charlotte is focused on building.

Key Factors for Ecosystem Success

Since 2008 a large body of work on entrepreneurial ecosystems has been produced. A new cult of personalities has come from this school of thought leaders, creating "rock stars" of entrepreneurship, like Brad Feld, Daniel Isenberg, Victor Hwang and Greg Horowitz.

Brad Feld, in his recent book entitled **Startup Communities: Building an Entrepreneurial Ecosystem in Your City** (2012), cites four imperatives for making an entrepreneurial ecosystem successful:

- 1) It must be led by entrepreneurs
- 2) There has to be a long term commitment (20 years)
- 3) It must be inclusive of everyone in the ecosystem
- 4) It must engage the community

Building an entrepreneurial ecosystem is not for the faint of heart. It is a grassroots, bottom up activity that incorporates open ideas, utilizing networks and diverse people and groups within the community to drive vision, strategy and activities. "In entrepreneurship, especially at the very early stages, there is no hierarchy. If the hierarchy tries to drive the startup community, it essentially stifles it," Feld says.¹⁴

Another recent book with expert insights is **The Rainforest, The Secret to Building the Next Silicon Valley** (2013), written by Victor Hwang, a Silicon Valley VC (who has a consultant living in Charlotte) and Greg Horowitz, one of the founders of San Diego based Global CONNECT, a renowned network growing technology clusters. And while Charlotte doesn't aim to be the next Silicon Valley, Hwang's VC firm also consults with communities all over the world where they facilitate the building of innovation systems. According to Horowitz and Hwang, the roots of an ecosystem are very broad and include smart policies, supportive infrastructure, flexible but strong intellectual property frameworks, enterprise and entrepreneurial support, and a robust capital "food chain." An effective ecosystem includes an informed and engaged private sector, proactive innovation leadership development, responsive and responsible workforce development that includes skill-building initiatives, active youth engagement, and university – industry linkages. Hwang and Horowitz point out that the number one currency in Silicon Valley is TRUST, and without that, no ecosystem can really thrive to its fullest potential. They summarize:

¹³ Entrepreneurship, Innovation and Economic Growth: Evidence from GEM Data; Wond, Ho, Autio; Small Business Economics (2005) 24:35-350, page 1

¹⁴ How to Build an Entrepreneurial Ecosystem, Kent Bernhard Jr., Upstart Business Journal, October 9, 2012; quoting Feld

“These behaviors, however, require that individuals rise above the short-term selfishness and focus on long-term mutual gain. The Rainforest theory therefore contradicts the notion that economic productivity is highest when the rational pursuit of selfish motives is greatest. The key factors driving the strength of human innovation ecosystems are: diversity of talents, trust across social barriers, motivations that rise above short-term rationality, and social norms that promote rapid, “promiscuous” collaboration and experimentation among individuals. This is the culture of the Rainforest.”¹⁵

Another prominent voice on ecosystems is Canada’s Stephen Daze, founder of Agawa Entrepreneurship Development Corporation. Much like the others writing on the subject, Daze suggests that healthy ecosystems contain the following critical elements necessary for success¹⁶:

1. Leadership - in the business community capable of supporting and championing entrepreneurial success.
2. Funding - both of support initiatives, and the actual startup funding networks
3. Community Engagement - access and networks to service providers, suppliers, clients and partners
4. Mentoring - the existence of formal programs to aid entrepreneurs in their growth
5. Incubation/Acceleration - not essential for all, but beneficial for many
6. Education and Professional Development - entrepreneurship education, not just business education, both at the k-12 and post-secondary levels
7. Celebration and Promotion - proactive recognition and communication as a vital part of a healthy entrepreneurship continuum

These current teachings of ‘best practices’ by these experts are taken into account in analysis of the ecosystem recommendations for the Charlotte region.

Innovation Initiatives of Note

While it has been stated that there is only one Silicon Valley – and it cannot be duplicated - there are many benefits to understanding what is working in other areas. Though no two entrepreneurship ecosystems will be exactly alike, there is mutual benefit in communities sharing best practices. They can save time and money by learning from other communities before investing their own scarce resources in a new initiative.

In looking at trends in entrepreneurship development, SSTI, a consultancy studying technology based economic development, tracks trends nationally, by state and locally. In a recent report, they noted that state economic development initiatives have fallen almost 40% since 2009.¹⁷ However, they see increased focus on commercialization of technologies/investment in research, an increasing number of states with new branding initiatives, and more Science, Technology, Engineering, Math (STEM) initiatives aimed at the nation’s skills mismatch. They note,

“...as state investment slowed, local and federal activity became more robust with several tech focused initiatives announced in the last year aimed at attracting talent and entrepreneurs and supporting regional clusters in targeted sectors likely to have the most impact on new job creation. Chicago, New York City, Philadelphia, St. Louis and Skokie, IL are some of the cities leading the charge with nonprofit accelerators, public private funds and other programs. At the federal level, multi-agency initiatives such as the i6 Challenge and Jobs and Innovation Accelerator Challenge have created pathways for states and regions

¹⁵ The Rainforest: The Secret to Building the Next Silicon Valley, Victor Hwang and Greg Horowitz, 2012, Introduction

¹⁶ Community Entrepreneurship Capacity Building, Stephen Daze, February 24, 2012

¹⁷ Trends in Technology Based Economic Development: Local, State and Federal Action in 2012, published by SSTI.org

to compete for funds to stimulate economic growth by supporting groundbreaking and potentially transformative projects.”¹⁸

A variety of programs that may be of interest to the Charlotte community are presented below. These are unique programs aimed at accelerating high growth entrepreneurial development.

JumpStart, Inc.

Sponsors: Began under sponsorship of Ohio Third Frontier Program and various regional foundation grants

When: Incorporated in 2004

Where: Cleveland, Ohio region

Jumpstart is a nationally recognized non-profit that accelerates the success of entrepreneurs, their high growth companies and the ecosystems supporting them. It is a model that has flourished over the ten years since inception in 2003 as a regional program to build a connected ecosystem in Northeast Ohio. It differs from programs in Charlotte or the Carolinas in several ways.

First, the program has received a series of large investments along the way that have funded the growth and development of the organization and their programs.

Year	Amount	Source
2003	Over \$1.2 M	Startup grants given by: Cleveland Foundations, Cleveland Tomorrow, Ohio Department of Development, George Codrington Foundation. Ohio Department of Development's support includes \$1.2 million from its Ohio Third Frontier program
2005	\$500,000	Second grant from Ohio Third Frontier program
2007	\$8.5 M	Additional grants from Ohio Third Frontier
2008	\$3 M	Burton D. Morgan Foundation announces a \$3 million challenge grant
2008	\$3 M	Receives a \$3 million grant from Ohio Third Frontier program
2008	\$30 M	Closes \$30M capital campaign
2009	\$2.5 M	Receives grant from Ohio Third Frontier
2010	\$5.7 M	Receives grants from Ohio Third Frontier, \$1.7 of which supports bioscience start-up companies in collaboration with BioEnterprise, Great Lakes Innovation and Development Enterprise, and the Akron Global Business Accelerator.
2011	\$6.7 M	Receives grants from Ohio Third Frontier, \$4.7 million of which supports the JumpStart Entrepreneurial Network, and \$2 million of which supports the Evergreen fund of JumpStart Ventures.

¹⁸ Ibid.

Another distinction in Jumpstart programs is that they have a mechanism to make direct investments into high growth startups. Between 2005 and 2009, \$1.1 B has been invested by venture capitalists and angel investors in 183 unique companies and JumpStart Ventures portfolio companies' reached over \$100 million in follow on funding.

Finally, as they have grown over time, they have expanded from Northeast Ohio to consulting nationally to help other ecosystems grow. They have added initiatives that expand their scope of work. For example, JumpStart launched IdeaCrossing in 2007, an online community resource focused on helping entrepreneurs based in Northeast Ohio and beyond find the business assistance and investment capital they need to launch new business ventures.

In 2008 they add VentureLoop, a website dedicated to job postings for venture backed startups to aid with recruiting needs.

In 2010 they added JumpStart Launch100 in conjunction with the Ohio Department of Development's Minority Business Enterprise Division. The pilot is aimed at assisting high-growth minority-owned businesses and high-potential firms based within Ohio's urban areas. Also in 2010 JumpStart Entrepreneurial Network is announced. This is a connected group of entrepreneurial support organizations—advisors, funds, investors, incubators, and educators--working across the 21 counties of Northeast Ohio. The network is managed by JumpStart. They also begin consulting within the region, with the help of additional foundation grants and the Economic Development Association, to help communities expand their region's entrepreneurial capacity. All told, the JumpStart website names 55 major sponsors and donors, representing a range of foundations, government grantors, corporations and individuals.

And in 2011, Jumpstart launched the JumpStart America initiative, in alignment with the goals of the Startup America Partnership, to build robust public, private, and philanthropic partnerships to create or accelerate innovation and entrepreneurship programs across the United States.

Turning Point Advisors contacted JumpStart Inc. to inquire about the consulting they are now doing with communities across the US to help establish more robust ecosystems. Kate Hanna with JumpStart replied, "Project costs vary widely based on a number of factors: what the region wants to achieve, the current level of entrepreneurial deal flow, the region's ability to raise funds, the scope and duration of the project, and a number of other factors." Hanna also said, "We don't have an active project in Charlotte, NC, but have had conversations with leaders in the Research Triangle area."

Benefits of Program

- *Robust participation across the region*
- *Has developed community engagement through marketing, strategy and outreach activities, tech talent and mentoring, connections and collaboration, resources for HGE development, from intake to due diligence in readying companies for investment, direct investment, and leadership into national "best practices" in ecosystem development*
- *Creates measurable direct jobs, follow on investment, economic impact and measurable annual revenues*
- *Has created a "culture" of entrepreneurial investment and participation*

FinTech Innovation Lab

Sponsors: Accenture and the Partnership Fund for New York City

When: Every summer; began in 2011

Where: Manhattan, New York City

The FinTech Innovation Lab is an annual program run by the Partnership Fund for New York City (an investment fund) and Accenture for early and growth stage companies that have developed cutting edge technology products targeted at financial services customers. Six companies are selected on a competitive basis. Winners get the chance to refine and beta test their financial technology products in New York City in partnership with the Lab's participating financial firms:

Ally Financial, American Express, Bank of America, Barclays, Capital One, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, JP Morgan Chase, Morgan Stanley, New York Life, State Street, and UBS.

The startup firms will receive access to relevant user groups within the banks for valuable feedback on products and proofs of concept. Each week the firms participate in workshops and panel discussions on issues relevant to financial technology companies, such as procurement, proofs-of-concept, technology architecture, bank regulation, and broader industry trends.

Benefits of Program

- *Acceleration of Product Development*
- *Mentoring by Senior successful mentors in the entrepreneur's industry*
- *Real market feedback on products*
- *Preparation for investor presentations*
- *Introduction to high quality VC firms*
- *Networking and Introduction to potential clients/decision makers*
- *National press coverage*
- *Increased education for entrepreneurs on technologies, trends and entrepreneurship*
- *Opportunity to receive a \$25,000 grant*
- *Opportunity to participate in Leadership Program*

Of Note: Charlotte firms Ally Financial and Bank of America were sponsor/participants

Winners will also participate in a Leadership Program, where they will have the opportunity to meet senior business leaders, leading financial technology entrepreneurs and investors in the NYC community. They also participate in mentoring sessions with the Lab's Entrepreneurs Network.

At the end of the twelve-week program, winners will have the opportunity to present at a Demo Day, in front of investors, senior executives of financial services firms, and local and national press.

Startup Atlanta

Where: Atlanta GA

When: May 2013

What: Support nonprofit established to aid startups

<http://www.startupatlanta.com/>

Startup Atlanta began as an innovation and startup round-table in 2011. It recently became an independent non-profit with an executive director and a board of directors. Goals will be to improve connections in the ecosystem,

improve connections to VCs, and publicize the region's strengths and assets as an entrepreneurial hub. They are building an open, detailed asset map and calendar.

JumpStart Foundry-Silicon Valley Partnership

Where: Nashville, TN

When: Beginning in summer 2013

What: Accelerator Graduates go to Silicon Valley

<http://jumpstartfoundry.com>

Three year old Nashville tech business accelerator Jumpstart Foundry (JSF) offers a program that relies heavily on a strong mentor driven curriculum, and upon graduation they hold an investor showcase typically attended by more than 400 angel and venture investors.

Benefits of Program

- *Only graduate companies are eligible, meaning they are more prepared to benefit from the experience*
- *Warm introductions are made to investors and key contacts within the Silicon Infrastructure, leveraging the potential for fundraising and strategic partnerships*
- *Open sharing encourages Home grown companies to come back home and apply what they've learned*

In March JSF announced a unique partnership with Silicon Valley startup 'ecobator' nestGSV. In the partnership JSF will rotate their program graduates through 12-week residencies at nestGSV's Silicon Valley campus. While JSF covers expenses for office and living space, startup teams will focus on raising capital and growing their strategic relationships, aided by facilitation and introductions by nestGSV's professional staff.

Growing access to Silicon Valley's funding and corporate infrastructure adds another meaningful dimension to the Jumpstart Foundry value proposition. "Our startups can grow their networks in the Valley while benefiting from all that Nashville has to offer them as founders. It's a win/win," says Jumpstart COO David Ledgerwood.

nestGSV's staff will facilitate the first 30 days of each company's stay via a guided process that will make warm introductions to entrepreneurs, angels and VCs, corporate, tech and strategic partners who can help the companies get off to a fast start. Jumpstart companies will then spend the next two months following up and developing key relationships. nestGSV CEO Kayvan Baroumand said,

*"The partnership with Jumpstart Foundry is in line with our vision of supporting the Global Silicon Valley. We are excited about the opportunity to work with different accelerator programs, such as Jumpstart Foundry, to help them join us in developing a global standard around entrepreneurship so the focus is less about where companies come from and more focused on identifying the best companies by sector, thus taking the bias out of geography. As opposed to saying that all startups need to move to Silicon Valley, we are encouraging companies' core teams to continue building their companies at home while leveraging key elements of the Silicon Valley ecosystem for fundraising and strategic partnerships."*¹⁹

JSF's Managing Director, Vic Gatto says that Jumpstart Foundry has become such a competitive program that fewer than 5% of applicants will be selected this year.

¹⁹ nestGV and Jumpstart Foundry Announce Partnership, March 15, 2013, PRWEB

Milwaukee Partnership Partners with Babson Global

Where: Milwaukee, WI

When: Beginning in 2013

What: Focus on Ecosystem improvements using the Babson model to rapidly improve startup culture and success

Milwaukee will be the first city in the United States to develop an entrepreneurship program using a Boston professor's model that has helped boost entrepreneurial "ecosystems" in cities in Colombia, Brazil, Denmark and other countries.

Daniel Isenberg, a professor of entrepreneurship practice at **Babson Global**, a wholly owned nonprofit subsidiary of Babson College in Wellesley, Massachusetts, will bring his model to Milwaukee and work with a broad coalition to develop an actionable blueprint for the city to increase the formation of startups and "scale up" existing ventures, according to an announcement from the group.

Benefits of Program

- *The first US city to develop an entrepreneurship program with Babson model*
- *Goal is to rapidly change the ecosystem, including culture*

The public-private partnership includes the Greater Milwaukee Committee, University of Wisconsin-Milwaukee, Wisconsin Economic Development Corp., Wisconsin Housing and Economic Development Authority and investors including Sheldon Lubar, coalition members said. **American Express** is also backing the project. Coalition officials declined to disclose funding amounts.

"(Isenberg's) done this all over the world and is the long-term thought leader in this field," said **Julia Taylor**, GMC president, in an interview.²⁰ "Milwaukee is still nascent in some ways in its startup culture but it's fairly rapidly accelerating. Are there ways we could do it smarter and faster? That's what I think Dan will help us find."

The project will focus on six areas: policy and leadership, the entrepreneurial culture, financial capital, human capital, access to customers and markets, and entrepreneurial support organizations, Isenberg said.

Isenberg says, "What we focus on is the conditions in which there will be measurably more high-growth entrepreneurship. The jobs, wealth and taxes are crucial byproducts."²¹

According to Isenberg the tipping point for success, is achieving one successful entrepreneurial venture per 100,000 residents each year in a particular community. "It doesn't happen overnight," Isenberg said.

Michigan Corporate Relations Network

Where: State of Michigan

When: Beginning in 2012

What: Focus on bridging the gap between small business and university research

²⁰ From Brazil and Denmark to...Milwaukee? Global Entrepreneurship Program Picks First US Home, Jeff Engel, March 28, 2013, Upstart Journal

²¹ *Ibid.*

The Michigan Corporate Relations Network is helping bridge the gap between small businesses and the research universities. Most tech commercialization is aimed at professors and students within a university commercializing in partnership with their university. The Michigan Corporate Relations Network, which is a statewide program, not local, financially helps deserving small and medium businesses gain access to specialized research that they otherwise could not afford.²² Their comprehensive Business Engagement Center connects entrepreneurs with companies and helps them access university library resources.

The MCRN also started the Small Company Innovation Program in 2012 which provides small businesses with access to matching funds to engage the MCRN partner universities on company specific research projects.²³

Benefits of Program

- *Bringing small businesses, not just those that are university affiliated, into open collaboration with research efforts*
- *The innovation program shares cost of company specific research innovations by matching monies*

StartUp PHL

Where: Philadelphia, PA

When: Beginning in 2013

What: Funding of ecosystem improvements

<http://www.startupphl.com/>

StartUp PHL is a collaborative effort between the City of Philadelphia Department of Commerce (economic development) and the Philadelphia Industrial Development Corporation. The goals of the organization are to strengthen the entrepreneurial environment in Philadelphia by backing smart proposals that will energize the startup scene, and to increase the availability of seed-stage capital by creating a public/private venture fund dedicated to making investments in Philadelphia-based startups. They are looking for investment funds that want to join them.

Benefits of Program

- *Similar to what the CRFE will do in Charlotte, the program openly solicits innovative ideas to boost infrastructure*
- *Also raising investment fund to fill funding gaps for local startups*

StartUp PHL is granting a total of \$500,000 over a 3-year period to groups, companies or individuals that can show ideas and best plans for boosting Philadelphia's entrepreneurial potential. They will make grants to proposals that enhance collaboration, attract new entrepreneurs from within or outside or foster networks for entrepreneurs to collaborate.

Triangle North Carolina Branding Campaign

Where: Raleigh- Durham, NC

When: Beginning in 2013

²² MCRN programs to help bridge the university research gap, Elijah Brumback, MBIZ, September 4, 2012

²³ Trends in Technology-Based Economic Development, Local, State and Federal Action in 2012, SSTI.org

What: Branding Campaign

Amid increased competition for talent, economic development groups from the Triangle unveiled a campaign to bring in more bio tech workers and show the area as an attractive place to relocate, “Work in the Triangle.” The campaign aims at recruiting top talent in key industry clusters. A \$1 million set aside will provide funding until 2014.²⁴

Benefits of program

- **RTP is perennially named one of the best entrepreneur and technology growth markets nationally**

Center for Entrepreneurial Development's (CED) Venture Mentoring Service

Where: Raleigh, NC

What: Launch of a stronger mentoring program for CED mentors

<http://www.cednc.org/?page=VMS>

CED has adapted the MIT Venture Mentoring Service model for their mentoring program, which has been proven to connect business to academia. They sign up Mentor Partners at \$5,000 per supporting organization. The financial support from Mentor Partners allows CED to offer programs and resources to entrepreneurs throughout the year. The list of mentoring partners contains a large number of companies that are also prominent in Charlotte.

Mentors are selected for their experience in areas relevant to the needs of entrepreneurs and for their enthusiasm for the program. To maintain a trusting environment for entrepreneurs, the mentors are required to subscribe, in writing, to a Statement of Principles that governs their behavior.

Benefits of program

- **They are following an established methodology that has proven successful**
- **They have attracted thousands of dollars in corporate support and the time of volunteers**
- **Mentors are prequalified and matched with entrepreneurs for better impact**

One Million to One Million (1M/1M)

Where: An online program runs from Silicon Valley

What: Global virtual incubator founded on a framework for Capitalism 2.0

<http://1m1m.sramanamitra.com/>

Although this is a for profit entity, the former venture capitalist and consultant, Sramana Mitra, who founded it has a stated goal of nurturing one million entrepreneurs to reach one million in annual revenue each by 2020, creating trillion dollars in GDP and ten million jobs. 1M/1M's incubator-in-a-box program is meant to either start a new incubator, or expand capacity of existing incubators. Mitra is a prolific writer that publishes in-depth entrepreneur interviews; hold free live webcast pitches and feedback sessions, and a free self-assessment for entrepreneurs. Premium members then access a curriculum of modules that educate and strengthen entrepreneurs to be investment or market ready. Mitra also has a network of VCs and angels that she will put in touch with companies when they are ready, although her curriculum strongly aims to help the self-funded entrepreneur strengthen their company and market approach too.

²⁴ *Ibid.*, page 20

Benefits of program

- **1M/1M has established a methodology patterned after tech accelerators/incubators**
- **An inexpensive way to increase entrepreneurial capacity in a region without large community investments in assets of physical incubators and staff**
- **Entrepreneurs can become connected with Silicon Valley networks**
- **A self-paced program also offers opportunities for interaction, feedback and virtual networking**

At \$1,000 annual fee per entrepreneur (unlimited access) that goes through the program, Mitra touts the extreme value of the education, and is working with communities around the country to rapidly scale their number of market-ready entrepreneurs. In interviewing her for this report, Mitra indicated she has had some discussions with people in the RTP, but she is very eager to work with North Carolina communities and Charlotte in particular.

1M/1M has announced partnerships with communities and companies like Microsoft, who grant membership to deserving

startups. Another selling point, Mitra points out, is that your entrepreneurs grow in place, without uprooting to find money or success through place based programs elsewhere.

Research Triangle Cleantech Cluster (RTCC)

Where: RTP, NC

What: 13 County Cleantech Global Innovation Hub

<http://www.researchtriangle.org/clusters/rtcc>

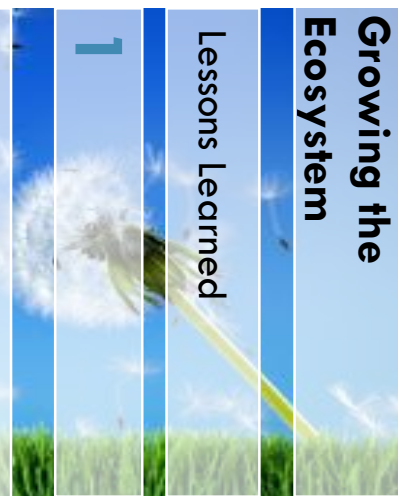
This newly founded (2012) public private partnership of 11 companies have paid \$75,000 each to form and is researching and promoting strategies expanding global networks, connecting cleantech entrepreneur community, attracting talent, providing workforce training, recruiting other companies, and developing an global brand for the sector. Members include ABB Inc., Cisco, Duke Energy, Field2Base Inc., Power Analytics Corp., PowerSecure International, RTI International, SAS, Schneider Electric, Sensus and Siemens.

Benefits of program

- **Industry leadership and collaboration for cluster growth**
- **Aimed at growing the industry, attracting more and connecting established companies with entrepreneurial companies**
- **Branding to a global audience**
- **Connecting RTP network to global networks**

IT IS THE RECIPE, NOT THE INGREDIENTS

Charlotte has a robust list of assets in their ecosystem; all the wealth and ingredients needed to support a strong entrepreneurial environment. So why is the community considered in its infancy compared to Boston, Austin and even the Research Triangle? As Victor Hwang's Rainforest states, it is not the ingredients, but the recipe that make an ecosystem thrive. Therefore, culture building activities, improved visibility of success stories and improved workforce development provide the recipe Charlotte is seeking.



Charlotte-Region's Entrepreneurial Ecosystem

Current State of the Market

The Great Recession brought unemployment to rates not seen in sixty years. In Charlotte, unemployment exceeded the national average, in part due to major decreases across the broad economy and heavy losses in dominant industries, such as banking, real estate and construction.

After 2008, new business creation rates rose to record highs nationally, as unemployed workers sought to start businesses and rebuild financially. A new wave of entrepreneurship swept not only the nation but the world. New entrepreneurial programs were introduced in schools and economic developers began to pay attention to what startup companies could do for local economies. The Charlotte Regional Partnership's David Swenson describes the "three legs of the stool in the effort to build businesses: 1) Marketing and new business attraction, 2) retention and expansion; 3) entrepreneurial development."

In 2011, the Charlotte City Council directed staff to develop a high growth entrepreneur strategy to make the city a desirable place to start and grow business.

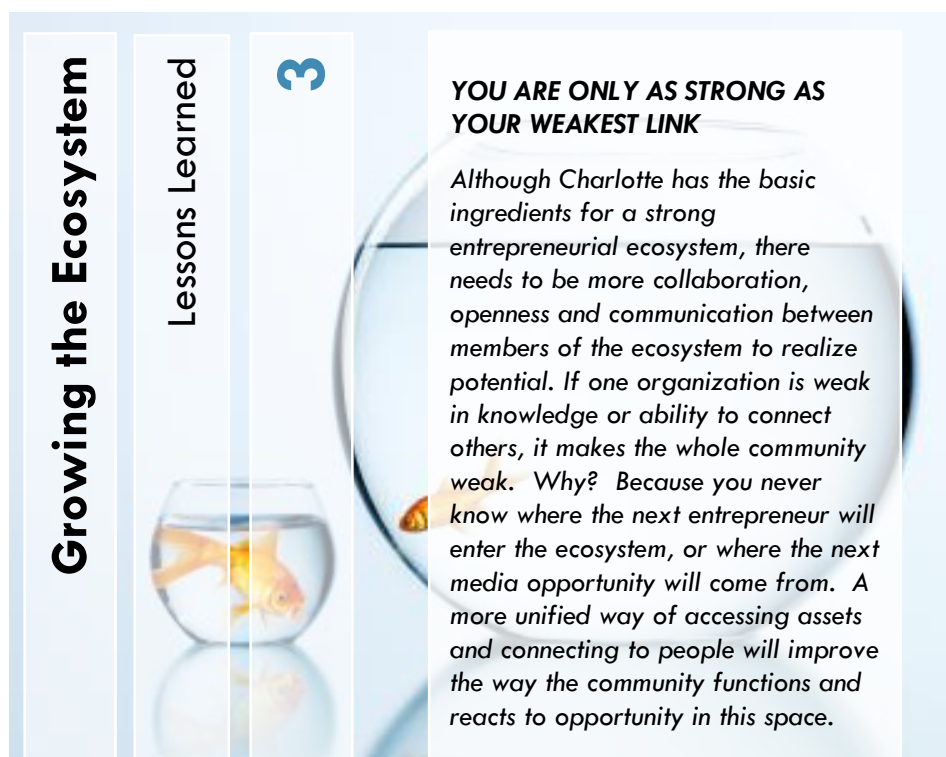
Locally, entrepreneurial support organizations were swept with new interest and new opportunities. The Ben Craig Center, the oldest incubator in the region, celebrated its 25th anniversary amid news that it was changing its name to Ventureprise and focusing on new regional opportunities, while also building a new 96,000 square foot center on UNC Charlotte campus.

Packard Place was formed in 2011 as a hub for entrepreneurs. Within its walls, several new incubators were launched for startup companies: The CLT Joules Energy Incubator, Innovo Labs, RevTech technology incubator and Queen City Forward, a social enterprise incubator.

<p>Growing the Ecosystem</p>	<p>Lessons Learned</p>	<p>2</p>	<p>PAY IT FORWARD</p> <p><i>Studies indicate that for every innovation based job, there are seven other jobs created. All accounts are that ecosystem development is a long term, not short term undertaking. In this slow growth economy, the only way for the ecosystem to mature rapidly is to accelerate the process by paying now for improvements that won't be seen until sometime down the road. Entrepreneurs are a generous group, and every success will be paid back through additional investments, startups and mentoring to the next generation.</i></p>
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Additionally, the Charlotte Entrepreneur Alliance (CEA) was formed in 2011 and is made up of members of entrepreneur support non-profits, city officials, representatives from the area colleges, investors and other stakeholders. The CEA is a coordinating council of individuals from the ecosystem that gather to share information about ecosystem activities and discuss strategies for growth. They have worked closely with the city and council members to inform and share information related to care and feeding of the local entrepreneurial system.

From the Alliance's stated goal of boosting the success of the entrepreneurial startups in the region, the idea to form the Charlotte Regional Fund for Entrepreneurship (CRFE) was born. The purpose of the CRFE fund is to enable service providers to fill the gaps in Charlotte's entrepreneurial ecosystem. Founded through a \$500,000 startup contribution from the City of Charlotte, required matching funds will need to be raised from the private sector. These funds will be accessible in a grant making process to nonprofit programs that fill gaps in the ecosystem without duplicating other existing programs. Additionally, the CRFE, as proposed, will be an advisory committee managed by Foundation For The Carolinas, who are experts at administering nonprofit grant making programs. A further stated goal of the CRFE is to develop renewable funding because ecosystem development across a region is a long-term multiyear undertaking. According to Brad Feld, a leading expert in startup development and author, these efforts should have a 20-year timeline for success because developing a healthy ecosystem is about establishing entrepreneurial culture throughout the community.



Growing the Ecosystem

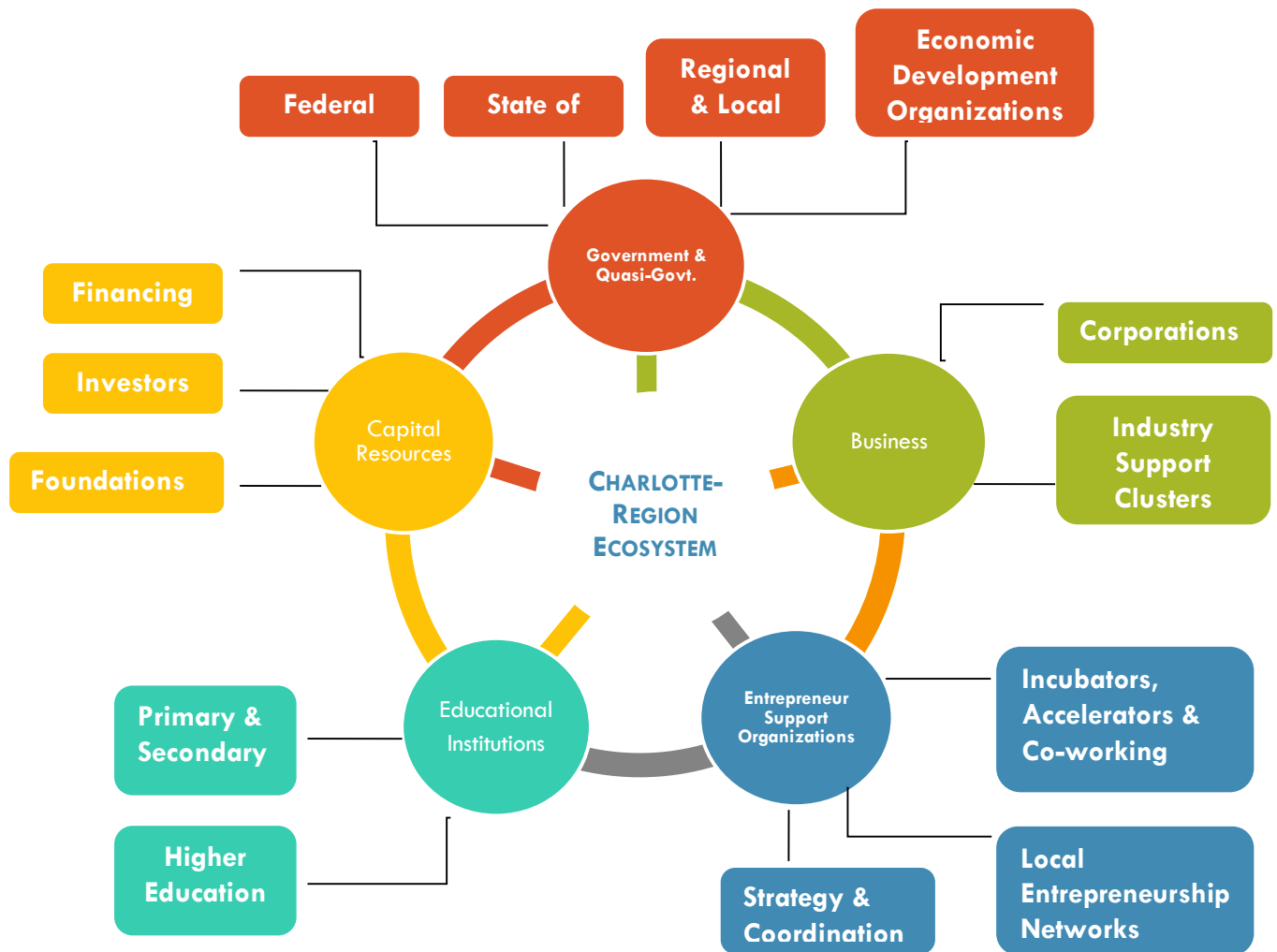
Lessons Learned

3

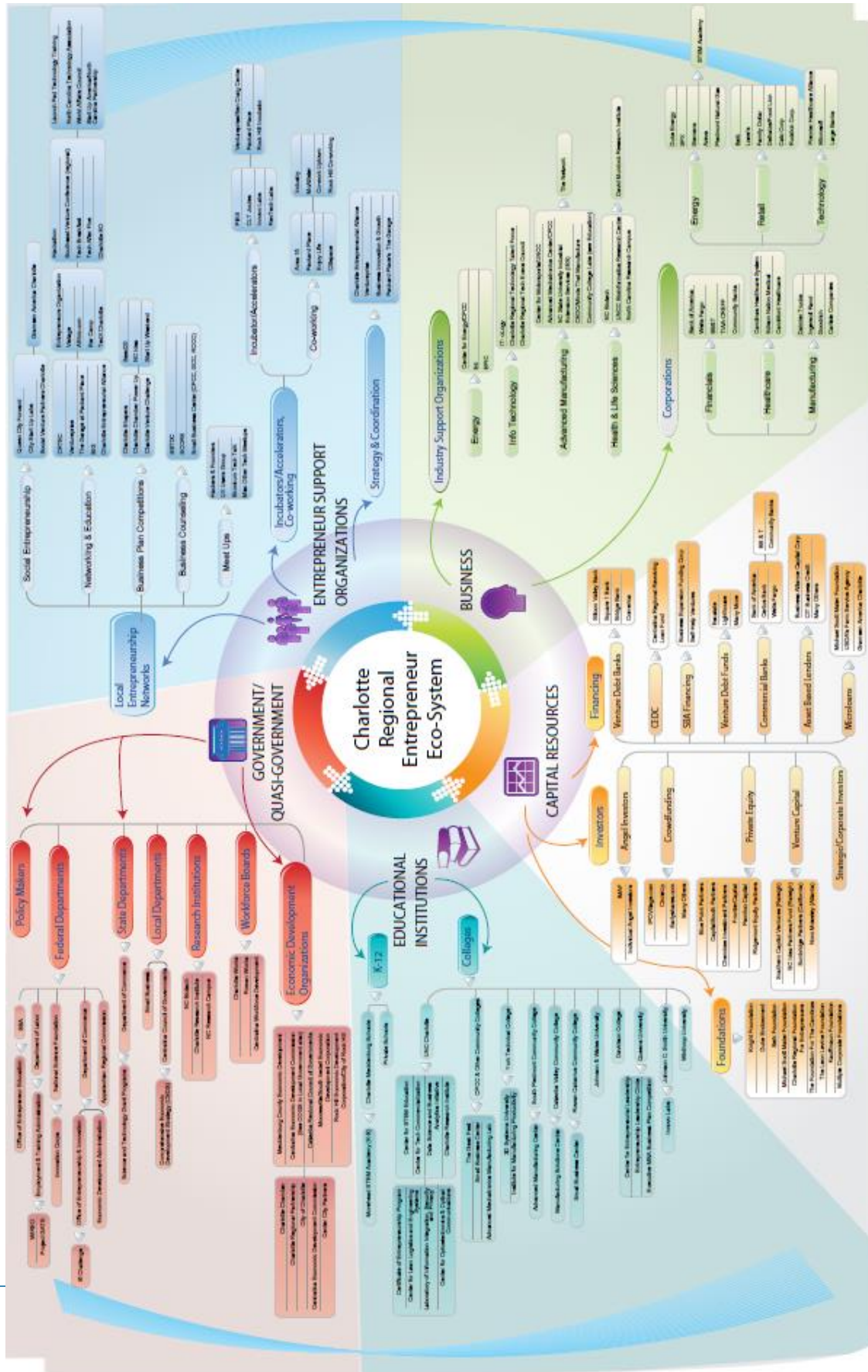
YOU ARE ONLY AS STRONG AS YOUR WEAKEST LINK

Although Charlotte has the basic ingredients for a strong entrepreneurial ecosystem, there needs to be more collaboration, openness and communication between members of the ecosystem to realize potential. If one organization is weak in knowledge or ability to connect others, it makes the whole community weak. Why? Because you never know where the next entrepreneur will enter the ecosystem, or where the next media opportunity will come from. A more unified way of accessing assets and connecting to people will improve the way the community functions and reacts to opportunity in this space.

Charlotte's Ecosystem Map



A more detailed view of the assets within the ecosystem is shown on the next page. A description of each asset and current ecosystem activity begins on page 21, and is color coded to the asset map.



A. Entrepreneur Support Organizations

➊ Strategy & Coordination of Networks

By their very nature, the growth of entrepreneurial networks is collaborative and organic. That is not to say that they do not require some coordination. Cities that have accelerated development of their entrepreneurial resources have emerged from non-organization to networks of organizations that provide highly effective programming and connections. Charlotte's model is not yet mature, but several organizations have taken on roles that are fostering communications and collaboration.

Business Innovation and Growth (BIG)

BIG is a nonprofit membership group that offers on-going programming for early stage and growth stage entrepreneurial companies. As a founding member of CEA, Terry Cox has gone beyond her traditional programming to bring new events to Charlotte that impact the whole region. BIG has also released two annual surveys (2012, 2013) on the health and growth of entrepreneurial companies in the Charlotte region. (Additional info listed in Networking and Education)

Charlotte Entrepreneurial Alliance (CEA)

This group, formed in 2011, is an informal collection of local entrepreneurs, academics and heads of entrepreneur support organizations. Started at the request of Dan Roselli of Packard Place, The Charlotte Chamber is involved, as is UNC Charlotte and members of city government. The goal, says Paul Wetenhall of UNCC's Ventureprise, a partner in the alliance, is to "rev up the entrepreneurial engine in Charlotte." It is this informal networking group, without a leader or a budget that has started the conversations and increased momentum within the entrepreneurial ecosystem. (Also listed in Networking and Education)

The Garage at Packard Place

The Garage is a nonprofit hub that gives entrepreneurs a free place downtown to meet, collaborate and learn. Dan Roselli's organization also works to bring additional programming, and he has coordinated within the region to bring in new accelerator programs and new players, such as IT-oLogy, to the ecosystem. (Additional info listed in Networking and Education)

Ventureprise

Ventureprise, a nonprofit affiliated with UNCC, has a plan to help facilitate and coordinate a regional entrepreneurial strategy, while offering business incubation, some programming and other services. Ventureprise has already taken the steps of aiding other ecosystem players in the organization of numerous business plan competitions and has sought to coordinate activities with other entities. (Additional info listed in Networking and Education)

➋ Local Entrepreneurship Networks

One of the most critical components of any entrepreneurial ecosystem is the personal networking and connections that take place through networking or learning groups. These groups are where entrepreneurs meet each other, mentors, advisors, consultants, funding partners, potential business partners, prospective employees, etc. Because these types of groups are the lifeblood for entrepreneurs, the City is seeing a rapid increase in networking options. Some are locally formed, and others are established as events or chapters related to regional or national organizations.

Social Entrepreneurship

CITY STARTUP LABS

City Startup Labs mission is to stimulate entrepreneurial activity and innovation within inner-city America. Their pilot Entrepreneurs Academy kicks off in early 3Q 2013, in collaboration with the Urban League of the Central Carolinas. The academy's primary focus is to teach entrepreneurship to young men of color, including ex-offenders, former gang members and other *marginalized young men*, who have the latent potential to be productive small business owners.

GRAMEEN AMERICA CHARLOTTE

Grameen is a non-profit that provides microloans, financial training and networking to women in poverty who open their own businesses. They have 300 participating members so far who have taken advantage of the program. So far \$2.3 million has been raised in the community, and their goal is to raise another \$700,000 in 2013.

QUEEN CITY FORWARD

Queen City Forward is a hub and incubator for social entrepreneurs, helping them scale high-impact social enterprises. Queen City Forward's mission is to create a robust cluster of innovation in the Charlotte region that spurs economic development, improves the lives of citizens, and drives a new model of sustainable growth. Queen City Forward has adapted a partnership model for their most recent class of businesses, is in the health sciences sector, and the program is sponsored by Ortho Carolina.

SOCIAL VENTURE PARTNERS (SVPC)

SVPC is a venture capital firm made up of partners that invest money, time and expertise in social initiatives and promising nonprofits that have a positive, measureable and sustainable impact on the community. They are also a sponsor of the SEED20 pitch competition. (See Business Plan Competitions)

Meetups

Meetup is the world's largest network of local meetings. It is very common for technical executives to establish regular meeting groups to discuss a particular technology. While there are literally hundreds of Meetup groups in Charlotte, the 20th largest and 24th largest, are The Charlotte Geeks and Charlotte Entrepreneurs Organization, with 1,077 and 1,062 members respectively. Meetups offer the ultimate in networking for entrepreneurs – they are open to anyone; they are focused on distinct subject matter that is of interest to the entrepreneur; they can see and trade messages with other members of the group; and they are free. These groups can be formal or informal, and anyone can set one up.

HACKERS & FOUNDERS

Designer and software engineer Tim Cheadle started this networking group in early 2011 because he wanted to meet others in the local startup world. Now more than 436 people have joined. The group holds monthly socials that are intentionally non-technical, Cheadle says, because the goal is to mix, mingle, and share ideas and resources.

SKOOKUM TECH TALK

This is a bi-weekly lunch, networking, and general tech discussion about Internet, technology and software development, hosted by Skookum Digital Works. There are 684 members.

UX USERS GROUP

Charlotte UX is for technologies interested in learning more about creating a great user interface experience. They meet monthly to discuss user experience design, information architecture, copywriting, analytics, usability studies, sketching and wireframing. They have 709 members.

MISCELLANEOUS OTHER TECHNOLOGY MEETUPS

Meetups, other than those listed above, mentioned most often by the entrepreneurs in this study (and their total membership) are Ruby (252), Startup Pitch Night (453) and Packard Place (920).

Networking & Education

BARCAMP

BarCamp bills itself as Charlotte's tech un-conference, an event where professionals from all industries come and pitch to talk about a topic they love, and people vote on what they would like to learn about.

BUSINESS INNOVATION AND GROWTH (BIG)

BIG is a nonprofit membership group that offers on-going programming for early stage and growth stage entrepreneurial companies. As a founding member of CEA, Terry Cox has gone beyond her traditional programming to bring new events to Charlotte that impact the whole region. In 2013 BIG will bring Silicon Valley's FailCon to the east coast for the first time, a one day conference for entrepreneurs, investors, developers and designers to study failure as a stepping stone to success.

CHARLOTTE ENTREPRENEURIAL ALLIANCE (CEA)

This informal networking group, without a leader or a budget, has started the conversations and increased momentum within the entrepreneurial ecosystem. Although it is invitation only, a wide body of members includes the Mayor, city officials, college reps, nonprofit support organizations, all with an interest in entrepreneurial development (also listed in Strategy and Coordination)

CHARLOTTE ENTREPRENEURS ORGANIZATION (EO)

EO is a global network of 8,000 business owners. Its mission is for entrepreneurs to learn from each other leading to greater business success. The Charlotte chapter's stated goal is to be an organization for the top 100 most influential entrepreneurs, with revenues over \$1 million to come together to grow their businesses.

CHARLOTTE REGIONAL TECHNOLOGY EXECUTIVES COUNCIL (CRTEC)

CRTEC is dedicated to continuous education for its members and the economic development of technology companies in the Charlotte region. The council resources are primarily volunteers comprised of executive level technology leaders in this region. CRTEC

is recognized as a 501(c)(6) non-profit organization. Annually they donate money for scholarships to UNC Charlotte's College of Computing and Informatics.

HACKATHON

A free team-based contest that allows coders, designers, analysts solve a business problem over two weeks and present solutions for prizes and recognition.

IGNITE

Twice per year, community members involved in technology, arts, communications, education, non-profit, the government sector and more, give five minute presentations on provocative subjects, meant to stir deeper thought or action in the audience.

LAUNCH PAD TECHNOLOGY TRAINING ACADEMY

This private academy, founded by local entrepreneurs will launch in summer 2013 focused on teaching software programming to students preparing for a career. The courses taught fill a need for businesses that cannot find availability of dot.net and ruby programmers. They will also teach a technology entrepreneurship course.

NORTH CAROLINA TECHNOLOGY ASSOCIATION (NCTA)

NCTA is a statewide membership association for the tech sector. Executive level events, policy making and focus on promoting K-20 educational initiatives and STEM curricula are their focus. NCTA averages about 9 or 10 events per year in Charlotte.

SOUTHEAST VENTURE CONFERENCE (REGIONAL)

In its seventh year, this gathering of venture capitalists, angel investors, early stage companies and entrepreneurs, higher education and business people come together for a series of discussions on business startups, investing and numerous funding pitches. The event was recruited by BIG to Charlotte in 2013 for the first time.

STARTUP AMERICA/NC PARTNERSHIP

The Startup America Partnership is a White House initiative, championed by private business leaders and ecosystem stakeholders, that launched to celebrate, inspire and accelerate high growth entrepreneurship. It is a public private effort to bring together the country's most innovative entrepreneurs, corporations, universities, foundations, and other leaders, working in concert with a wide range of federal agencies. Each state has created a state partnership and informal sharing networks have been set up. There are no designated leaders, as it is a completely voluntary and grassroots movement. In Charlotte, leadership from The Garage and Packard Place have been attending the state (NC Partnership) and regional meetings.

TEDX CHARLOTTE

TedX is a local self-organized nonprofit event that brings people together for a series of live talks. Provocative area thinkers are featured.

TECH BREAKFAST

This is a free event held the second Wednesday of every month at Packard Place. It is a "judged" pitch practice fostering feedback conversations. It is hosted and judged by local entrepreneurs/investors/service providers.

TECH AFTER FIVE (TA5)

Tech After Five is live professional networking social for tech professionals, entrepreneurs and the people who can help them. It is a regional effort held throughout the Carolinas and Georgia. The organization is also organizing a program called Catapult that introduces startups to investors. Although they hold a networking event in Charlotte in May, Ta5 and Catapult are heavily sponsored by University of South Carolina, Clemson University, Upstate Carolina Angel Network and Greenville's InnoVenture.

THE GARAGE AT PACKARD PLACE

The Garage is a nonprofit entity that exists to advance startup activity in the city of Charlotte. By hosting and supporting efforts such as Startup Weekend, Startup America, the Charlotte Entrepreneurs Alliance, RevTech Labs, CLT Joules, Queen City Forward, Pay CLT, and others, they have become the predominant hub and venue for entrepreneurial networking.

VENTUREPRISE

Ventureprise is nonprofit public-private partnership with UNC Charlotte that promotes venture development through incubation, programming, communications and regional planning. They also host a student incubator for UNC students, and are a primary sponsor of the Charlotte Venture Challenge business plan competition.

WORLD AFFAIRS COUNCIL

As a non-profit, non-partisan organization, the World Affairs Council is supported by private funding from individual and corporate member dues and contributions. As a regional center for education and discussion of world affairs, the Council provides leadership for global thinking, believing that a broad perspective is necessary for effective competition in the global economy. Although not an organization related to startup businesses, networking with international business members provides connections for entrepreneurs seeking to understand international commerce and trading issues.

Business Plan Competitions

Pitch competitions are another mainstay in the entrepreneur world. This is where entrepreneurs hone their chops and outline the viability and strength of their ideas for judges or investors who often award prize money to the most "investor-ready" companies. Charlotte Venture Challenge, formerly Five Ventures, has long been the main business plan competition in the region. In 2012 with a new name, new format and a purse of \$100,000 in prize money, the Venture Challenge attracted more local and out of town companies than ever before. NC Idea, a statewide entrepreneur's grant program run from Raleigh saw a 30% increase in Charlotte region companies applying for their program. And the Charlotte Chamber's Power Up Challenge, co-sponsored by Ventureprise, was a hit in 2012 and is underway with its 2013 competition, which will award \$25,000 to the winning small business or entrepreneur.

In 2012, Charlotte Shapers came to Charlotte with Hugh McColl as a board member. Focused on global social issues and youth unemployment, the Shapers are offering a business plan competition in 2013 for entrepreneurs 18 to 30 years old. Also, Seed20, a competition for startup social entrepreneurs recently held their first pitch competition for non-profit startups, and StartUp Weekend continues to increase momentum with its 5th competition since 2010.

Ventureprise, sponsor of the Charlotte Venture Challenge, has worked with organizers of nearly all the other business plan and pitch competitions in Charlotte to help them with best practices in how to set up and run an effective competition. Their guidance has also ensured that there is not significant overlap between competitions, but rather a differentiated focus for each competition.

Local Competitions

Competition	Year Started	Organizer	Eligible	Contestants	Format	Prize	Dates
Charlotte Venture Challenge	2001	UNC Charlotte & Ventureprise	Business In S.E. states <\$350k rev	117 total 18 finalists	Workshops, mentors, multi-round pitches	\$80k tot. \$25k winner	Jan-May
Startup Weekend	2010	Volunteers	New idea Group Selection	60+ people 7 pitches	Intensive hands-on weekend, leads to CVC	In kind services	Jan
Power Up Challenge	2012	Charlotte Chamber	Chamber members, Charlotte business, <\$1M rev, innovation	18 total 4 finalists	Pitches in 7 chapters, mentors	\$32k total \$25k winner	Feb-Nov
Shape Charlotte	2012	Charlotte Shapers	Business ideas 18-30 yr. old	27 ideas 6 finalists	Workshops & mentors	\$12,500	Sep-Nov
SEED20	2012	Social Venture Partners	Non-profit ideas	60 ideas 20 intensive	Coaching pitch prep, Alumni post event	\$45,000 total	Oct-Mar
CVC Pitch Day	2012	UNC Charlotte & Ventureprise	Business Ideas UNCC grad students, researchers, inventors network	10 teams	Corporate innovator pitches Lead in to CVC	\$5,000	Dec

Source: Ventureprise 2013

Business Counseling

SMALL BUSINESS AND TECHNOLOGY DEVELOPMENT CENTER (SBTDC)

With matching grants from the SBA, the University of North Carolina through the SBTDC provides free business coaching and advice, but no mentoring, on 15 campuses across the state. The SBTDC works mainly with founders of existing companies and Gazelles (high growth); only 15% of their clients would be considered start-ups. The SBTDC also connects with Angels and holds a capital access conference each year. The Charlotte SBTDC sees 800 companies from an eight county region each year.

THE SERVICE CORP OF RETIRED EXECUTIVES (SCORE)

SCORE is a non-profit group of volunteers that provide small businesses with mentoring and workshops around business formation and growth. In general, they work with traditional entrepreneurs more than high growth entrepreneurs.

➤ Incubators, Accelerators, Co-working

Incubators/Accelerators

Just as the number of networking groups and business competitions have grown tremendously, so have the physical working spaces and accompanying support programs. For nearly 25 years, Ventureprise's Ben Craig Center was the only business incubator in the region. In the past three years, the region has seen the addition of:

- Ventureprise Portal (new incubator and student incubator opening in January 2014)
- Packard Place (home to several incubators, accelerators, co-working and programs)
- Queen City Forward (social enterprise accelerator at Packard Place)
- RevTech Labs (technology accelerator at Packard Place)
- Innovo Labs (Johnson C. Smith University's incubator program at Packard Place)
- CLT Joules (energy accelerator at Packard Place)
- PiES (clean tech incubator in Davidson)
- Rock Hill incubator (will open this summer in alliance with Clemson University)

Co-working

Co-working facilities allow independents and startups to acquire inexpensive desk space and office amenities in a "group" setting. Co-working spaces include: Area 15, AKA Creative, Citispace, Co-work Uptown, Enjoy Life, Industry, McAllister, Packard Place and a new co-working space just opened in Rock Hill.

B. Business

📌 Corporations

Corporations can partner with entrepreneurial startups and work together to solve problems. There are hundreds of mid-and-large companies in the region in multiple vertical markets that can tap into the ecosystem of entrepreneurs and innovators. High potential corporate collaborators are shown below but do not represent a comprehensive list for the area. Just because they are part of the ecosystem, does not mean they have been actively participating with startup companies. They are shown as potential collaborators, sponsors and funders of ecosystem programs that can benefit themselves as well as the entrepreneurs in the community.

Energy Companies

The energy sector has over 240 companies in the region, providing 27,000 jobs. Companies like Duke Energy and SPX have a focus on innovation. Siemens founded and sponsors the STEM Academy, an initiative that promotes science, technology and math in K-12 schools. The industry has also been aggressive about creating workforce training programs in partnership with colleges and universities.

Financial Services Corporations

Bank of America and Wells Fargo both run innovation programs where they work with early stage companies. Bank of America has two showcase events per year - one in San Francisco and one in London. They bring in early stage companies to shop for solutions they could incorporate into their business, as well as identify potential investment banking candidates. Spotlight companies are sourced globally, but Charlotte companies are typically not present. Other potential collaboration partners are Wells Fargo, TIAA-CREF, Ally Bank and BB&T.

Healthcare Corporations

Charlotte has a strong healthcare industry with the presence of Carolina Healthcare System, CaroMont Healthcare, Novant, Ortho Carolinas and others. Edison Nation Medical, formed in 2012 as a joint venture between Enventys and Carolinas Healthcare System, is raising funds to innovate, license and develop new solutions and products for the industry. Although headquartered in Charlotte, all of their development activity is currently taking place elsewhere.

One collaborative example in this sector is that Ortho Carolina has sponsored the Spring 2013 Queen City Forward Accelerator for healthcare related social enterprise startups.

Manufacturing Firms

The Charlotte-region offers the largest manufacturing employment in the Carolinas. Among the leading employers are Daimler Trucks, Goodrich Corp., Carlisle Cos. Inc. and Ingersoll Rand, which have an innovation practice.

Retailers

Charlotte boasts a strong corporate retail environment as home to Delhaize America (Food Lion), Lowe's Cos. Inc., Ruddick Corp. (Harris Teeter), Belk Inc., Family Dollar Stores Inc. and Cato Corp.

Belk recently created a significant partnership with UNC Charlotte for promoting business innovation and business analytics.

Technology Companies

Technology is an enabler of many industries in Charlotte. The banks and large financial services companies are the area's largest technology employers. (Although the number of Bank of America's 15,000 local employees who are in technology is unknown, as a company, they employ 70,000 worldwide in its Global Technology & Operations division. That alone ranks as one of the world's largest technology firms.)

Premier Healthcare Alliance is one of the largest, most sophisticated healthcare IT companies in the country. Software giant Microsoft employs over 1,000 on its Charlotte campus.

➤ Industry Cluster Support Organizations

Economic clusters create opportunity to focus on emerging ideas. Identifying gaps in the cluster offer opportunities for developing training, leadership and innovation that strengthens the overall capabilities of the region. Furthermore, aligning universities/colleges, research institutes and state and local government to support a cluster can help "support start-up efforts by professors and students through mentorship, entrepreneurial education and financing."²⁵ Below are some of the most prominent clusters in Charlotte's ecosystem.

Energy cluster

The energy industry arguably has the strongest support infrastructure with a combination of industry focused training centers and research institutes amid the Center for Energy at CPCC and UNCC's EPIC. With 240 energy companies employing 27,000 people in the region, the City boasts energy powerhouses Duke, Piedmont Natural Gas, Areva and Siemens.

E4

Non-profit energy consortium E4 was formed in late 2012. E4 is a policy, research and leadership training consortium "whose focus is on innovation," says Scott Carlsberg, the director. The industry banded together and took charge, leveraging their size and willingness to collaborate to update the skills and leadership training provided by the institutions of higher learning in the area.

CENTER FOR ENERGY/CPCC

CPCC responded immediately to the training needs of the energy industry by forming the Center for Energy in January 2013. CPCC brought a known executive out of retirement to head the program and started an Executive Energy Leadership Group to address the talent pipeline. CPCC also assembled their Deans of STEM education, Applied Technology, Workforce Development and Corporate Learning to personally visit and survey 186 Mecklenburg energy companies. They are also working to bring education regarding career paths within the industry to high schools and middle schools, while several of the large companies are planning career days in the public schools.

ENERGY PRODUCTION AND INFRASTRUCTURE CENTER (EPIC)/UNC CHARLOTTE

The University of North Carolina at Charlotte's Lee College of Engineering is expanding its energy-related curriculum, research and laboratory facilities through industry collaboration to meet the demands in the energy field. EPIC will bring together industry, students, faculty and

²⁵ Clusters of Innovation: Regional Foundations of U.S. Competitiveness, Michael E. Porter of Harvard University, 2001

research experts in disciplines of electrical and computer, civil and environmental and mechanical engineering, all under one group.

The mission of EPIC is to enhance the available technical workforce, advance technology and facilitate the strategic industry-university collaboration for the global energy industry while supporting the Carolinas' economic and energy security development.

Health & Life Sciences cluster

The Life Sciences cluster is broad and encompasses companies in pharmaceuticals, research, testing, labs, agriculture, and chemicals. Also, the Charlotte region has a significant presence in the medical device manufacturing industry with firms employing over 10,000 workers. Below are the ecosystem's industry cluster support organizations for health and life sciences.

NC BIOTECH

NC Biotech was established more than 25 years ago to make the connections, build cooperation and provide the support to grow the biotechnology industry. NC Biotech provides support of biotechnology research, business, education and strategic policy statewide. Their mission is:

- Serving as the statewide hub of life-science commercialization
- Bootstrapping companies and new business sectors with loans and other support
- Funding key faculty recruitment and commercially promising research
- Linking academic, business, civic and policy leaders
- Supporting workforce development activities
- Providing curriculum development and workshops for educators

The General Assembly funds the NC Biotechnology Center as a private, non-profit organization. Although headquartered in Research Triangle Park, Greater Charlotte is one of five regional offices. At this time, the Governor has proposed significant cuts to this institution.

NORTH CAROLINA RESEARCH CAMPUS

The North Carolina Research Campus is a public-private research center that is home to corporations, universities and healthcare organizations that are committed to improving human health, nutrition and agriculture through the study of plants, plant-based foods and the health-promoting bioactive compounds they contain. The goal is to find new means to prevent and treat diseases and to support human health and longevity through natural means and agricultural crops nutritionally-enhanced through traditional breeding methods. The 350-acre campus is located just north of Charlotte, NC in the city of Kannapolis.

David Murdock, CEO of Dole Foods, has invested over \$620 million in the NCRC and has built over 800,000 square feet of state-of-the-art laboratories and facilities to host academic and industry scientists. These include researchers from seven campuses of the University of North Carolina system, Duke University and Rowan Cabarrus Community College. In addition, companies such as Dole, LabCorp, Monsanto and General Mills, as well as start-up and small companies are all co-located on the campus.

DAVID MURDOCK RESEARCH INSTITUTE

DHRMI has adopted a multidisciplinary, integrated approach to food and health research that includes genomics, analytical sciences, cellular sciences and bioinformatics.

UNC CHARLOTTE'S BIOINFORMATICS RESEARCH CENTER (BRC)

This 75,000 square foot facility houses labs and core facilities for research of gene expression, proteomics, microscopy, crystallography and computing.

Information Technology cluster

The region's IT competencies are concentrated in the financial services, healthcare and logistics industries. The City ranked as a top 10 location in 2012 for job postings for Microsoft developer and project managers, ahead of Boston, New York and San Francisco, according to Experis, the technology subsidiary of Manpower.

Centralina Economic Development's recent "Prosperity for Greater Charlotte" project identified computer and software occupations as experiencing a shortage in the region's workforce. These shortages can impact the needs of high growth and emerging industries. Research firm Gartner projects that banking, insurance, healthcare, retail and transportation are expected to outpace all other industries in IT investments in the next several years. Each of these is among the sweet spots for Charlotte's economy.

Even with an acknowledged workforce shortage and lots of demand looming, the technology industry in Charlotte lacks the breadth of large and well-funded support organizations that the energy and manufacturing segments enjoy. A grass roots movement started in February 2012 oriented toward talent development in IT. Focus groups were held with the Chamber, large and small businesses, the Mayor and others.

CHARLOTTE REGIONAL TECHNOLOGY TALENT TASK FORCE

From the grass roots movement mentioned above, the Charlotte Regional Technology Talent Task Force was formed. The mission of the Task Force is to foster and grow the number of technology professionals in the Charlotte area. This is a loosely formed volunteer organization with no focused leadership and no budget. They are represented by a broad spectrum of people, from large corporations to small business, technology startups and established technology companies, as well as representatives from the education community. The Task Force has established three goals: 1) Attract and retain professionals, 2) Train and re-train existing professionals, 3) Educate a new work force.

Currently the Task Force's education and training initiatives are supported by Charlotte Mecklenburg Schools, CPCC and UNC Charlotte College of Computing and Informatics.

IT-OLOGY

Dan Roselli introduced IT-oLogY to the city's leadership, and in December 2012, they launched a Charlotte chapter with Kay Read as the area director. There are currently six cities participating nationally and 5-10 others in the works. IT-oLogY promotes education on the occupations in IT, workforce readiness in young adults and training and leadership to keep IT workforces current.

The organization is supported through seed money and grants. Funding an executive director is a shared cost between the organization headquarters and the local community. The current participation in the Charlotte region is 34 organizations, including Peak 10, AvidXchange, UNC Charlotte, Johnson C. Smith, Foundation For The Carolinas and the Charlotte Business Journal. A steering committee is being put into place that will execute on initiatives. A needs analysis is also conducted for each member firm.

IT-ology is already part of a \$5M grant at CPCC to train displaced workers.

CHARLOTTE REGIONAL TECH EXECUTIVES COUNCIL

CRTEC facilitates success of its members through education and collaboration. They support continued growth of business in the community by utilizing the collective IT executive base to support higher education and entrepreneurs.

As the longest established forum for networking and collaboration between technology executives, activities focus on deliberation on key technology issues facing Charlotte's executive community and promote social networking within the ranks.

Advanced Manufacturing cluster

The non-profit Centralina Economic Development Commission (CEDC) identified the adoption of advanced manufacturing technologies as a priority for the region. Currently over 2,700 manufacturing firms exist, the largest concentration in the state.

In 2007 the CEDC released a study showing the region's manufacturing industry as the best opportunity for growth and development. For Turning Point Advisor's current analysis of the ecosystem, UNC Charlotte professor Deborah Strumsky, evaluated the Charlotte region empirically, and found that as of 2010, advanced manufacturing again shows up as the region's most dominantly competitive growth opportunity segment. This confirms the previous research that advanced manufacturing is the leading cluster for industry development and job growth potential. Below are the ecosystem's industry cluster support organizations for manufacturing.

CENTER FOR MOTORSPORTS

The motorsports industry in Charlotte is supported by academic-based research assets that include the North Carolina Motorsports and Automotive Research Center at UNC Charlotte. Racing teams, a specialized labor pool, a well-developed supplier chain and some 700 businesses make up the motorsports industry and employ more than 20,000 people in the region. In addition to racing teams based here, the region supports a number of other motorsports-related enterprises.

NC STATE UNIVERSITY INDUSTRIAL EXTENSION SERVICES (IES)

IES provides education and technical assistance to businesses and industries to help them stay abreast of the latest technologies and best manufacturing practices. The end result is increased operational efficiency, productivity, quality and profits. Assistance ranges from business solutions and environmental and safety management to lean enterprise and on-site peak performance training. The Charlotte region holds three regional offices of IES. (See Appendix)

CEDC/ MINDS THAT MANUFACTURE

A grant supported initiative of the Economic Development Administration and equity partners, the Centralina Economic Development Commission (CEDC) formed this network of members supporting ideas, innovative talent and resources for advanced manufacturing.

C. Capital Resources

➤ Investors

Angel Investors

Angel investors are affluent individuals that provide start-up capital to an entrepreneur in exchange for an equity stake in their business. Angel investing is among the most prevalent investment option entrepreneurs have access to in the region. There are numerous individual angels that are active, but only Inception Micro Angel Fund (IMAF) is actively making investments, while Wed3 and Charlotte Angel Partners have essentially disbanded.

Crowdfunding

Crowdfunding, as it relates to business investing, is a collective effort of individuals and lenders to invest small equity amounts in a company. President Obama's JOBS Act removes a ban against public solicitation for private companies raising funds. The JOBS Act allows accredited investors to invest through a crowdfunding campaign, however the SEC has yet to promulgate the rules governing equity based crowdfunding.

In business financing, there is the "debt based" model that allows individual or institutional lenders to invest for interest payments on top of capital repayments. This source is normally used by existing businesses that are able to demonstrate creditworthiness.

"Equity based" is the model of crowdfunding garnering most of the attention in the startup space. Companies sell small shares for startup capital that can increase as the value of the business increases.

There are dozens of platforms for debt or equity based crowd funding such as IPOVillage.com, CircleUp, Earlyshares.com, MicroVentures.com, AngelList, bolstr, secondmarket and SEEDUPS.

Crowdfunding will change the opportunity for financing that is available to companies, although no one is really sure at this point what a mature crowdfunding environment will look like. Crowdfunding will likely provide gap financing when other means are not available and may even supplement VC money to help companies raise capital faster.²⁶

Private Equity

Private equity groups are investors and funds that make investments directly into private companies or conduct buyouts of public companies in order to make them privately held. Private equity firms often invest in existing or mature companies to provide growth capital, or to take a majority ownership position as an investment. Charlotte is rich in private equity firms which include Blue Point Partners, CapitalSouth Partners, Cherokee Investment Partners, FrontierCapital, Pamlico Capital and Ridgemon Equity Partners, and more.

²⁶ How Venture Capital And Crowdfunding Can Coexist, Marielle Segarra, CFO.com, April 24, 2013

Strategic/Corporate Investors

Whether to fill in R&D gaps or keep abreast of cutting edge technologies, midsize-and-large corporations are putting their stockpiles of cash to work by investing in early stage companies. See page 12 to understand the benefits of including corporations in the entrepreneurial ecosystem.

Venture Capital

This is the largest gap in the Charlotte region's ecosystem according to some interviewees. Terry Cox of BIG states that there is "almost no institutional money in the area, and the situation is worse than it was five years ago." The Wakefield Group, one of the few VCs in the area, is now inactive. Frontier Capital, formerly a VC, is now in private equity. Only Southern Capitol Ventures and seed fund NC Idea Partners Fund, both from Raleigh, are doing any Charlotte investing. A partner from Sunbridge Partners in California has recently moved to Charlotte. Another VC, Don Rainey, of Grotech Ventures in Washington D.C. is moving to the region in June.

To address this severe lack of venture funding, a group of Charlotte community and State leaders is working together to raise a VC fund that will not only invest in state and local startups, but it will also, in concept, make funds available to support the entrepreneurial ecosystem. This unique innovation to the VC model is a way of developing continuing financial support for the entrepreneurial ecosystem.

This VC fund, called the Cornerstone Fund, is being developed in partnership with the Blackstone Entrepreneurial Network and Foundation For The Carolinas. It is estimated that the fund will be launched in late 2013 with approximately \$40 million in assets. The Cornerstone Fund will be a North Carolina state-wide fund and will focus investments in the Charlotte region, the Triangle and the Triad initially.

❶ Financing

Asset Based Lenders

There are many finance companies that do asset based lending that entrepreneurs can tap. Funds can be available as loans or lines of credit collateralized by assets, receivables or purchase orders. Local asset based lenders include: BBT, Business Alliance Capital Corporation, CIT Business Credit, HSBC Business Credit, National Canada Finance, and many others.

Commercial Banks

Large commercial banks (B of A, Wells Fargo, BB&T), Community Banks, and specialized business banks (like Certus Bank) are available for traditional business lending.

Centralina Economic Development Commission Revolving Loan Fund

Provides small business and entrepreneurs with gap financing required to start or expand their business. Loans are typically made at interest rates that are at or below market to small business; borrowers must demonstrate credit was not otherwise available to them. This fund is available to new/expanding, private, for profit business and industrial companies located or willing to locate within the Centralina Council of Governments nine county region. Priority is given to companies using advanced manufacturing technologies.

Microloans

USDA's Farm Service Agency makes microloans to small and family farms of up to \$35,000.

Grameen America Charlotte makes microloans of \$1500 available to women in poverty for starting a new business.

SBA Financing

The SBA oversees the Small Business Investment Company (SBIC) Program which works with private investment funds to provide growth capital to US small business. The licensed SBIC companies are private, for profit finance companies that make independent investment decisions. The list of North Carolina companies can be found in the SBIC Directory at www.sba.gov

The SBA also makes general small business loans under program 7(a) and microloan guarantees of up to \$50,000 through accredited intermediaries. For Charlotte, Self Help Ventures is available as a provider of SBA backed microloans.

The SBA's 504 Loan program, available through the Business Expansion Funding Corp. in Charlotte is available for companies who want to borrow against owner occupied real estate.

Venture Banks

Of the 8,000 commercial banks in the U.S., only an infinitesimal subset is active in the venture debt market. These banks provide funding and banking services to emerging growth companies. Those include: Silicon Valley Bank, Square 1 Bank, Bridge Bank and Comerica.²⁷

Venture Debt Funds

These non-bank debt financing entities are an alternate to Venture Banks. While this is more expensive form of capital than the banks, there are a wider variety of players in this space. To name a few: MMV, Escalate, Hercules, Vencore Capital, Oxford and Lighthouse.

➤ Foundations

Belk Foundation

The Belk Foundation invests in schools and organizations within the Charlotte area (and two outside geographic markets) that work aggressively in youth education, from kindergarten through college.

Duke Endowment

As one of the nation's largest 501(c)(3) private foundations, 83% of funding goes to grant making. Two focus areas for the Endowment are healthcare and higher education. Duke Endowment works through select colleges and universities (Davidson College, Duke University, Furman University and Johnson C. Smith University) in accomplishing their goals of improving education and student access. They also support initiatives in improving healthcare and quality of life.

Foundation For The Carolinas (FFTC)

Established as a community foundation, Foundation For The Carolinas is a nonprofit corporation created by and for the people of the Carolinas. Three program areas help manage charitable programs for individuals and families, nonprofits and corporations. They have 13 regional affiliates that provide grants in North Carolina and South Carolina, in a region that closely mirrors the geographic coverage of the Charlotte Regional Partnership.

²⁷ Venturebanker, Understanding Venture Debt, Zack Mansfield, March 1, 2010.

CHARLOTTE REGIONAL FUND FOR ENTREPRENEURS (CRFE)

Managed by FFTC, The CRFE's goal is to support high growth entrepreneurship and enhance the high growth ecosystem in the Charlotte region. The CRFE's objective is to provide grant funding to qualified non-profit organizations and initiatives. The CRFE Fund will be a \$500,000 contribution from the city, matched by donations from the private sector. The CRFE Fund will back projects that address gaps in the entrepreneurial ecosystem.

Kauffman Foundation

A national foundation, Kauffman is among the largest foundations in the United States with an asset base of approximately \$2 billion. They focus their grant making and operations on two areas: education and entrepreneurship.

The Foundation develops and supports numerous efforts that provide entrepreneurs with the knowledge, skills and networks they need to start and grow businesses. Kauffman Labs for Enterprise Creation, for example, was specifically established as a teaching and training entity to accelerate the creation and success of new, scalable businesses. Other Foundation backed programs, including Kauffman FastTrac, Startup Weekend, entrepreneurship.org, 1 Million Cups, Ice House Entrepreneurship Program and Global Scholars, contribute directly to achieving their objectives. By providing access to education and disseminating practical, needed information, the Foundation helps individuals create their own roadmaps for entrepreneurial success.

The Foundation also supports entrepreneurship networking programs for underserved populations, such as women and minorities, and for innovators in science and technology. They support the early-stage startup process through their online networking and business competition site, iStart.

Knight Foundation

The Knight Foundation funds programs in arts, journalism, media and community engagement. The Knight Foundation was instrumental in financially backing the establishment of northeast Ohio's Jumpstart venture development program. Other active public private partnerships they have formed and helped fund are programs in digital literacy for the community and technology in the classroom.

The Leon Levine Foundation

The Leon Levine Foundation seeks to create permanent, measurable, life-changing impact by investing in organizations with highly effective leadership, a track record of success and a focus on sustainability. Focus areas that may particularly relate to entrepreneurship are healthcare and education.

Michael Scott Mater Foundation

The Michael Scott Mater Foundation was founded in 2008 by veterans who believe the key to affecting change is to build the capacity of individuals and empower them to improve and take control of their lives. The organization is founded on the principles of giving individuals the tools and education they need to help themselves. The Foundation provides financial resources, work force training, cross cultural exchanges, and sustainable solutions to real world challenges.

Multiple Corporate Foundations

There are numerous other foundations in the region that might could potentially contribute to social initiatives within the region.

D. Educational Institutions

➤ Primary and Secondary Schools

Charlotte Mecklenburg Schools

MOREHEAD STEM ACADEMY (K-8)

The Morehead STEM Academy is the district's only K-8 science, technology, engineering and math magnet school. Students are admitted by lottery.

PHILLIP O. BERRY ACADEMY OF TECHNOLOGY (9-12)

This is a full magnet school offering STEM programs in Engineering Technology, Information Technology and Medical & Biotechnology. Students are admitted by lottery.

BEVERLY WOODS ELEMENTARY

This school offers an after-school enrichment club, South Park Engineering and Robotics Club, which focuses on STEM using materials from Lego Education. Several other elementary and middle schools have recently started their own programs.

Private Schools

No private schools offer specific STEM curricula, but several offer AP science and math.

➤ Higher Educational Institutions

Government support of R&D along with the active role of universities in applied sciences, technology, and engineering foster a symbiotic relationship that stimulates entrepreneurship across a wide spectrum of business and industry.²⁸ Below are programs of note to the ecosystem.

UNC Charlotte

CENTER FOR STEM EDUCATION

The mission of the Center for Science, Technology, Engineering, and Mathematics Education is to promote a regional vision for STEM education and outreach, to increase capacity in leadership, and to facilitate collaborative partnerships for addressing STEM priorities for PreK-16. The center also supports regional science and engineering fairs for school aged children.

CENTER FOR TECH COMMERCIALIZATION

UNC Charlotte's Office of Technology Transfer (OTT) identifies, protects, and commercializes university research and intellectual property. The office works closely with faculty, students, and staff to help bring new technology and innovation to market.

DATA SCIENCE AND BUSINESS ANALYTICS INITIATIVE

The Data Science and Business Analytics Initiative (DSBA) at UNC Charlotte is proposed as an industry-university-state partnership, led by the College of Computing and Informatics

²⁸ What Dries Innovativeness? Entrepreneurship and Regional Clustering in Three Biotechnology Hotspots, Jerry Haar, Maija Renko and Alan Carsrud, 2006, p. 269-290

and the Belk College of Business, with strategic input from the College of Health and Human Services and other academic departments.

DSBA provides an effective solution to the challenge of "Big Data" by creating education, training and research programs in data science and analytics integrated with business and industry expertise.

THE CENTER FOR LEAN LOGISTICS AND ENGINEERING SYSTEMS

The Center provides custom training solutions that can significantly affect a company's performance. The center's expertise is in lean system design, planning and analysis, and quality management. The center is striving to be the premier logistics and engineered systems design, analysis and implementation portal for supply chain, logistics, and engineering professionals from the industry, the government agencies, and the academia.

LABORATORY OF INFORMATION INTEGRATION, SECURITY AND PRIVACY

Designated by the NSA as a Center of Academic Excellence in information assurance education, the Laboratory of Information Integration, Security and Privacy (LIISP); the center provides innovative educational programs, research and development in the areas of information integration, security, and privacy.

CENTER FOR OPTOELECTRONICS AND OPTICAL COMMUNICATIONS

General Dynamics, Northrop Grumman and Digital Optics are among the companies forming research partnerships with the Center for Optoelectronics and Optical Communications. The Center's Technical focus is in advancing the intergradient of optical and electronic functionality for photonic devices and systems, creating better sensors and communications modules as well as developing methods for their low-cost manufacturing.

Charlotte Research Institute (CRI)

The CRI is a partnership between UNC Charlotte and the corporate and entrepreneurial communities of the region. Charlotte Research Institute is the portal for business-university partnerships at UNC Charlotte. Regionally, CRI works with the community and the campus to accelerate technology commercialization, and champions the growth of entrepreneurial ventures. Globally, CRI develops intellectual capital through collaborations with industry, government and academia.

Charlotte Research Institute's goal is to enhance the technology infrastructure of the Charlotte region by facilitating the development of intellectual capital through global collaboration with industry, academia and government to create a top-tier interdisciplinary technology research community.

New business and research ventures, university partnerships with regional and national enterprises, and CRI spin-off companies all draw research and businesses to the region and spur economic growth.

Science and engineering ventures at CRI are driven through the university's research centers in Precision Metrology, Visualization, and Optoelectronics. CRI's research vision continues to grow with emerging research initiatives that include bioinformatics, biomedical engineering systems, energy production and infrastructure, information security, motorsports and automotive engineering, nanoscale science, and translational research. With state-of-art facilities on the

Charlotte Research Institute Campus and at the North Carolina Research Campus in Kannapolis, CRI helps companies initiate new partnerships at UNC Charlotte and offers a variety of opportunities to engage talented faculty and make use of specialized resources available at UNC Charlotte.

Central Piedmont Community College

THE GEEK FEST

An annual festival for students and the community at large highlighting creative innovations in technology, media, and industry

SMALL BUSINESS CENTER

CPCC Institute for Entrepreneurship has changed its name to the Small Business Center (SBC) to more clearly link to the statewide Small Business Center Network, a community college-funded initiative with a vision to foster and support entrepreneurship, small business and economic development in local communities across the state.

The Center offers services to local pre-venture, startup, existing and nonprofit businesses in the area, including no-cost workshops, comprehensive training, networking events and confidential business counseling helping 2,500 startup entrepreneurs and small business each year.

ADVANCED MECHATRONICS MANUFACTURING LAB

The combination of mechanical, electrical and computer training was devised to prepare people for high-paying advanced-manufacturing jobs.

Gaston College East Campus and Textile Technology Center

Forming research partnerships with industry and the community college system, the Gaston College East Campus and Textile Technology Center is dedicated to developing a world-class workforce for the North Carolina textile industry through new and sample product development, product testing, training and consulting. Six on-site laboratories are stocked with modern textile equipment including a “mini-manufacturing site” yarn production lab, a knitting and weaving lab, a dyeing and finishing mini-plant, and labs for chemical and physical testing.

York Technical College

INSTITUTE FOR MANUFACTURING PRODUCTIVITY

A cooperative effort between York Technical College, Okuma, Charmilles, and other manufacturing partners, the Institute for Manufacturing Productivity (IMP) is a 20,000 square-foot training facility located on the York Tech campus that trains local industry in identifying in-house manufacturing, processes and operational improvements. Manufactures that have been assisted by the IMP include General Motors, Harley Davidson, Ingersoll-Rand, John Deer and Siemens.

3D SYSTEMS UNIVERSITY

York Technical College’s new 17,00 square-foot training center, called, operates in partnership with 3D Systems Corporation to train customers from around the world in the use of the company’s innovative products, services and technologies. The training center also serves as a showcase for the digital manufacturing technologies and as a place to

demonstrate how 3D Systems' technologies are changing the world of manufacturing in almost every industry.

South Piedmont Community College

ADVANCED MANUFACTURING CENTER

South Piedmont Community College 3500 square foot Advanced Manufacturing Center features two Hass CNC lathes, two Hass CNC Mills, three Welding stations, three manual mills, three manual lathes, six CNC mill/lathes simulators and a computer lab. Foundation course will include Applied Math, Measurement, Safety and Shop operation, Job Skills, Bronze WorkKey CRC, and Blueprint Reading. Career Building Courses include Metal / Metallurgy, Quality Control, Welding, Manual Mill, Manual Lathe, CNC Programming-Simulation, CNC Mill/Lathe Operation and Solid Works.

Catawba Valley Community College

MANUFACTURING SOLUTIONS CENTER

The Manufacturing Solutions Center (MSC) is experienced in a multitude of different areas and performs product testing for over 200 different manufacturers, retailers and brands. The MSC Testing Center invites customer interaction and has earned a reputation for strict confidentiality along with fast, accurate results using industry approved methods. They are a corporate member of the American Association of Textile Chemists and Colorists (AATCC), and a member of American Society of Testing and Materials (ASTM), and are capable of many industry standard test methods.

Rowan Cabarrus Community College

SMALL BUSINESS CENTER

The College's Small Business Resources provides Concord, Kannapolis, Salisbury and surrounding towns provides businesses with education and resources. Ventureprise is a speaker at their Annual Resource Fair.

Davidson College

The Entrepreneurship Initiative is a campus wide collaborative project aimed to raise awareness of entrepreneurship, and connect and enable community entrepreneurs. The Initiative, run from the President's office, does not make entrepreneurship available as a program of study, but rather is meant to make it available to complement students in every field of study. The Initiative also connects the College to the greater region's entrepreneurial networks.

Queens University

The McColl School of Business at Queens established the Center for Entrepreneurial Leadership provides resources and mentoring for students and the emerging class of small business owners. The school's Entrepreneurship Leadership Circle, made up of business leaders within the region, provides student scholarships, half-day seminars on entrepreneurship and quarterly luncheons. Annually, the Executive MBA Business Plan Competition is held at the School of Business. Here the students pitch a business plan to a panel of Entrepreneurship Leadership Circle judges made up of prominent business people.

[Johnson C. Smith University](#)

The University's Innovo Labs are a small business incubator and think tank laboratory run by the Center of Excellence for Diversity Workforce and Small Business Department at the Smith Institute for Applied Research. The University also runs a Women's Entrepreneurship Program with workshops and seminars.

[Johnson & Wales](#)

Johnson and Wales has begun offering a class in entrepreneurship to their business students.

[Winthrop University](#)

Rock Hill's university offers a Bachelor of Science in Business Administration with a minor in Entrepreneurship.

E. Government and Quasi-Governmental Agencies

Only those departmental programs that are potentially accessible by entrepreneur-related or education related programs that could impact the regional ecosystem are covered within the scope of this project. Just because a program is listed here as being accessible to local ecosystems or entrepreneurs, does not mean that area entities are participating in them.

🔗 Federal Departments

Small Business Administration (SBA)

OFFICE OF ENTREPRENEUR EDUCATION

The Office of Entrepreneurship Education's (OEE) mission is to provide entrepreneurial information and education, resources and tools to help small businesses succeed. The office is an integral component of Entrepreneurial Development's network of training and counseling services. OEE develops and promotes innovative resources for small business owners and prospective entrepreneurs. These resources are designed to assist in the start-up, management and growth of small businesses. Such resources include specialized training sessions, distance learning, written materials, websites, and other means of providing business development, business management and business growth information. The SBA also manages the Service Corp of Retired Executives (SCORE) coaching and mentoring program.

Department of Labor

EMPLOYMENT & TRAINING ADMINISTRATION

The mission is to contribute to the more efficient functioning of the U.S. labor market by providing high quality job training, employment, labor market information, and income maintenance services primarily through state and local workforce development systems.

National Science Foundation

INNOVATION CORPS (I-CORPS)

I-Corps are new public-private partnerships to help develop scientific and engineering discoveries into useful technologies. The program connects academic researchers, entrepreneurs and business communities. I Corps Nodes, chosen through annual grant proposals, will provide training, tools, resources and longer term research projects over a 2-3 year timeframe. These federal grants will help grow the innovation ecosystems for the regions. Charlotte does not have any of these grants.

Department of Commerce

OFFICE OF ENTREPRENEURSHIP & INNOVATION

16 CHALLENGE

A multiagency is a competition that funds regional collaborations to bring innovative, groundbreaking ideas from the lab to the marketplace, creating new startups and jobs. Charlotte has not won any of these grants.

Appalachian Regional Commission

The Appalachian Regional Commission (ARC) is a regional economic development agency that represents a partnership of federal, state, and local government. Established by an act of Congress in 1965, ARC is composed of the governors of the 13 Appalachian states and a federal

co-chair, who is appointed by the president. Local participation is provided through multi-county local development districts.

Each year ARC provides funding for several hundred projects in the Appalachian Region, in areas such as business development, education and job training, telecommunications, infrastructure, community development, housing, and transportation. These projects create thousands of new jobs; improve local water and sewer systems; increase school readiness; expand access to health care; assist local communities with strategic planning; and provide technical and managerial assistance to emerging businesses.

➤ State Departments

N.C. Department of Commerce

SCIENCE & TECHNOLOGY GRANT PROGRAM

The Office of Science & Technology supports communities and business through expanding tech infrastructure, enhancing innovation and fostering an entrepreneurial economy.

THE ONE SMALL BUSINESS PROGRAM (SBIR/STTR GRANTS)

A matching grant up to \$100,000 for companies that have been awarded federal Small business Innovation Research and Small Business Technology Transfer grants. These grants help early stage tech commercialization and development for small business.

➤ Regional-Local Departments

City of Charlotte

The City's Small Business Opportunity (SBO) Program is race and gender neutral program that ensures small business participation in contracting and subcontracting opportunities with the City of Charlotte. Furthermore the City has created a Small Business Strategy and manages the CharlotteBusinessResources.com website which is a one-stop portal for small business information and events.

Centralina Council of Governments

The CCOG is a voluntary organization serving the region. The CCOG administers state and federal grants in economic development, workforce development and planning.

Catawba Regional Council of Governments

CROG is an association of South Carolinas governments in Chester, Union, Lancaster and York counties. The intergovernmental program among other things provides economic development, workforce investment services, as well as administering Small Business loans and grants provided by the US Economic Development Agency.

➤ Research Institutions

Charlotte Research Institute

(See Colleges -UNC Charlotte)

NC Biotech

(See Industry Cluster Support Organizations- Health & Life Sciences)

NC Research Campus

(See Industry Cluster Support Organizations- Health & Life Sciences)

2 Workforce Boards

These public-private partnerships invest in training and other services to connect job seekers to the changing needs of employers. Among the areas workforce boards are Charlotte Works, Rowan Works and the Centralina Workforce Development Board.

2 Economic Development Organizations

Catawba Regional Council of Governments

COG is an association of South Carolina local governments in Chester, Lancaster, Union, and York counties. The COG serves as a forum for intergovernmental cooperation and as a central staffing resource with a variety of responsibilities including economic development and workforce investment.

Centralina Economic Development Commission

The Centralina Economic Development Commission (CEDC) is a 501(c)(3) organization serving the greater Charlotte region and supporting the key activities proposed in the Centralina Regional Comprehensive Economic Development Strategy (CEDS). The strategy outlines an approach to regional growth and prosperity that builds on the region's strengths, emphasizes key regional industry clusters, and prioritizes economic development projects. The Commission is supported by the Board of County Commissioners in eight North Carolina counties (Anson, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, and Union) by the City of Charlotte and the Town of Mooresville.

Center City Partners

Center City Partners is a 504(c)(4) nonprofit that facilitates and promotes the economic, cultural and residential development of the urban core district. Through visioning and leadership, working with urban planners and economic development, they market the unique development of Charlotte's Center City.

Charlotte Chamber

The Chamber is a membership organization that supports growth and development within the City through its program of work which includes economic development assistance, and entrepreneurial ecosystem support through the Power Up Challenge business plan competition.

Charlotte Regional Partnership

The Partnership is a regional nonprofit, public-private economic development organization that actively solicits new business and supports existing business in the target sectors of the economy, including: film, health, defense, aerospace, energy, finance, motorsports, international business and tourism. Their activities cover 16 counties – 12 in North Carolina and four in South Carolina.

Centralina Economic Development Commission (see COGS in Local Govt also)

The mission of the CEDC is to build partnerships throughout the region that promote the growth of high technology industry clusters and expand economic activity. The CEDC is a 501(c)(3) that supports key activities in the Centralina Regional Comprehensive Economic Development Strategy

(CEDS). The Commission is supported by the Board of County Commissioners in eight NC counties and the City of Charlotte and Town of Mooresville. Additionally, the CEDC puts focused emphasis on logistics and advanced manufacturing clusters with collaborative activities. The CEDC also operates the Centralina Regional Revolving Loan Fund.

City of Charlotte

The City of Charlotte's Economic Development department facilitates business attraction and growth through public private partnerships, collaboration, sharing of resources and aiding in small business development.

Mecklenburg County Economic Development

The County's economic development program is mainly carried out with the Regional Partnership and the Chamber. The County itself operates a Minority, Women and Small Business Enterprise program.

Mooresville/South Iredell Economic Development Corporation

The Mooresville South Iredell Economic Development Corporation (MSIEDC) is a private, non-profit organization located in Iredell County, and dedicated to the growth and success of the Mooresville business community.

Rock Hill Economic Development Corporation and the City of Rock Hill

Rock Hill authorities are supporting traditional economic development, but have plans to redevelop the Old Town (downtown) area of Rock Hill around an entrepreneurial knowledge driven business economy. In addition to a new Clemson affiliated incubator and co-working space, the authorities are soliciting a large number of development proposals for transforming the Knowledge Park section of Rock Hill.

ECOSYSTEM GAPS - FINDINGS

The following list of gaps in the Charlotte entrepreneurial ecosystem is developed from 50 in-depth interviews with ecosystem stakeholders. Direct comments and a list of those interviewed are included in the Appendix section of this report.

Culture

1. It is widely viewed that there is a lack of understanding and appreciation for what entrepreneurs bring to the community
2. The community does not celebrate/recognize the success of entrepreneurs
3. The community does not seek to understand the reasons for failure of certain ventures
4. In some sectors the region is viewed as patriarchal and not sufficiently collaborative
5. The community has made strides in building the entrepreneurial ecosystem, but is still in the early stages of development and have much further to go to be “competitive”
6. The ecosystem must develop the means of identifying the true Gazelle’s in the community and develop programs that provide them the best opportunity to succeed
7. The community desires more activities and interest in promoting innovation and creativity
8. Promotion of entrepreneurial thinking must begin in K-12

Talent Availability and Development

1. Tech companies are experiencing a big skills gap between their needs and what the schools in general, and UNC Charlotte in particular are graduating, so the community is setting up its own training and with increasing frequency, not requiring college degrees for professional positions in technology
2. The community must develop K-12 curricula that support skill development for software coding and STEM training so students are better prepared to take advantage of the opportunities available in tech industries
3. The community must develop a national campaign to attract technical workers; businesses will leave if Charlotte does not improve its technical workforce, which is already experiencing/anticipating shortages
4. Educators are trying to develop more employer facing training programs, but still may not be teaching the right things.

Networking and Mentoring

1. The region must attract higher quality angels and mentors who have actually had success in entrepreneurial endeavors
2. Entrepreneurs require a variety of ways to reach out and meet others for collaboration; not always easy to find
3. There is no aggregated list of startups for the region
4. The Charlotte Region must implement a structure for matching the right mentors with the startup companies at the appropriate life cycle stages
5. The region must raise its profile by bringing more thought leaders, VCs and business leaders to Charlotte for presentations and speaking engagements
6. The region must become more active and visible with national and global networks

Media

1. The entrepreneurial and business community asserts that there is little understanding or coverage of the local entrepreneurial market in the news

2. The community must raise visibility of the Region on an national scale as a place friendly to and supportive of entrepreneurs

Open Participation

1. The City leadership and CRFE should deal with entrepreneurs in an open, grass roots system that is accessible by entrepreneurs and led by entrepreneurs.
2. Newer efforts are emerging for women, rural and marginalized individuals who want to be entrepreneurs; they should not be excluded from the “system”

Venture Capital and Funding

1. This is one of the highest profile deficiencies (opportunities); as entrepreneurs and service providers alike do not find financing/funding past the seed round readily available.
2. The community must connect with more angels, strategic investors, syndicates, etc.
3. Deal flow, or the number of potentially fundable business opportunities, is low - possibly because regional entrepreneurs are not strong enough.

Higher Education Partnerships

1. UNC Charlotte gets credit for tech transfer initiatives and the Charlotte Venture Challenge, but they are not seen as particularly integral to entrepreneurship by technology entrepreneurs
2. Industry feels *they* must drive the creation of partnerships for training and education at UNC Charlotte or risk not getting what they need.
3. UNC Charlotte recognizes they must do a better job partnering with industry and continuing to improve on employer facing initiatives.

Large Company Partnerships and Clusters

1. Entrepreneurial companies feel completely disconnected from exploring opportunities to partner or develop solutions with large companies.
2. Manufacturing appears to be a large potential area for increased partnership and innovation.
3. Large companies would benefit from understanding the capabilities and initiatives of entrepreneurial companies in the region.

The Chamber and Economic Development

1. Entrepreneurs say the Chamber is not focused on them.
2. The Chamber believes that their resources are limited for supporting entrepreneurs; they believe Ventureprise and BIG are better able to focus and will coordinate activities with them.

The Need for CRFE and Unified Coordination

1. Members of the ecosystem see a need for centralized coordination and communication, not control
2. The City should put skin in the game.
3. There exists concern for how some parties in the ecosystem will play together in leading strategy.
4. A methodology must be developed for measuring the Ecosystem’s output of value – data for grants, ROI, and program effectiveness.

RECOMMENDATIONS FOR CRFE FUND DEVELOPMENT

The Fund of the Charlotte Regional Fund for Entrepreneurship represents an innovative investment aimed at building capacity within the entrepreneur ecosystem. This section outlines recommendations for managing and administering the Fund.

CRFE Fund Mission

The goal of the CRFE Fund is to make grants that increase the effectiveness and efficiency of the entrepreneurial ecosystem for the Charlotte USA region. Furthermore, the CRFE Fund's mission is to strengthen the capabilities of ecosystem service organizations by increasing their capacity to meet the needs of startup and early stage companies.

Through this study, the CRFE has attempted to illuminate and understand the links between healthy ecosystems and vibrant communities. These linkages aren't necessarily understood across the public or with the policy makers for the region. This study attempts to uncover the linkages and best practices that have worked in other areas as a means of identifying ways to strengthen the Charlotte community. The opportunities to improve gaps is where the CRFE Fund will focus grants to accelerate program activities in the ecosystem.

Recommended Program Priorities

The CRFE Fund will engage in collaboration with entrepreneurial ecosystem partners to understand and support those key programs that will build their capacity to create and further networks supporting entrepreneurial companies.

Grants awarded from the CRFE Fund will seek to further CRFE's mission. These grants are strategic and innovative investments that must deliver solutions in one or more of the opportunity areas below:

Fundable Opportunity Areas

Vision	Opportunity Areas	Opportunity Areas
Build Entrepreneurial Culture	Improve Community Understanding	Promote Innovation and Creativity
Enhance Ecosystem Connections	Improve Structured Mentoring	Enable Partnerships between HGEs and Large/Med Companies
Improve Visibility for Charlotte with Entrepreneurs, Funders and Media	Promote Charlotte as a Hub for Entrepreneurial Development	Promote success stories within the Region
Build Technical Skills	Enable Skills Collaboration between Universities/Colleges and Technical Employers	Promote STEM training in K-12 and for women
Develop a Capital Continuum	Build connections with SV VCs	Improve quality of/and access to Local Angels

Eligibility

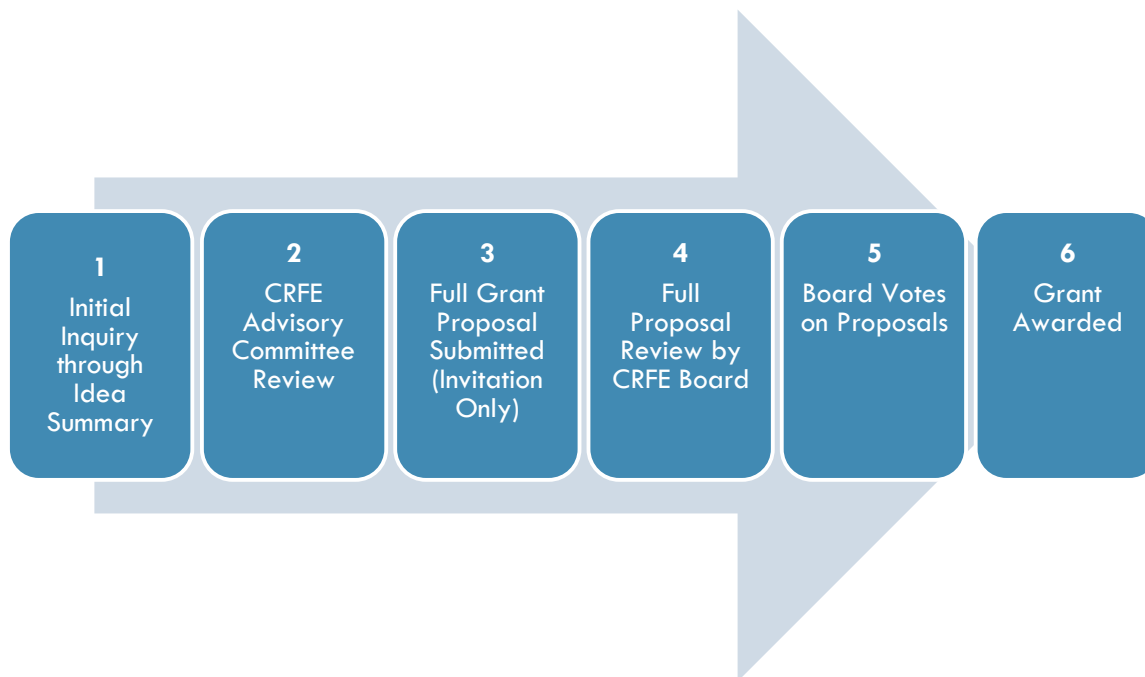
To be eligible for a grant, organizations must have a current nonprofit tax status under the Internal Revenue Act. Applicants must have a 501(c)(3) determination letter, or identify themselves as a validly organized and operating municipal corporation or public agency.

At the committee's discretion, grant monies can also be used to fund research, economic impact studies, business surveys, and conferences for business leaders and public officials focused on entrepreneurship in economic development's public domain.

CRFE will not make grants to individuals, nor as equity or seed capital investments.

The CRFE Process for Grant Making

The CRFE will attempt to identify and encourage those proposals that will have the largest impact on the geographic region. The following process is recommended:



Step 1 - The first step for applying will be for the eligible stakeholder organizations to fill out an “Idea Summary” which gives details for the quality and feasibility of the proposed activity or program, including costs and impacts from the program.

Step 2 - Initial Idea Summaries will be reviewed by the **CRFE Advisory Committee** for focus, impact, and chances of success. Applicants may be asked for additional information or required to interview with the committee or committee members.

Step 3 - Once the idea has been invited for consideration, the requestor will fill out a detailed application proposal.

Step 4 - **CRFE Board** will review the applicant organization's ability to succeed in the project, evaluating its budget, staff capability and experience. See next page for "Evaluation Criteria."

Step 5 – Board votes on proposals.

Step 6 – Grant Awarded to strongest applications meeting the Evaluation Criteria.

CRFE Advisory Committee and Board Structure

It is recommended that the CRFE be made up of a two tier body for review and acceptance of grant proposals. This format will allow for knowledgeable review and discussion of initial proposals by a non-voting group of ecosystem stakeholders (CRFE Advisory Committee), which leads to more comprehensive and well researched full proposals. Full proposals, however, should not be voted on by members of the recommending Advisory Committee, in order to remove conflicts of interest. Proposals will be voted on by the Board of the Charlotte Regional Fund for Entrepreneurship.

The non-voting advisory members should include a collaborative cross section of the ecosystem. Therefore it is recommended that the Advisory Committee be made up of designated representatives from the following:

Area Universities, Community Colleges, nonprofit support organizations, CRTEC and other technology industry associations, Angel and VC Investors, Mentors, entrepreneurs, large company innovation reps and city/county economic development agencies. The Advisory Committee should include no more than 16-18 members for a one year initial term. The CRFE will solicit and choose the Advisory Committee with two members from each stakeholder category. The committee members must vote on 90% of the proposals submitted during their term, or they will not be eligible to participate in subsequent years.

An idea moves to a proposal invitation with a positive vote from two thirds of the committee members. Committee members with a conflict of interest must recuse themselves up front and may not vote on that proposal. If a member is found to have voted and a conflict existed, they will be removed from the committee.

The voting Board of the CRFE will be made up of 11 members. It will include once City Council member appointed by the Mayor and one City representative appointed by the City Manager of Charlotte. All remaining Board members will be appointed by FFTC. Any member with a conflict of interest must recuse themselves from voting on a proposal or they will be replaced on the Board.

Evaluation Criteria

To advance CRFE's objectives, those stakeholder grant requests must address the following:

- Achieve objectives in one or more "opportunity areas"
- Ability to execute on the program
- Generate community support and involvement
- Be measurable and attainable within the grant period
- Ensure post grant assessment of funded projects to determine impact to the community

Grant requests must not:

- Be used for general operating support, capital projects, equipment, land, building construction, university overhead costs, lobbying efforts or scholarship programs.

In addition, CRFE encourages proposals that demonstrate the following characteristics:

- They address multiple opportunity areas
- Existence of co-financing or the ability to leverage additional funds
- Existence of partnerships, alliances or collaboration with one or more other ecosystem support organizations to reduce duplication of efforts
- Endorsements from other recognized agencies or authorities
- Strong regional impact
- Innovation and creativity in addressing gaps
- Clear plans for self-sustained continuation and/or replication after initial CRFE funding
- Impacts entrepreneurial community in job creation
- Supports social entrepreneurship

Selection

Selection for grants will follow the process previously outlined. Submittals may require additional information to be provided after initial review. The CRFE Board will vote on final proposals. The Board will review applications on a monthly basis and make decisions within 60 days.


CRFE Effectiveness Review

Each year, a review of program objectives and outcomes will be developed by the CRFE. Open presentations will be given to stakeholders in the region. Suggestions for improvement will be garnered through a formal process. The CRFE will adapt any changes and promote a revised list of gap “opportunity areas” to be funded in the following year.

It's not the Chicken or the Egg – it is both!

Ecosystems come in many forms, and no two are the same. But as ecosystems mature, structure around key functions and coordination of communications and activities, optimize a community's ability to support business on limited resources. The experts have shown that all domains within an ecosystem should be improved simultaneously.

Charlotte's ecosystem can more rapidly accelerate if its members work together to form a shared vision and develop a structure that addresses the gaps and enables best practices.



4

Lessons Learned

Growing the Ecosystem

SUMMARY

Ecosystems are complex and dynamic environments, just as entrepreneurs themselves are complex and ever-changing. In order to accelerate the development of the entrepreneur ecosystem within the Charlotte region, the City of Charlotte and Foundation For The Carolinas have undertaken this study of the assets that exist to support entrepreneurial growth.

Key Findings

- There has been an acceleration of entrepreneurial activity since 2010 that is seen as very positive
- The capacity of the ecosystem has grown much larger over this time frame
- Although Charlotte has increased momentum, they still appear to be significantly behind second tier markets such as Nashville, Indianapolis, and Milwaukee
- Entrepreneurs are generally happy living in Charlotte, but don't feel understood or appreciated
- Across all segments, the Charlotte community is viewed as risk adverse, not trusting or creatively open enough to culturally fit with an entrepreneurial environment
- There is a growing technical skills gap that threatens not only the startup community, but the large and mid-size companies as well
- There is little interaction between entrepreneurial companies and the larger more successful companies in the region
- Investors say that deal flow in Charlotte is weak
- Entrepreneurs feel that funding options, especially through VCs are weak
- Entrepreneurs want more visible and stronger Angels
- Entrepreneurs also want more sophisticated and seasoned mentors that have actually been successful in their own right
- Charlotte is poor at promoting itself within and beyond the region as a startup location
- There are many volunteers in the system that want to help entrepreneurs, but the ecosystem may not have the structure to match them in a way that best benefits entrepreneurs
- Although it is improving, there still exists a need for better communications around how to enter the ecosystem, and how the members collaborate within it
- Changes in the workforce require that Charlotte improve education, career knowledge and training options for students of all ages (K-12 and college)
- There is a need to measure the value, growth and development of the ecosystem
- The region's media outlets do not care about covering entrepreneurship and local startups
- Charlotte lacks the robust funding of focused entrepreneurial programs in leading innovation cities
- Charlotte lacks the concerted and collaborative focus to attract more R&D dollars to the region

In closing, based upon the best practices programs and literature that is available, it is understood that Charlotte has a good infrastructure for developing a stronger ecosystem. Utilizing organizations like Foundation for the Carolinas and the members of the Charlotte Entrepreneur Alliance, the region can prioritize and fund additional programs in an effort to accelerate opportunities. The key to *long term success* in building the region's infrastructure will be significant public private partnership participation, financial and otherwise, over and above what the CRFE is currently anticipated to contribute. Development of a focal organization that promotes collaboration and a framework for efficient best practices program/service delivery is necessary to put Charlotte in the echelon of other high growth entrepreneurial markets.

APPENDIX

Community interviews

This section lists those individuals whose input was used to understand the current state of the Charlotte-region entrepreneurial ecosystem.

ENTREPRENEURS

Steve	Amedio	Technekes
Tim	Cheadle	Hackers & Founders
Jim	Cuttino	Camber Ridge
Bryan	Delaney	Skookum Digital Works
Louis	Foreman	Enventys
Chris	Halligan	CRTEC
Igor	Jablakov	Blackstone Entrepreneurs Network
David	Jones	Peak 10
Rahul	Mohan	Application to Go
Garth	Moulton	formerly with Jigsaw and Other Screen
Ted	Theodoropoulos	Acrowire
Jim	Van Fleet	IT'S bspoke
Taffy	Williams	Colonial Technology Development

EDUCATION

Chuck	Bamford	Queens University
Olin	Broadway	UNC Charlotte, College of Computing & Informatics
Lori	Day	CPCC, Small Business Institute
Dr. Yi	Deng	UNC Charlotte, College of Computing & Informatics
Allison	Dulin	Davidson College
Bill	Heitman	CPCC, Director of Center for Energy
Renee	Hode	CPCC, Small Business Institute
Deborah	Strumsky, PhD.	UNCC,
Dr. Bob	Wilhelm	Charlotte Research Institute

INVESTORS

Larry	Bettino	Starvest Partners
Henry	Doss	T2VC
Daniel	Friel	8 Rivers Capital
Dan	Gotte	IMAF
Paul	Solitario	Cerium Capital

SUPPORT PROVIDERS & ECONOMIC DEVELOPMENT

Marilyn	Carpenter	Ventureprise
Sarah	Cherne	Junior Achievement
Devin	Collins	Charlotte Venture Challenge
Terry	Cox	Business Innovation and Growth
Lonnie	Emard	IT-oLogy
Adam	Hill	The Garage at Packard Place
Vic	Howie	Tech Breakfast
Bill	Mahoney	South Carolina Research Authority
George	McCallister	SBTDC
Kay	Read	IT-oLogy
Henry	Rock	City Startup Labs
Kathleen	Rose	PiES
Dan	Roselli	Packard Place
David	Swensen	Charlotte Regional Partnership
Charles	Thomas	Queen City Forward
Keva	Walton	Charlotte Chamber of Commerce
David	Warner	Rock Hill Development Authority
Paul	Wetenhall	Ventureprise

OTHER

Scott	Carlberg	E4 Energy Consortium
Warren	Cooksey	City of Charlotte Councilman
Manoj	Govindan	Bank of America
John	Nurkin	SPX Corporation
Holly	Welch-Stubbing	Foundation For The Carolinas