

Entrepreneurial Ecosystems in Appalachia

Ecosystem Development Case Studies

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EntreWorks Consulting with the Center for Rural Entrepreneurship
and the Center for Regional Economic Competitiveness

About This Report

This report was prepared under contract to the Appalachian Regional Commission on a project entitled *Documenting and Strengthening Entrepreneurial Ecosystems in Appalachia* (CO-18608-2016). The project was led by EntreWorks Consulting, in partnership with the Center for Regional Economic Competitiveness and the Center for Rural Entrepreneurship.

The Appalachian Regional Commission (ARC) is an economic development agency of the federal government and 13 state governments focusing on 420 counties across the Appalachian Region. ARC's mission is to innovate, partner, and invest to build community capacity and strengthen economic growth in Appalachia to help the Region achieve socioeconomic parity with the nation. www.arc.gov

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This report is part of larger project entitled *Entrepreneurial Ecosystems in Appalachia*. Additional project materials can be accessed at www.arc.gov, as well as the project's website at: <http://arceco.creconline.org>.

Contents

About This Report	2
Introduction	6
Entrepreneurial Ecosystems in Appalachia: Case Study of Asheville, North Carolina	13
Description of the Place	13
Asheville: A Data Snapshot	14
Asheville’s History of Entrepreneurial Ecosystem Development	14
Assessment of Asheville’s Entrepreneurial Ecosystem.....	16
Asheville: A Summary Assessment	22
Lessons Learned for Other Communities and Regions	24
Entrepreneurial Ecosystems in Appalachia: Case Study of Athens, Ohio	27
Description of the Place	27
Athens: A Data Snapshot	28
Athens: A History of Entrepreneurial Ecosystem Development.....	28
Assessment of Athens’ Entrepreneurial Ecosystem	31
Summary Assessment of the Athens Ohio Ecosystem.....	38
Lessons Learned for Other Communities and Regions.....	39
Entrepreneurial Ecosystems in Appalachia: Case Study of Cattaraugus County, NY.....	41
Description of the Place	41
Cattaraugus County: An Entrepreneurship Data Snapshot	42
Cattaraugus County: A History of Entrepreneurial Ecosystem Development	42
Assessment of Cattaraugus County’s Entrepreneurial Ecosystem	45
The Cattaraugus County Ecosystem: A Summary Assessment	52
Lessons Learned for Other Communities and Regions	52
Entrepreneurial Ecosystems in Appalachia: Case Study of Chattanooga, Tennessee	54
Description of the Place	54
Chattanooga: A Data Snapshot	55
History of Entrepreneurial Ecosystem Development	55
Assessment of Chattanooga’s Entrepreneurial Ecosystem	59
Chattanooga: A Summary Assessment	65
Lessons Learned for Other Communities and Regions	68

Entrepreneurial Ecosystems in Appalachia: Case Study of New River Gorge/Greenbrier Valley, West Virginia	70
Description of the Place	70
New River Gorge/Greenbrier Valley: A Data Snapshot.....	71
New River Gorge/Greenbrier Valley West Virginia: Entrepreneurial Legacies	72
The New River Gorge/Greenbrier Valley Ecosystem in 2017	73
New River Gorge/Greenbrier Valley: An Ecosystem Assessment.....	81
Lessons Learned for Other Communities and Regions	82
Entrepreneurial Ecosystems in Appalachia: Case Study of The Shoals Region of Alabama	84
Description of the Place	84
The Shoals Region: A Data Snapshot	85
Shoals Region Entrepreneurial Legacies	86
The Shoals Entrepreneurial Ecosystem in 2017	90
The Shoals Region: An Ecosystem Assessment.....	93
Lessons Learned for Other Communities and Regions	94
Entrepreneurial Ecosystems in Appalachia: Case Study of Garrett County, Maryland	97
Description of the Place	97
Garrett County: A Data Snapshot.....	98
History of Entrepreneurial Ecosystem Development in Western Maryland	98
Assessment of the Mountain Maryland Entrepreneurial Ecosystem	101
The Garrett County Ecosystem: A Summary Assessment.....	104
Lessons Learned for Other Communities and Regions	105
Entrepreneurial Ecosystems in Appalachia: Case Study of Southwest Virginia	106
Description of the Place	106
Southwest Virginia: A Data Snapshot	107
Southwest Virginia’s Entrepreneurial Legacies.....	107
Building Southwest Virginia’s Regional Ecosystem: A History	108
Southwest Virginia’s Ecosystem: A Summary Assessment	114
Lessons Learned for Other Communities and Regions	116

Introduction

The news media and others regularly speak of Appalachia as a singular place, but local people and more informed observers know that Appalachia is a diverse and complex region that does not easily lend itself to a single narrative. This is true no matter where we look or if we examine Appalachia through a lens of health care, poverty, economic development or natural resources. Within Appalachia, there are thriving places and there are challenged places, and there are places that are truly unique as well as those that are no different than any other so-called typical American community.

If we examine entrepreneurial ecosystems in Appalachia, a similarly diverse and complex picture emerges. In some rural locales and places with greater economic challenges, ecosystems are often weak. In denser urban areas, such as Pittsburgh and Chattanooga, strong and robust ecosystems are in place. These rural-urban disparities can be found in other U.S. regions as well. Across Appalachia, regional economies present a mix of circumstances, and the processes of ecosystem building vary greatly.

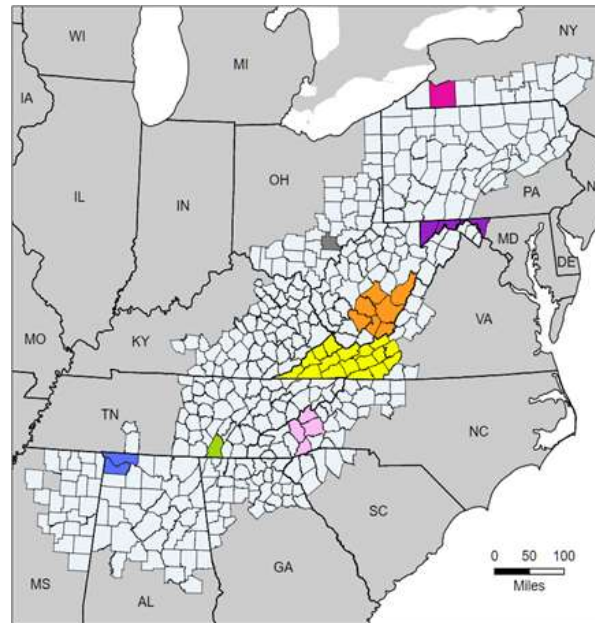
This case study report seeks to capture the current state of ecosystem development in Appalachia via in-depth case studies of eight different areas. The case studies assess how these regions have progressed in terms of nurturing strong ecosystems, i.e., the networks of community resources, assets, and support systems that help entrepreneurs thrive. When combined with other components of the Entrepreneurial Ecosystems in Appalachia project, these case studies help portray the diversity and complexity of the entrepreneurial economy across the Appalachian Region.

The case studies presented below include assessments of ecosystem development in the following locations, which are also shown in Figure 1:

- Asheville, NC
- Athens, OH
- Cattaraugus County, NY
- Chattanooga, TN
- New River Gorge/Greenbrier Valley, WV
- Florence/Muscle Shoals, AL
- Garrett County, MD

- Southwest Virginia

Figure 1: Entrepreneurial Ecosystems in Appalachia: Case Study Regions



These locations vary greatly, in terms of both their current economic situations and their relative success in supporting the creation and growth of start-up companies and other entrepreneurial ventures. This diversity of cases is by design. Working with Appalachian Regional Commission staff, the research team identified potential case studies that could offer useful lessons for other places across Appalachia and beyond. Thus, our case studies include locales that have a long history of supporting entrepreneurial development (Athens, OH), and places where this emphasis is relatively new (Cattaraugus, NY and Southwest Virginia). They also include regions that are thriving (Chattanooga) and places where economic circumstances are more challenging (New River Gorge/Greenbrier Valley, WV). The case studies often address specific issues of particular relevance to local ecosystem building strategies. Examples include the role of philanthropy (Chattanooga), links to food system development (Athens), or the challenges of operating over a large regional footprint (Southwest Virginia).

Each of the eight case studies is organized in a similar format and was developed based on an extensive literature review, interviews with key stakeholders, and site visits to further assess local activities and investments. At the outset of each case study chapter, we present data on the region's performance on key measures of entrepreneurial dynamism. These measures are also presented at the county, state, and regional level in the Entrepreneurial Dynamism section of the Entrepreneurial Ecosystems in Appalachia website. These case studies are not intended to serve as complete histories of recent regional developments. They are focused on ecosystem building, with a primary goal of providing guidance and lessons learned to community leaders located in Appalachia and elsewhere.

As noted on the website and in related project materials, the availability of data on regional entrepreneurship performance can pose challenges. Much of the public data is delayed and often fails to provide complete coverage for all types of new ventures, including sole proprietorships. Other excellent data sources, such as the Kauffman Foundation's Index of Entrepreneurial Activity, only tracks performance for states and major metro areas, and is thus less useful for understanding entrepreneurship in much of Appalachia.

Because of these data constraints, the research team has deployed a new dataset developed from YourEconomy.org, a website developed and managed by the University of Wisconsin Extension, Division for Business and Entrepreneurship and the Business Dynamics Research Consortium (BDRC). Actual data come from several databases developed by InfoGroup, and the information is further refined by UW Extension and BDRC.¹ Using these data, the research team has created three measures to track local performance in terms of entrepreneurial activity: level of startups, stage 2 businesses, and high growth businesses. Our definitions of these terms are as follows:

- **Startups** – establishments that existed in 2014 and/or 2015, but not earlier
- **Stage 2 Businesses** – establishments with 10-99 employees
- **High Growth Businesses** – establishments with at least 75% employment growth from 2011-2015

As a whole, these measures help capture the key components of a county or state's entrepreneurial dynamism. Each specific metric offers unique insights as well. A relatively high share of startups may suggest that a local economy is quite dynamic and is generating new opportunities for new ventures. In some cases, it may simply mirror a rising population, or it may sometimes serve as an indicator of high rates of "necessity entrepreneurship," where local people opt to start businesses because of a lack of other career options. Stage 2 firms are considered by many experts to be "high potential" companies, with a higher-than-average likelihood of achieving fast growth. A relatively high concentration of these firms suggests a more stable economy as well as an economy with potential for future growth. Finally, higher concentrations of high growth businesses are a core sign of local economic dynamism, suggesting that the region has the potential to not only spawn new businesses but to support rapid growth over the long term.

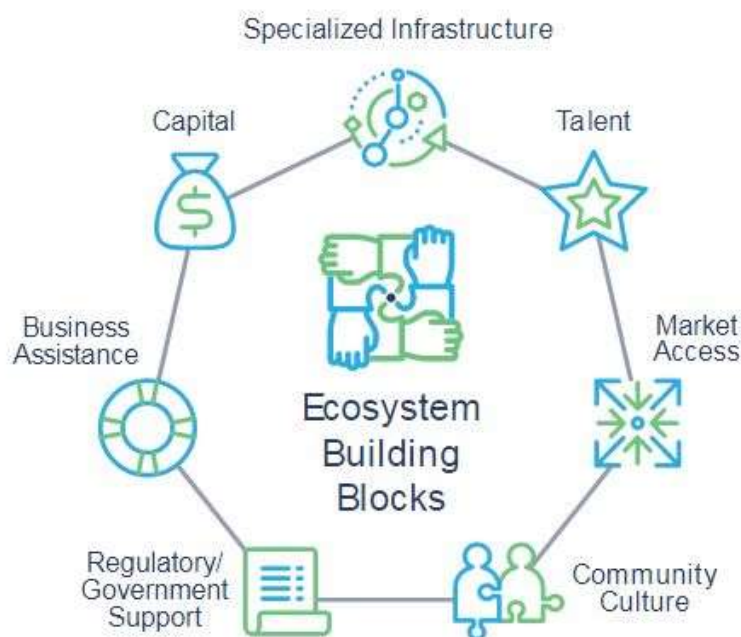
When compared to other counties in Appalachia, most of the locations included in this case study analysis are high performers. Their entrepreneurial dynamism performance typically outpaces that found in nearby places or in other parts of Appalachia. However, the data differences between various subregions are not huge. The available data offer some useful insights, but they do not provide the last word on what makes for successful entrepreneurial ecosystems in Appalachia. The case studies presented in this report are designed to offer further insights on this front.

¹ Further details on methodology can be found at the accompanying *Entrepreneurial Ecosystems in Appalachia* website.

After sharing data on the case study location's recent performance, each case study begins with a review of the location's recent history and recent investments in economic development and ecosystem building. It next offers an assessment of the location's relative strengths and weaknesses on several core elements of effective entrepreneurial ecosystems, including the key factors highlighted elsewhere in this larger research project and portrayed in Figure 2:²

- *Market Access*: Helping entrepreneurs identify, access and succeed in new markets
- *Capital*: Providing diverse sources of capital to help firms start and grow
- *Talent*: Building a regional talent base
- *Business Assistance*: Providing easy access to technical assistance
- *Specialized Infrastructure and Facilities*: Meeting the unique space needs of entrepreneurs
- *Community Culture*: Honoring and embracing entrepreneurship
- *Regulatory/Government Support*: Cutting red tape and promoting flexibility

Figure 2: Key Elements of Entrepreneurial Ecosystems



None of case study locations' ecosystems contain deep and robust capabilities related to each one of these elements. By design, they present a mix of activities, histories, competitive strengths, and challenge areas. Like all ecosystems, they are works in progress that are constantly evolving and, hopefully, improving over time.

² These elements are further discussed in the project's related April 2017 report: *Entrepreneurial Ecosystems in Appalachia: A Literature Review*.

After assessing each location's relative success in building and sustaining robust entrepreneurial ecosystems, each case study concludes with a review of lessons learned, with an emphasis on how these lessons can help guide ecosystem building efforts elsewhere in Appalachia and beyond.

Individually and collectively, these case studies are designed to offer lessons learned on what works and what does not work in terms of building entrepreneurial ecosystems in Appalachia. Each case study offers its own unique insights and lessons, but a number of common threads emerge. These shared lessons include:

- **Culture Matters**

The critical importance of an entrepreneur-friendly business culture is perhaps the most important take-away from these case study analyses. By entrepreneurial culture, we refer to a mix of local attitudes and business practices that encourage local people to start and grow companies. A number of factors and attitudes come into play. Attitudes toward risk and failure are especially important. Are local residents willing to take risks? Is business failure viewed as a personal shortcoming or is it viewed as a learning experience? In addition, successful places tend to champion innovation and entrepreneurship. They support a culture of research and inquiry, and view entrepreneurs—as opposed to big business or the government—as core builders of the local economy and local wealth.³

For a variety of reasons, many parts of Appalachia have not been home to entrepreneur-friendly business cultures in the past. For example, our case studies of Southwest Virginia and Southeast West Virginia note the lasting legacy of the coal industry where local economies were dominated by a few major employers and where paid employment—rather than business ownership—was viewed as the path to success. Fewer local residents started businesses because other economic options were preferable, and local entrepreneur-friendly culture never developed.

As the economic landscape has evolved, regional leaders have consciously sought to encourage a more entrepreneur-friendly local mindset. Via awards programs, training for adults and youth, and other means, these subregions have acted to educate local people about the benefits of business ownership. Thanks to these subtle “nudges,” more local people have opted to consider business startups or to champion entrepreneurship as a regional development strategy.

More successful places build an entrepreneur-friendly culture while they also build a support system for local entrepreneurs. By championing entrepreneurship as a “cool thing to do,” they excite local people about opportunities for themselves and for the wider region as well. Along the way, these culture-building efforts also help to develop a local pipeline of entrepreneurs and to scale local networks where both budding and veteran entrepreneurs can learn from each other.

- **Organizational Design Matters**

³ World Economic Forum, “Entrepreneurial Ecosystems Around the Globe and Company Dynamics,” Report Summary for the Annual Meeting of the New Champions. (2014), pp. 12-13.

Building an entrepreneurial ecosystem is an economic development challenge, but it is a problem that cannot be solved by economic developers alone. Many factors contribute to robust entrepreneurial ecosystems, some of which, such as nurturing an entrepreneur-friendly business culture or providing training, may fall outside of core activities of traditional economic development organizations (EDOs).

EDOs can and should be core partners in regional ecosystem development, but they cannot do it on their own. The most successful ecosystem builders engage a diverse mix of partners that typically includes EDOs, educators, entrepreneurs, and other community leaders. In successful regions, a core organization typically operates in a network weaving role where it pursues a core mission of building the local ecosystem while also encouraging a wide network of partners to provide services and invest in building out key ecosystem components. Examples from the case studies include ACEnet (Athens, OH), Alabama's Shoals Shift, the HIVE in West Virginia, and Virginia's Opportunity SWVA.

These collaborations typically operate via a distributed network structure where partners collaborate on core activities (e.g., hosting events or seeking outside funding) and develop special expertise or focus on local ecosystem elements (e.g., human capital) or on serving certain segments of the local business community (e.g., mentoring growth businesses or youth entrepreneurship). This diffuse structure allows the partnerships and the wider ecosystem to evolve as new issues or opportunities emerge.

- **By and For Entrepreneurs**

The most successful ecosystems—in Appalachia and around the world—share a singular focus: they are “by and for entrepreneurs.” They are led by local entrepreneurs, and their programming is driven by the needs and interests of local companies. These entrepreneur-led networks are the norm in more advanced technology hotspots such as Silicon Valley, Seattle, or North Carolina's Research Triangle. They are less common in developing ecosystems such as those found in many parts of Appalachia. A few of the more successful regions, like Asheville and Chattanooga, support local networks that are truly “by and for” local business owners. Many of our case study locations have not yet reached this milestone, and local EDOs or ecosystem builders may drive regional ecosystem development efforts. Transitioning to entrepreneur-led networks takes time, but it should be a core goal for all successful ecosystem building efforts.

- **Align with other Strategies**

A number of our case study locations have enjoyed success by linking ecosystem building efforts to new or ongoing regional development strategies focused on related issues or challenge areas. Across Appalachia, many subregions are focused on linking economic development strategies to the Region's emerging opportunity areas in sectors like energy, food systems, health and tourism. Linking these efforts to entrepreneurship programming has proved highly successful for many communities. For example, Athens, Asheville, the Shoals Region, and New River Gorge/Greenbrier Valley all place great emphasis on food systems development and the new business opportunities generated by these investments. Other regions, such as Garrett County, MD, build links to local tourism promotion, and

others, such as Southwest Virginia, seek to create synergies with other downtown development and Main Street investment efforts.

- **Think Bigger**

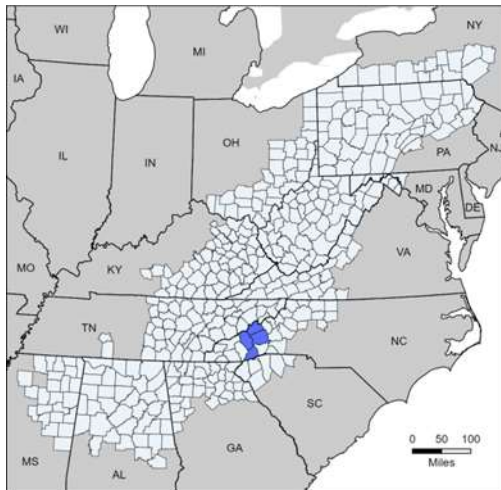
Successful places think and act like regions when it comes to building entrepreneurial ecosystems. Several of our case studies focus on county-level ecosystem building efforts, but our findings suggest that most parts of Appalachia need to think bigger in terms of regional partners and service areas. Existing research highlights the importance of density and connectivity in robust entrepreneurial ecosystems. These ecosystems benefit from a large number of entrepreneurs who have regular opportunities to interact and connect with one another. This density and connectivity is less common in rural areas, where populations are smaller and regular connection opportunities may be limited. Working at a wider regional level can engage more entrepreneurs, and increase the density of networks. Such strategies also allow business service providers to share resources and ideas, and more effectively and efficiently support local companies.

All of the places profiled in these case studies have enjoyed some success in building robust and sustainable entrepreneurial ecosystems. These communities are beginning to see the flowering of new companies and faster growing local ventures, and a wider community recognition that entrepreneurship needs to be a part of future economic development planning and investments. Despite these successes, representatives from these places would readily admit that there is more work to do. Building ecosystems is a constant process, and the work is never done. Yet, the benefits of this work—in terms of stronger economies and stronger communities—can be profound.

Entrepreneurial Ecosystems in Appalachia: Case Study of Asheville, North Carolina

Description of the Place

With a 2010 population of 87,236, Asheville is the county seat of Buncombe County. It is also the hub of a four-county metropolitan area in western North Carolina with a total population of almost 425,000 in 2010. Situated in the Blue Ridge Mountains, and at the junction of the Swannanoa and French Broad Rivers, Asheville is a beautiful place that attracts tourists seeking natural amenities as well as its “cool vibe.” Asheville has received many national accolades in recent years – one of “America’s Best Beer Cities” (Conde Nast, 2015); “Best City in America for Locavores” (The Daily Meal, 2014); “Top 10 Sunny Places to Retire” (AARP Magazine, 2012).



In spite of its metropolitan status, the region has a rural character and is relatively isolated from other population centers. Unlike many parts of rural America, however, the Asheville region is growing. From 2000 to 2016, population in the four-county region grew by 22%, powered almost entirely by in-migration from other parts of the U.S.⁴ Total employment almost kept pace with the growing population, increasing by 20% between 2000 and 2015, driven in part by a more than 50% increase in the number of proprietors, a frequently cited measure of entrepreneurship.⁵ Over this same period, the region’s income increased by 29%, with both labor and non-labor sources of income increasing. The

region’s non-labor income is strongly influenced by the attraction of retirees to this beautiful part of the country.

Asheville has a long history as a tourist destination and has been well served by a series of public investments (Great Smoky Mountains National Park and the Blue Ridge Parkway as examples) and private investments (Biltmore Estate and the Grove Park Inn). A decision by city leaders following the Great Depression also impacted the future development of the region. These leaders made a commitment to pay back all of the city’s debts, which took until the mid-1970s. At a time when many cities were demolishing historic downtown buildings in the name of urban “renewal”, Asheville had to

⁴ Headwaters Economics, A Profile of Socioeconomic Measures: Buncombe, Haywood, Henderson and Madison Counties, NC, www.headwaterseconomics.org, July 18, 2017.

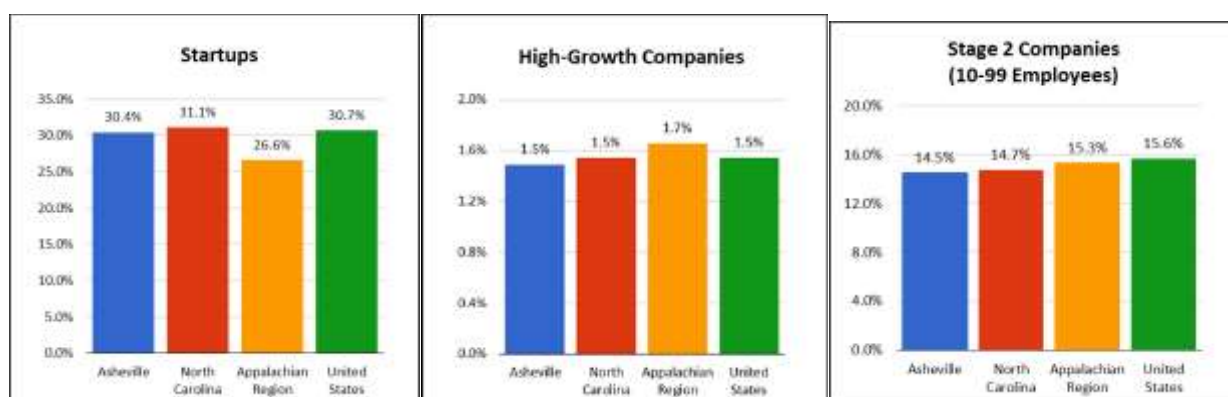
⁵ Ibid.

sit on the sidelines as the commitment to debt repayment left no financial capacity for such development. The enforced preservation of these iconic structures, even if they remained in disrepair, was critical for the ecosystem development that was to come.

Asheville: A Data Snapshot

While data on “entrepreneurship” is not readily available, this research effort has identified several key indicators that help to paint a picture of the outcomes of a strong entrepreneurial ecosystem, i.e., the entrepreneurial energy in a particular place. The data in Figure 3 below provide a snapshot of how the Asheville region compares on these measures of entrepreneurship to the same indicators for the Appalachian Region as a whole. Based on these figures, the Asheville economy compares favorably to state and national benchmarks, with few significant differences in the concentration of startups, growth companies or Stage 2 ventures.

Figure 3: Entrepreneurial Dynamism in Asheville, NC: 2011-2015.



Asheville’s History of Entrepreneurial Ecosystem Development

The roots of Asheville’s entrepreneurial ecosystem can be found in the downtown area’s economic devastation in the 1970s, caused by the development of a mall on the outskirts of town. In a common refrain, many businesses – and their customers – moved from downtown Asheville to the new mall, leaving a vacant and lifeless core. It took the vision of a recent returnee to North Carolina in the 1990s, Julian Price, to turn the tide in Asheville. Raised in Greensboro, North Carolina, Price returned to the state – but not to Greensboro – after spending time on the west coast finding his own way in life, distinct from his wealthy family. Building on the fledgling efforts of some residents to create small businesses in downtown buildings during the 1980s, Price saw the potential behind the once-grand buildings and invested his time, talent and treasure to promote a rebirth of downtown Asheville focused on local business development. In 1991, Price established Public Interest Projects (PIP), a for-profit development company committed to sustainable downtown revitalization through small business

development. For more than a decade, PIP invested or donated about \$15 million into Asheville's downtown buildings and people.⁶ Price also invested in Asheville's "infrastructure" – providing \$50,000 to help launch Mountain Microenterprise Fund (now Mountain BizWorks) and \$30,000 to stabilize and grow the local newspaper. According to Greg Walker-Wilson, founding CEO of Mountain BizWorks, Price "created the institutions and capacity for business to grow in the downtown." This history forms the foundation of Asheville's entrepreneurial ecosystem today.

The renewal of the city of Asheville also helped to create a unique cultural vibe. Asheville is perceived as an open and welcoming community. Its emphasis on local ownership has contributed to a culture that celebrates the unusual, the artsy and the creative. This is a culture that is also very consistent with entrepreneurial behavior – with positive, optimistic, opportunity-driven individuals. The roots of this culture can also be found in the unique arts, craft and music history of the region and the fierce independence and entrepreneurial spirit that is part of the western mountain culture. People were drawn to the region, as the data suggest, in response to this vibe. This culture formed the seedbed of the entrepreneurial ecosystem that was to come.

In the mid-1980s, the entrepreneurial ecosystem in the Asheville region lacked many of the elements visible today. In 1984, the state established the university-based Small Business Technology Development Centers (SBTDCs), in partnership with the U.S. Small Business Administration (SBA). These centers, including one in Asheville affiliated with Western Carolina University, provided business counseling and technical assistance to small and mid-sized businesses. About the same time, the state established a pilot group of Small Business Centers (SBCs) at community colleges across the state, eventually expanding to all community colleges in 1995. The SBC at Asheville-Buncombe Technical Community College (A-B Tech) provided services for entrepreneurs at the early stage of exploring or starting a business. Asheville was also served by a Chamber of Commerce. And, Self Help Credit Union established its western regional office in Asheville in 1988, bringing access to financial services to a broader group of business and residents in the region. These were the early partners in the ecosystem, working together to support the growing focus on small business development in Asheville's downtown.

In the broader western North Carolina region, two organizations were working to support the artists, craftspeople, musicians and others who comprised the mountains' "creative class." Groups like the Southern Highland Craft Guild had been supporting local craftspeople since 1930. In the late 1980s, Haywood Community College developed a Professional Craft program that combined studio art and craft courses with business courses so that graduates were better positioned to become successful artists or employees in craft businesses. While more common today, this program was innovative and unique at that time. From 1995 to 2015, Handmade in America worked with small towns across western North Carolina to help them transition from a mill town economy to one that was driven by the arts, culture and history of the region. Handmade was an influential proponent of entrepreneurship as a driver of economic development. The current emphasis on "creative placemaking" in community

⁶ Michael Muller, "Open for Biz: A passionate legacy," *Mountain Xpress*, Asheville, NC, August 17, 2010, <https://mountainx.com/news/community-news/081810open-for-biz-a-passionate-legacy>.

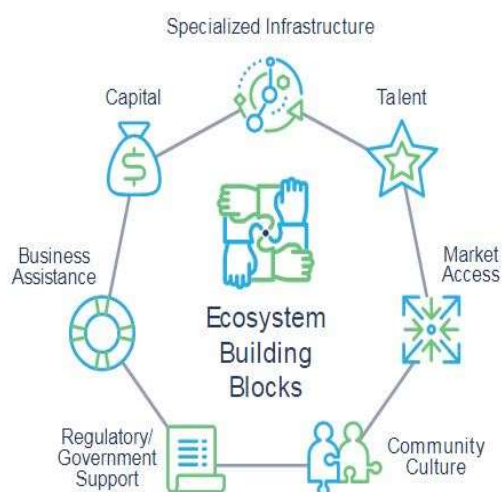
economic development has its roots in the innovative work done by this regional nonprofit. While Haywood Community College's program has thrived, Handmade in America closed its doors in 2015 but not before leaving its mark on the region and other parts of Appalachia.

Some additional and critically important elements of what has evolved into the Asheville region's entrepreneurial ecosystem were put in place beginning in the early 1990s. Mountain BizWorks (then Mountain Microenterprise Fund) was established as a microenterprise development organization (now community development financial institution) that provided both training and access to small loans to Asheville's growing small business community. Together with Self Help, Mountain BizWorks provided the small loans that made business development in downtown Asheville possible. About the same time, the North Carolina General Assembly created regional economic development organizations across the state – public-private partnerships with a primary role of marketing sub-regions of the state to outside corporations. In the early 2000s, Advantage West embraced entrepreneurship as a core component of its development strategy, establishing the Blue Ridge Entrepreneurial Council (BREC) based on the successful Council for Entrepreneurial Development in the Research Triangle region of the state and the Blue Ridge Angel Investors Network (BRAIN). BREC and BRAIN helped to expand the support that higher tech, higher growth potential entrepreneurs could access in the region. While Advantage West closed its doors at the end of September 2015 due to the loss of state funding, two of its important programs were adopted by Mountain BizWorks – the Advantage Opportunity Fund, providing early stage capital for businesses in the region with growth potential, and ScaleUp WNC, one of eight SBA-funded acceleration programs for existing businesses in the U.S.

A focus on economic sectors that drive the region's economy has been key to the history of ecosystem development in the Asheville region. Local foods and natural products, craft beers and, more recently, outdoor gear builders are sectors that are flourishing in Asheville as the ecosystem has expanded to provide more specialized services and organizational support to the businesses involved.

Assessment of Asheville's Entrepreneurial Ecosystem

While the roots of Asheville's commitment to entrepreneurship lie in downtown revitalization, the



creative economy, and small business development, a set of high performing entrepreneurial support organizations have partnered over time to create a robust entrepreneurial ecosystem that can support a range of entrepreneurial talent. The accompanying figure depicts the consensus building blocks of an entrepreneurial ecosystem derived from the research literature. The rest of this section provides an assessment of each element for the Asheville ecosystem, pointing out both the strengths and the weaknesses of a system that has evolved and developed over a 20-25 year history. This assessment is based on interviews with 18 individuals

whose organizations comprise the ecosystem currently or who contributed to its past development.

Community Culture

Any discussion about the Asheville entrepreneurial ecosystem must begin with community culture. Interviewees described a change in the culture of the region over the past decade. While the “mountain culture” had strong roots in self-reliance and bootstrapping, there has been growing enthusiasm for and acceptance of entrepreneurship and business development as the way forward for the Asheville economy. Enthusiasm for entrepreneurship builds on Asheville’s “artsy” culture and openness to new people and ideas. Entrepreneurship is celebrated and applauded. Interviewees pointed to a number of specific movements or programs that have contributed to this culture change:

- BREC and BRAIN, resources for entrepreneurial growth companies in the region, started by Advantage West.
- Asheville Grown, with a mission to “grow a resilient local economy and thriving community, champion the unique character of our region and advocate for prosperity for all”, and their Love Asheville, Go Local campaign.
- 1 Million Cups of Coffee, initiated by Venture Asheville, that brings entrepreneurs together weekly to network and provide peer encouragement and support.
- Creative Mornings, hosted by the founder of Arts for Life, to provide a networking opportunity for the region’s creatives.
- Talent Jam, a “speed dating, job fair and a networking event” designed to connect talented people with local companies, sponsored by Western North Carolina University’s Kauffman Foundation Entrepreneur-in-Residence.
- Asheville Citizen-Times, local reporting focused on innovation and creative ventures.

The large “in-migration of talent” has also contributed to this culture change. One interviewee described Asheville as a “BYOJ region – Bring Your Own Job”. As talented people move into the region – whether early retirees drawn to the beauty of the region or Millennials seeking easy access to outdoor recreation and a good work-life balance – they are confronted with the need to make a living. Entrepreneurship provides an alternative to more traditional career paths. Oscar Wong moved to the region in 1994 and started the first brewery in Asheville, Highland Brewing Company. Josh Dorfman moved to the region and is providing entrepreneurial leadership through Venture Asheville.

In addition to these efforts to champion entrepreneurs and entrepreneurship, interviewees also described a culture of strong collaboration among the organizations that make up the ecosystem. This collaborative spirit was true when there were few organizations engaged in the system and appears to be true as the system has expanded. Evidence of this collaboration is Spark Tank, a network of service providers in the region that has been meeting regularly for close to 15 years. These providers, including many of those referenced in the sections below, meet to share what they are doing and, increasingly, to work together on programming and innovation to better serve their small business and entrepreneur clients. Due in no small part to this collaborative spirit, one interviewee described the region as being

“more cooperative than competitive – we don’t get hung up on who gets credit.” This collaborative culture contributes to an emphasis within the system on “keeping entrepreneurs out in front”.

Business Assistance

In many rural regions, the sole anchor organizations providing business assistance to small businesses and entrepreneurs are often the Small Business Development Center and SBA-sponsored SCORE (Service Corps of Retired Executives). In Asheville, both the university-based SBTDC and the community-college based SBC have a long history in the region. However, over time, the ecosystem has developed to provide a broader range of business assistance from a diverse set of organizations. One notable organization is Mountain BizWorks (MBW). While the organization began as a program of the North Carolina Rural Center, they became their own community development financial institution (CDFI) in order to have more flexibility to respond to the needs of the businesses in the region. This flexibility has been an important feature of MBW, distinguishing them from some of the state- and federally-supported service providers that operated under a more constrained set of guidelines and outcomes measures (e.g., number of business served). MBW was able to be more flexible and responsive to what they were hearing from their small business clients – for example, offering assistance in Spanish as the number of Hispanic entrepreneurs increased. In addition, their approach to business assistance has emphasized the power of peer learning. The Foundations course, a staple of the organization for many years, provided classroom instruction that built individual skills but also fostered peer support and learning, reinforced by an active alumni network. During the organization’s restructuring in 2014, MBW contracted with Birds Eye Business Planning & Consulting to take over and revamp the Foundations business planning course so that it would continue to be a resource for aspiring and startup entrepreneurs in the region.

One of the programs that MBW inherited from Advantage West was ScaleUp WNC. Through this SBA-supported program, MBW is providing “intensive growth strategy development and implementation assistance to two cohorts of 15 small businesses annually through 2019.” Businesses are selected based on their potential for both growth and job creation, helping MBW expand their business assistance beyond microenterprises to more growth-oriented businesses. In addition to providing support to a growing set of growth ventures, ScaleUp WNC contributes further to the development of an entrepreneurial culture in the region – the launch of the Spring 2017 cohort was a celebratory event held at the Highland Brewery and included short “pitch” presentations by new cohort members to an audience of family, friends, investors, entrepreneurs from previous cohorts and interested community members.

In another example of ecosystem innovation, the Economic Development Coalition of Asheville-Buncombe County (EDC) and the Asheville Chamber of Commerce entered the entrepreneurial support arena with a focus on high-growth potential entrepreneurs in 2011. An assessment of the support programs in the region showed a lack of services for growth-oriented entrepreneurs. As a result, Venture Asheville was launched. As described by the Director of Entrepreneurship, Josh Dorfman, a high growth ecosystem requires “talented entrepreneurs; the talent to work with them; organized capital; and a visible and connected startup community.” Venture Asheville set out to help the ecosystem better

serve high-growth entrepreneurs – those entrepreneurs who live and work in Asheville/Buncombe County but pursue markets outside the region.

In terms of business assistance, Venture Asheville filled a very important gap by bringing a proven model, the MIT Venture Mentoring Service, to Asheville to provide mentoring to entrepreneurs through the Elevate Program. Entrepreneurs are paired with a team of 3-4 mentors who work together to support the entrepreneur. At the time of this case study, there were 25 high-growth Asheville entrepreneurs participating in the program, served by more than 50 mentors. In addition to mentoring, Venture Asheville has played an important role in the culture change that has gripped the city through support for 1 Million Cups of Coffee and Asheville Startup Weekend.

Market Access

Asheville's real strength in terms of the market access component of the ecosystem has been in the support and development of sectors that build on the unique assets of western North Carolina.

Local Food and Agriculture/Natural Products. Western North Carolina has a long history of small farm agriculture, including a significant reliance on tobacco in the past. In the mid-1990s, as farmers struggled to identify an alternative to tobacco, a group of farmers and supporters created the Appalachian Sustainable Agriculture Project (ASAP), a nonprofit organization with a mission “to help local farms thrive, link farmers to markets and supporters, and build healthy communities through connections to local food.” ASAP has achieved this mission through a number of avenues. Since 2002, ASAP has produced the *Local Food Guide* as part of their Local Food Campaign, listing family farms, farmers markets, CSAs, restaurants and others engaged in providing local food to the region. The organization also helped to create Appalachian Grown™, a local food brand, and a free certification process so farmers and other food producers can more effectively connect with buyers who are seeking certified locally produced food products. ASAP also developed the Growing Minds Farm to School program and provides training support for farmers market managers, helping to strengthen both the direct and institutional markets for food producers in the region. ASAP's work connects well to Asheville Grown's Buy Local campaign.

Related to the development of the market for local food and agriculture, there has been a concerted effort to develop the natural products sector in the region. An alliance of organizations is driving this sector development including Blue Ridge Food Ventures' Natural Products Manufacturing Facility, the BioNetwork at A-B Tech that provides training and laboratory services to support natural products business development and Bent Creek Institute that focuses on research and business development for entrepreneurs seeking to enter the natural products sector.

Craft Beer and Breweries. Asheville's first brewery, Highland Brewing Company, started in downtown Asheville in 1994. The sector started small and has built over time until Asheville earned its “Beer City USA” nickname. In the early years, the first five and then seven breweries began to get together to talk about issues and identify opportunities for joint purchasing. These craft beer entrepreneurs realized that they needed to work together to grow the sector, creating a larger market for all. In 2009, this

collaboration was formalized through the creation of the Asheville Brewers Alliance (ABA). In 2015, ABA hired its first full-time director. At that time, the alliance had 32 brewery members and 16 associate members, supply chain and support organizations focused on the sector. Within 18 months, ABA had grown to 55 brewery members and 108 associate members. As a trade and membership organization, ABA works to provide its members with the support needed to grow the western North Carolina craft beer sector.

Outdoor Gear Builders. The most recent sector focus in western North Carolina is on outdoor gear manufacturers. Drawn to the outdoor amenities of the region – and to being close to their customer base – a number of outdoor gear manufacturers were quietly growing across the region. In 2013, a group of these business owners got together to consider how they could strengthen the annual Mountain Outdoor Sports Festival and create an industry presence at the festival. Advantage West, still operating in the region at that time, provided staff support for this industry network including attending trade shows to promote the sector. Advantage West also provided resources to run a series of workshops for manufacturers to help them enter international markets and learn from industry leaders like Patagonia. Throughout 2014, the network focused on organizational development, forming a diverse steering committee of manufacturers from the region and beginning to hold monthly membership meetings. With the demise of Advantage West, the network was forced to become more self-reliant, instituting member dues and seeking more private sector funding support for the organization as a whole. In 2017, the network hired its first Director of Outdoor Gear Builders, Noah Wilson, and launched a website. Network members engage with the broader Asheville ecosystem even though many are located in neighboring counties. What began as a five-company network has now grown to a sector comprised of 35 companies.

Specialized Infrastructure

The Asheville ecosystem has been innovative in creating specialized infrastructure to support business development in two unique directions. Blue Ridge Food Ventures (BRFV) is a shared use commercial kitchen and natural products manufacturing facility located on the A-B Tech campus. BRFV can provide clients with the space to produce their own products or can provide co-packing services and produce products for a company. In addition, BRFV provides training for food and natural products entrepreneurs, with its own staff and in collaboration with the Small Business Center located on the same campus. Since its opening in 2005, BRFV has served over 235 clients, with about 60 active clients using the facility in a given quarter. In 2013, over 160 businesses received technical assistance from BRFV and \$390,000 worth of natural products were produced in the facility.

In downtown Asheville, coworking/incubator spaces have cropped up in recent years, meeting a growing demand for flexible space in downtown locations where new entrepreneurs can work and connect in both formal and informal ways. Three spaces/organizations stand out.

In 2011, Mojo Coworking opened in downtown Asheville. This open workspace provides members with space to work, meeting space and connections to other entrepreneurs focused on starting or growing their businesses. Mojo shares information about member skills to promote business-to-business

collaboration. This more traditional coworking space is designed to promote cross-fertilization of ideas and to build on the energy that entrepreneurs bring to their ventures.

Founded in 2016, the Collider is an “innovation center focused on catalyzing market-driven climate solutions”. Its co-working space is located within walking distance of the National Centers for Environmental Information, an asset that has given Asheville another relevant nickname – “Climate City”. The Collider is building on this asset and offers membership to entrepreneurs, providing them with access to relevant information, to other members and outside expertise and to events and other activities supported by the organization.

Hatch, a co-working space launched in mid-2016 with three tech companies, provides an opportunity for startup companies to start small and grow their businesses in an environment that encourages easy networking with their peers. The space now hosts six companies. Most recently, Hatch launched a new event – Hatch This – to celebrate startups and provide an opportunity to entrepreneurs to pitch ideas, get advice and compete for services and co-working space. Hatch not only provides specialized physical infrastructure, it is also contributing to a stronger startup culture in downtown Asheville.

Capital

A common challenge for many entrepreneurs and small business owners is access to capital. The Asheville entrepreneurial ecosystem has some, but not all, of the important components of a strong capital market for entrepreneurs. Mountain BizWorks has been and continues to be an important non-traditional lender in the region, providing loans ranging from \$10,000 to \$150,000 to microenterprises and other small businesses. As discussed earlier, MBW also provides business assistance to their borrowers including training, coaching and peer support. One source of business capital that was imperiled with the demise of Advantage West was the Advantage Opportunity Fund. Fortunately, that fund, focused on providing early stage financing to help entrepreneurs start or expand their businesses, was adopted by MBW and continues to be a source of capital for the region.

Self Help Credit Union is another non-traditional lender serving the state and the region. Self Help, a CDFI, provides businesses financing often in partnership with MBW and banks in the community. They also introduced to the region the Go Local CD – a way for people to invest their money locally to support financing for green entrepreneurs and other economic development efforts. The Carolina Small Business Development Fund (previously The Support Center) is another CDFI operating statewide but with an Asheville office. They operate the Western Women’s Business Center and have an historical focus on serving minority and women entrepreneurs.

While there are non-traditional sources of debt capital for entrepreneurs in the region, entrepreneurs often need early stage investment before they can qualify for a loan. In 2002, Advantage West helped to introduce an angel investing culture in the region by organizing the Blue Ridge Angel Investors Network (BRAIN). The network eventually transitioned into Inception Micro Angel Fund - Western and continues to serve early stage, high growth companies in the region. The legacy has been continued by Venture Asheville with the launch of Asheville Angels in 2014. In a unique partnership, Asheville Angels will be

managed by Upstate Carolina Angel Network, an experienced network that provides management expertise and connections to additional experienced angel investors from outside the region.

Talent

In Asheville, the focus on talent development has been primarily on supporting entrepreneurial talent and reaching entrepreneurial students in regional colleges, universities and community colleges. Western Carolina University established a respected Master of Entrepreneurship program, “designed by seasoned entrepreneurs for entrepreneurs.” UNC-Asheville and The Center for Craft, Creativity & Design launched the Center for Creative Entrepreneurship as a one-stop-shop to provide business training and resources to students and others starting “maker-based businesses.” A-B Tech offers both certificate and associate degree programs in entrepreneurship and established the Craft Beverage Institute of the Southeast® to support the craft beer sector in the region.

Effective Regulations

In all of the interviews conducted for this case study, there was a strong sense that the region is highly supportive of entrepreneurs. Some interviewees indicated that the Asheville city council and the county commission were supportive of business development, even if they were not active support providers within the ecosystem. The roots of this support can be traced back to Julian Price and his investments in business development. These investments contributed to the decision against a major downtown mall redevelopment project that would have fundamentally changed Asheville’s “local business” persona. Interviewees commented on the lack of chain stores and the promotion of local ownership in the downtown area. There was some concern, however, that this steadfast support for local business development and preference for local over outside ownership may be weakening. New hotel and other development downtown is putting some pressure on the character of the city.

Unlike some municipalities where support for small business is less robust, the Asheville city government website includes a “Start Your Business” icon on the front page. Clicking on the icon takes the entrepreneur to a tool that will help determine the zoning and permitting requirements for starting a business within the city. Given that a frequently heard challenge from entrepreneurs is not understanding what they need to do to comply with local regulations, this tool does two things. One, it helps simplify the regulatory environment for the entrepreneur with a set of questions designed to point toward the right permits, etc. Two, it makes a statement to the startup community that the city is supportive of business development.

Asheville: A Summary Assessment

The Asheville entrepreneurial ecosystem has developed over almost two decades of intentional focus and effort related to small, locally-owned business and entrepreneur development. It has been a demand-driven system with new initiatives or programs added as gaps were identified. For example, Venture Asheville and its suite of services was designed to fill a gap in services for growth-oriented

startup companies and to create a stronger startup culture in Asheville to augment the already strong locally-owned business culture. And, it is an ecosystem that supports the unique, asset-based sector development that has characterized Asheville's approach to economic development. Interviewees did identify, however, some ways in which the system could be strengthened.

- Many elements in the ecosystem are “Asheville-centric” – they serve businesses and entrepreneurs within the city but fail to reach people in outlying counties. With the demise of Advantage West, the regional development organization, there is less “cross pollination” with organizations and individuals in the more rural counties. There is one way that the ecosystem does seem to be spilling over into more rural places in the region. As Asheville city has developed, there has been corresponding upward pressure on housing and commercial property values. As a result, there is some anecdotal evidence, shared by interviewees, that some new entrepreneurs are being priced out of Asheville city and are moving into smaller communities such as Old Fort, Marshall and Mars Hill. This natural migration suggests the need to strengthen the regional ecosystem – including outlying towns and counties – over time. Service providers, particularly MBW, are considering ways to build trust and extend services to these smaller communities.
- The ecosystem does not serve minority entrepreneurs as well as it could and some intentional focus on meeting the needs of this part of the entrepreneurial population is needed.
- There continue to be capital gaps in the system. Two gaps mentioned by interviewees most frequently were venture capital – beyond the level that angels can provide – and credit enhancement for lower-wealth business owners. These gaps require very different solutions and partners but represent important perceived needs within the system.
- Without a major research university, there is some concern about the availability of talent for higher growth, higher tech entrepreneurs. If they start in the region, will they be able to stay in the region as they grow and need to bring on new talent? Interviewees expressed encouragement about new leadership and programming at the region's existing colleges and universities that might help to address in part this concern.
- There is some concern about resources to help with the transition of lifestyle businesses. As the owners of these businesses age and want to retire, there is a risk that the business will simply close without assistance to facilitate transition to a new generation of leadership. This problem is not unique to Asheville but besets many rural communities across the country.
- With the wide range of available resources in the entrepreneurial ecosystem (see map below), there is concern that entrepreneurs will get lost or have trouble connecting to the right resource at the right time. Some interviewees suggested the need for “navigators” to help match entrepreneurs with resources. Where those navigators would reside – and who would pay the costs of this navigation function – remain questions for consideration.

ASHEVILLE
Small Business Development Center

WHAT RESOURCES ARE AVAILABLE FOR MY BUSINESS OR STARTUP?

I WANT TO GROW MY BUSINESS

- NEED A COACH OR A BUSINESS PLAN?
 - SCHEDULE AN APPOINTMENT
 - SCORE
 - SAUTMAN ENTREPRENEURIAL RESIDENCE
 - AS TECH SMALL BUSINESS CENTER
 - WEDC
 - SMITH PYS CONSULTING
- CONSIDERING AN INCUBATOR, ACCELERATOR OR CO-WORKING SPACE?
 - NEED TO HIRE TALENT?
 - IS YOUR BIZ PRODUCT-BASED?
 - UTILIZE
 - mojo connect
 - VENTURE ASHEVILLE PLANTS
 - THE COLLIDER
 - AS TECH SMALL BUSINESS INCUBATOR
 - IS IT ALL-NATURAL, NATURE-BASED, OR A FOOD PRODUCT?
 - UTILIZE
 - Blue Ridge Food Ventures
 - NATURAL PRODUCTS MANUFACTURING FACILITY
 - ACCELERATING APPALACHIA
 - AS TECH SMALL BUSINESS INCUBATOR

I WANT TO ATTEND ENTREPRENEURIAL EVENTS

- INTERESTED IN STARTUP EVENTS?
 - CHECK UPCOMING EVENTS
 - ASHEVILLE
 - ATTEND EVENTS
 - 1000000 (MILLION DOLLARS)
 - STARTUP GRIND
 - LEAN STARTUP CIRCLE
 - ASHEVILLE STARTUP WEEKEND
 - TECH AFTER FIVE
- INTERESTED IN TECH-BASED EVENTS?
 - IS YOUR BIZ TECH-BASED?
 - APPLY
 - NCIDEA INNOVATION FUND
 - ATTEND EVENTS
 - meet the geeks
 - WINCOT.NET
 - ASHEVILLE MAKERS
 - ASHEVILLE COODERS LEAGUE

I NEED FUNDING

- WANT TO APPLY FOR A GRANT?
 - IS YOUR BIZ HIGH-SUPPORTIVE?
 - APPLY
 - mountain city works
 - LOOKING FOR AN INVESTOR?
 - ARE YOU INTERESTED IN A LOAN?
 - APPLY
 - SMITH HELP CREDIT UNION
 - THE SUPPORT CENTER
 - ADVANTAGE OPPORTUNITY FUND
 - NATURAL CAPITAL INVESTMENT FUND
 - DE INNOVATECHNOLOGY CENTER

VENTURE ASHEVILLE
small business development center

SOURCE - VENTUREASHEVILLE.COM/STARTUP-RESOURCES

There is no single approach to building a robust entrepreneurial ecosystem and, indeed, there are elements of Asheville's system that might be unnecessary or out of place in another community. However, there are important lessons learned for other communities and regions in Appalachia seeking to build a stronger support system for their entrepreneurial talent.

- 24

MBW's ScaleUp WNC. This demand-driven focus in ecosystem building is a strategy that should be adopted and practiced by other communities and regions.

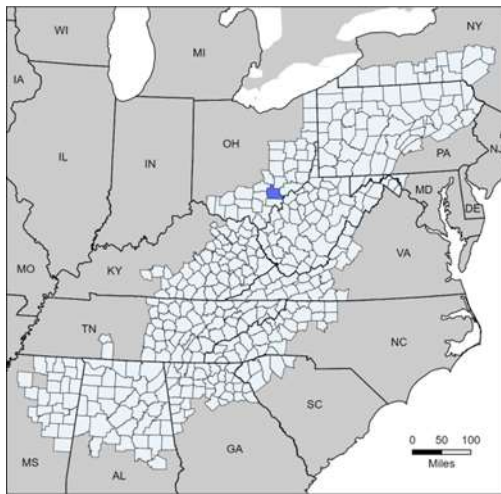
- **Culture matters.** Especially in regions without a history of entrepreneurship, creating a strong culture of entrepreneurship is very important. Asheville has made a culture of local business ownership and development central to their definition of an entrepreneurial ecosystem. "Local" is celebrated and rewarded. The city and region embrace the labels of "Beer City" and "Startup City." This celebration and focus on encouraging a spirit of entrepreneurship is something that other places should emulate.
- **Capital alone is never enough.** In developing the set of services that comprise the Asheville ecosystem, there has been a concerted effort to address most of the elements of an effective ecosystem and not focus solely on capital. MBW has demonstrated over time the power of combining access to capital with business advisory services. One of Venture Asheville's first programs was Elevate, bringing a proven team mentoring model to the region. Too often, creating access to capital is the default strategy for ecosystem building and the Asheville experience suggests the need to take a more holistic approach to supporting entrepreneurs.
- **Foster a collaborative, entrepreneurial approach within the ecosystem.** Organizations that make up the Asheville ecosystem embrace a collaborative, "shared credit" approach to supporting entrepreneurs. These organizations, for the most part, try to be as entrepreneurial as the people they serve. That means they do their market research by engaging with entrepreneurs to identify opportunities to better meet their needs. Then they innovate to fill the gaps in the system. As a result, new organizations and programs have been introduced into the Asheville ecosystem in response to demand from entrepreneurs and small businesses – filling gaps rather than creating programs because they were the "next big thing" or because they worked somewhere else. Encouraging a spirit of collaboration among service providers is an often difficult but increasingly necessary task in building an ecosystem. In a time of limited resources and, in many parts of Appalachia an imperative to support those who are contributing to an economic transition, collaboration is a necessary condition for success. One way to encourage collaboration is to work together to identify gaps and then support the best resource partners as they fill those gaps.
- **Root the ecosystem in the diverse assets of the place.** Asheville's ecosystem development is a prime example of asset-based development. Over time, the ecosystem has developed to support a relatively diverse economy – outdoor gear builders, craft brewers, high tech startups, local food and natural products manufacturers and the more traditional tourism-related businesses. This diversity is derived from the unique assets of the place. The renewal of downtown through local business development versus urban renewal helped to preserve Asheville's unique architectural assets. The Collider leverages federal investments in climate science data and research located in Asheville. Outdoor gear builders benefit from proximity to outdoor recreation opportunities and the people who are drawn to them. And, other examples can be drawn from the development of the ecosystem. This is perhaps the most important lesson for other communities and regions – build an ecosystem that is responsive to the unique

assets of the place, including the entrepreneurial talent that exists or might be attracted to the community.

Entrepreneurial Ecosystems in Appalachia: Case Study of Athens, Ohio

Description of the Place

Athens, Ohio is the county seat of Athens County, home of Ohio University. Located along the Hocking River, the city of Athens is the hub of southeastern Ohio, with a population of 23,832 in 2010. In spite of its status as a Micropolitan area, the county has a rural character. Unlike many parts of rural America, however, Athens County is growing. From 2000 to 2016, population in the county grew by 6% while



population in the city of Athens increased by almost 12%.⁷ Total employment in the county grew by 13% over the same time period, more than double the population growth in the county, driven in part by an almost 27% increase in the number of proprietors, a frequently cited measure of entrepreneurship.⁸ Over this same period, the region's income increased by 33%, with non-labor income increasing at twice the rate of labor sources. The region's non-labor income is strongly influenced by the attraction and retention of retirees in southeastern Ohio. The "college town" atmosphere of Athens, and the amenities that a significant university (over 26,000 students in 2016-2017) brings to a region, creates a quality of place that is attractive to retirees and a growing group of entrepreneurs.

Until the 1950s, the economy of southeastern Ohio was dominated by coal and brickmaking; the area was famous for making the well-known "Star Bricks" of Nelsonville. These industries declined over time and have been replaced by a strong local/regional agricultural economy and growth in manufacturing, including in the forest-related products sector. Building on the natural asset of the rolling Hocking Hills, the region has a strong tourism sector and has developed its own "Regional Flavor" – Brewed on the Bikeway, 30 Mile Meal, and Ohio's Windy 9 are three examples of this branded tourism development strategy. Through these and other initiatives, there is a long and robust history of collaboration across sectors – public, private and philanthropic – in the Athens area. Nonprofit organizations like Rural Action, ACEnet (Appalachian Center for Economic Networks), and the Athens Convention and Visitors Bureau along with Ohio University's efforts including the OU Innovation Center and TechGROWTH Ohio have been leading efforts to create a stronger, more entrepreneurial approach to economic development for decades. Only recently, with the establishment of APEG (Appalachian Partnership for Economic Growth) in 2012, has the region had a regional economic development organization. APEG brings a portfolio of traditional (retention, expansion and attraction programs) and non-traditional

⁷ Headwaters Economics, A Profile of Socioeconomic Measures: Buncombe, Haywood, Henderson and Madison Counties, NC, www.headwaterseconomics.org, July 18, 2017.

⁸ Ibid

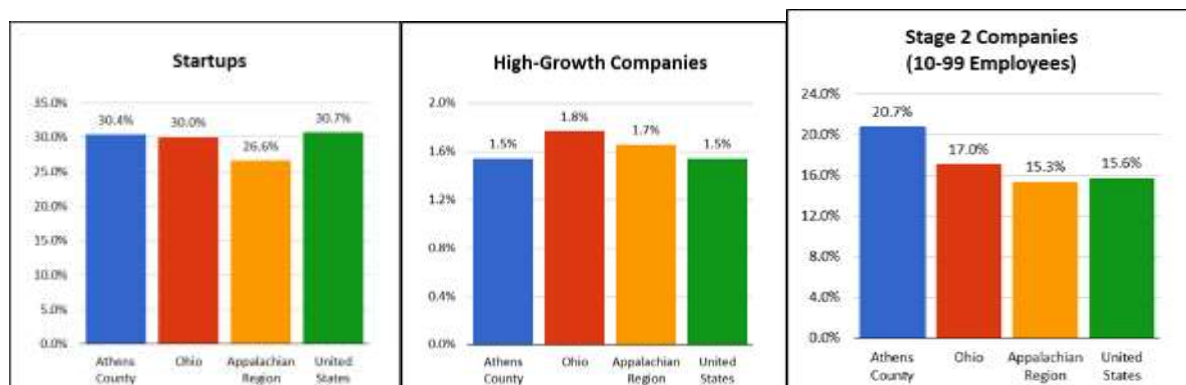
(cluster initiatives, sectoral wealth-creation strategies) approaches to the region’s economic development capacity.

In terms of its entrepreneurial ecosystem, the Athens area is best known for its robust regional food system, anchored by partners ACENet and Rural Action. For more than three decades, these and other organizations have worked together to build a responsive ecosystem that connects local entrepreneurs to broader markets and provides them with the support and resources needed to grow viable businesses that move the entire sector forward. New initiatives, funded by ARC’s POWER grant program and other sources, are building on this solid foundation to create a vibrant entrepreneurial economy worthy of emulation across the Appalachian Region.

Athens: A Data Snapshot

While data on “entrepreneurship” is not readily available, this research effort has identified several key indicators that help to paint a picture of the outcomes of a strong entrepreneurial ecosystem, i.e., the entrepreneurial energy in a particular place. The data in Figure 5 below provides a snapshot of how Athens County compares on these measures of entrepreneurship to the same indicators for the Appalachian Region as a whole. The regional concentration of Stage 2 companies is strong, and overall performance in terms of supporting startups and high-growth ventures is also promising.

Figure 5: Entrepreneurial Dynamism in Athens County, OH: 2011-2015.



Athens: A History of Entrepreneurial Ecosystem Development

The modern history of entrepreneurial ecosystem development in Athens County begins in the mid-1980s to early 1990s and is a tale of promoting economic justice along with economic development. In

1985, a group of Athens community members came together to create what is now ACEnet (Appalachian Center for Economic Networks), including June Holley (former Executive Director) and Leslie Schaller (long-time Director of Programming). In its early years, the organization had a strong focus on worker ownership and helping low income people in the community start worker-owned businesses. Over time, ACEnet has helped launch 10 worker cooperatives including Casa Nueva Restaurant & Cantina, a fixture in downtown Athens. ACEnet's mission continued to evolve to include an emphasis on building networks and connecting entrepreneurs to each other and emerging markets. Beginning in 1990, their focus on developing the ecosystem for food entrepreneurs began with the creation of the Food Ventures Center. ACEnet's current mission is to "grow the regional economy by supporting entrepreneurs and strengthening economic sectors."

About the same time, Carol Kuhre, a social justice activist in the region, was involved with what was to become Rural Action, a nonprofit, membership-based organization with a commitment to asset-based economic development. Rural Action's model relied heavily on community engagement and leadership development, working with diverse and inclusive community groups to develop strategies to create economic, social and environmental sustainability in the Athens area, from the ground up. Over time, Rural Action has evolved to place greater emphasis on sector strategies in sustainable agriculture and forestry, zero waste, energy and watershed restoration. More recently, the organization refocused on engaging communities through its entrepreneurial communities work, funded by ARC's POWER initiative.

Building on this solid foundation of asset-based development, funded initially through religious philanthropic organizations, another important initiative contributed to the entrepreneurial ecosystem in Athens. In the mid-2000s, the Regional Flavor movement was born in Athens. This unique approach to development focused on using a region's unique assets to add value to the economy. Going beyond more traditional tourism approaches, Regional Flavor engaged local businesses, helping them innovate and expand to serve regional and urban markets. It focused on regional collaboration, recognizing that regional solutions and innovation required more than a single organization or leader. It also reached out to businesses outside of tourism to help them improve processes, develop regional products, and sell into urban markets. The ecosystem foundation was strengthened by the addition of another strong anchor institution, the Athens County Convention and Visitors Bureau (ACCVB), led by Paige Alost. The ACCVB embraced the regional flavor approach and developed initiatives to build on the region's unique assets, including 30 Mile Meal featuring farms, food and spirit businesses located within 30 miles of Athens.

All of the efforts described above were innovative, collaborative and served in many ways as model practices for other rural regions across the country. ACEnet's Food Ventures Center has inspired similar efforts in other regions, including western North Carolina's Blue Ridge Food Ventures (described in the Asheville case study). The Regional Flavor approach has influenced similar efforts in Native American communities and the Arkansas Delta. Rural Action's zero waste sector work and more recent focus on social enterprise are models for other communities. Yet there was another anchor institution in the

region, Ohio University, poised to extend the entrepreneurial ecosystem to support a stronger startup culture in the region.

The mid-1980s marks Ohio University's entry into the region's ecosystem building landscape. In 1983, the OU Innovation Center was established as the first university-based business incubator in the state. This business incubator has provided space and technical support to startup enterprises for more than two decades. It supported the startup of a number of successful and diverse businesses in the region including:

- Third Sun Solar, an installation company that started with a goal of hiring eight employees but in 2015 employed 30;
- Imgur, a web platform that attracted about \$40 million in external investment
- Diagnostic Hybrids Inc., one of the largest companies incubated in the Center which was subsequently acquired by another firm in 2010.

In 2006, TechGROWTH Ohio was established as a public-private partnership to provide support for startups in southeastern Ohio. Located in the Voinovich School of Leadership and Public Affairs at Ohio University, the initiative provides business assistance, mentoring and access to capital for startup entrepreneurs across the region. The focus is on technically innovative businesses in southeast Ohio (or willing to locate there) that are small (fewer than 30 employees) and new (less than five years old). The presence of TechGROWTH Ohio has added a new set of resources to the ecosystem, serving entrepreneurs who need acceleration and commercialization support. This focus on tech/growth entrepreneurs is also facilitated through the partnership with OU's Innovation Center.

In addition to the nonprofit and university partners, this region also benefitted from the establishment of one of the first rural focused venture capital companies, Adena Ventures. Adena brought attention to the equity capital needs of rural entrepreneurs in the region and was an early innovator and contributor to the entrepreneurial ecosystem.

These nonprofit and higher education partners have been instrumental in building, over time, the entrepreneurial ecosystem described in more detail below. Their importance is magnified in the Athens area because, until 2012 when the state privatized economic development, the region was not represented by a formal economic development organization. In response, the Foundation for Appalachian Ohio, working with Jobs Ohio, a private, nonprofit entity, incubated a regional economic development organization, the Appalachian Partnership for Economic Growth (APEG). Since 2012, APEG has filled an important gap in the entrepreneurial ecosystem, focusing support on clusters of manufacturers in the region and helping them connect to the resources they need to remain innovative and competitive in a global economy. While Jobs Ohio has a narrow focus on traded sector, job creating businesses, APEG is doing much more in the region. Almost half of their 2017 projects do not fit the narrow Jobs Ohio definition but these projects – like the wood products industry supply chain work described below – are critical to building wealth in the region.

From its roots in economic justice, worker ownership and asset-based development, and with the strong support of its higher education anchor institution, the Athens Ohio entrepreneurial ecosystem has evolved into a robust, multi-dimensional system that serves a wide range of entrepreneurial talent in the region. The ecosystem was built upon a strong commitment to collaboration and community engagement that, for the most part, continues today. Recent funding initiatives including ARC's POWER program have brought a new set of innovations to the system, with new collaborative challenges and opportunities. The strength of the system, and the important and lasting connections between some of the key anchor institutions, bodes well for the successful integration of new ecosystem partners and initiatives in the years ahead.

Assessment of Athens' Entrepreneurial Ecosystem

While the roots of Athens' commitment to entrepreneurship lie predominantly in the local and regional food system, a set of high performing entrepreneurial support organizations partnered over time to create a robust entrepreneurial ecosystem that supports a range of entrepreneurial talent. The ecosystem, in recent years, has grown to include some of the smaller communities and regions around Athens city and county, connecting these more rural entrepreneurs to resources in Athens and, in some cases, bringing those resources to them. The graphic below describes the consensus building blocks of an entrepreneurial ecosystem derived from the research literature. The rest of this section provides an assessment of each element for the Athens ecosystem, pointing out both the strengths and the weaknesses of a system that has evolved and developed over a 30 year history. This assessment is based on interviews with 19 individuals whose organizations comprise the ecosystem currently or who contributed to its past development.

Community Culture

Collaboration and strong social capital have been hallmarks of ecosystem development in Athens. Key organizations – for example, ACEnet and Rural Action – have worked well together for the past two or more decades to build a strong entrepreneurial culture in the region. According to one partner, she came to realize that their work wasn't just about creating businesses, it was about "changing the entrepreneurial culture". One of their early efforts was focused on getting a story in the paper every week to highlight a local entrepreneur. These efforts to elevate the entrepreneurial culture continue today as partners like Ohio University's Center for Entrepreneurship and Innovation and ACEnet's Food Ventures Center draw attention to new and existing businesses in the region. In addition, the emergence of a growing number of craft breweries, spin-off ventures from Casa Nueva and successful regional and even national food companies are contributing to



a “we can build it here” spirit in Athens city and county. Events such as 30 Mile Meal draw attention to local *agri-preneurs*, food entrepreneurs, restaurants and other participants in the local food sector.

The region has also had a strong focus on networking – connecting entrepreneurs to peers. Nowhere is this networking culture more in evidence than at the ACEnet Food Ventures Center. Entrepreneurs are able to connect with one another, share resources and experiences and even do joint purchasing. Recently, the LIGHTS Innovation Network, developed by Ohio University with support from ARC, has begun establishing a regional system of innovation hubs and maker spaces that to create a startup/innovation culture and community in the region. The Athens Chamber plays an important role in networking as well, hosting monthly networking events at a participating business, hosting quarterly Cash Mobs to support local businesses and holding the first Women’s Summit.

The region is also working to lift up entrepreneurship and innovation by hosting Startup Weekends – first in Athens and more recently in Zanesville. Using the TechStars framework, these weekends, supported by the OU Innovation Center, provide an opportunity for aspiring entrepreneurs to take an idea “from concept to creation in one weekend.” The events draw attention to entrepreneurship as an opportunity for the region and contribute to building an innovation culture. The Innovation Center contributes to this strong culture in other ways as well – through student entrepreneurship competitions, lunch and learn events and opportunities to network within the Center itself.

Another recent effort focused on building community capacity and culture around entrepreneurship is the entrepreneurial communities’ work that Rural Action is doing in partnership with the national Center for Rural Entrepreneurship. Funded through an ARC POWER grant, Rural Action has formed a coaching team that is bringing the Center’s tools and framework to communities in southeastern Ohio. These community teams are identifying entrepreneurs, connecting them to resources and helping to promote entrepreneurship as a way of doing economic development in these small towns. Rural Action is committed to building their own capacity to work in a similar way with communities across the region in the future as a way to strengthen the ecosystem outside Athens city and provide greater connection to the resources of the larger regional ecosystem.

Business Assistance

The Athens area has developed some sophisticated resources to provide business assistance and support to specific types of entrepreneurs. Local food entrepreneurs are well served by ACEnet and Rural Action. High tech, innovation-focused entrepreneurs can receive support through TechGROWTH Ohio and the Ohio University Innovation Center. TechGROWTH Ohio has provided business assistance, mentoring and, for some, capital support to 2,000 entrepreneurs over about a decade in the region. APEG provides a range of services and support to traded sector businesses, with a focus on those that will create at least 10 jobs. Up until the state’s reimbursement formula was changed, APEG served as the Manufacturing Extension Partnership in the region, helping a range of manufacturing companies adopt new processes and systems to keep them globally competitive. This role will be taken on by Ohio University going forward. APEG has also focused on wood products entrepreneurs, helping to build a

stronger set of supply chain partners and value-added entities to create and keep more wealth from this sector in the region.

The new LIGHTS initiative was begun in recognition that the university's focus on tech-based entrepreneurs was missing some important innovators, particularly in the rural communities outside of Athens. Through a series of innovation hubs and maker spaces, LIGHTS is seeking to identify entrepreneurs and provide business assistance to help them launch their products and inventions. This initiative is filling a gap in the ecosystem that was not being filled by university resources restricted to campus – through the Innovation Center for example. This initiative is only one year old but, at the time of the interview, had already worked with 20 new businesses, resulting in new business investment and job creation.

Support for microenterprises and less specialized business startups is more limited in the region. In the 1990s, ACEnet became a regional microenterprise development program and was active both regionally and as part of the national microenterprise development movement. Through this work, ACEnet became a one-stop organization for assistance, capital, physical incubator space, and marketing support. In the 2000s, the organization recognized a need to tighten their focus as leadership changed. They continue to be an important source of support for local food and artisan entrepreneurs, and a vital piece of the ecosystem, but the microenterprise focus has been taken on by the local development organization. Also working in this startup/early stage space, the region's SBDC system was described as less than robust. Reorganization at the state level has placed more responsibility for the SBDCs in the region at Ohio University and interviewees described this move as a positive one for entrepreneurs and indicated that they expect to see a more robust set of services and more attention to marketing in the future.

Market Access

The Athens ecosystem is relatively robust in terms of helping a range of entrepreneurs identify and access the markets they need to grow a business. In the late 1990s, ACEnet began a stronger focus on market access and development. ACEnet helped to develop a regional brand – Food We Love – and worked to get Food Ventures clients' products positioned in regional supermarkets. The Art of Ohio website, with over 100 artisans, was launched about the same time, providing online access to markets that these artisans would not have had. Rural Action has worked with agri-entrepreneurs to tap new markets including owning and operating a social enterprise – the Chesterhill Produce Auction – that provides market access for producers, including a significant number of Amish farmers, by aggregating local products to meet the needs of larger buyers (e.g., restaurants, food companies). TechGROWTH Ohio is focused on providing “no-cost help to tech-based entrepreneurs” to commercialize technology coming out of the university and identify new market opportunities for those innovators. The LIGHTS initiative has as one of its goals to help “entrepreneurs understand and identify the correct market for their product ideas and connect them to the necessary resources and funding to move forward.” APEG manages the Ohio Wood Products Database, supported by a US Small Business Administration Regional Innovation Cluster Initiative grant, that identifies small wood products manufacturing companies and helps connect them to potential buyers both in and out of the region.

The Athens Area Chamber also views its role as being a messenger for the region. The Chamber is actively trying to spread the word about successful businesses beyond the region since only a few are already known more widely. Marketing about the region's entrepreneurial culture and quality of place, and festivals that build off the successful entrepreneurs (Brewed on the Bikeway, 30 Mile Meal), help to create a "halo effect" that contributes to a culture that attracts more entrepreneurial talent, and visitors alike.

In addition to these very specific, sector-focused market access resources, entrepreneurs needing assistance competing for government contracts can receive help through Ohio University while those who require export assistance can work through the state's Development Services Agency.

While the ecosystem components are in place to help entrepreneurs with market access, interviewees identified some constraints or gaps in the system. Broadband continues to be a challenge, making it more difficult for entrepreneurs to tap markets outside the region. In spite of some of the efforts to help entrepreneurs with marketing, there is still a gap in terms of market development – where to sell, how to build a website to sell, etc. There is also untapped potential in the tourism market in the region. ACEnet has helped with a regional branding effort with local artisans, including baby boomers seeking extra income and fine artists seeking to expand the market for their art. But, a more comprehensive regional approach to tourism development may be warranted for the region.

Specialized Infrastructure

The region has a long history of investment in specialized infrastructure, beginning with the ACEnet Food Ventures Center in 1996 and continuing with the establishment of maker spaces in several locations across the region in 2017 and 2018. ACEnet now operates two incubation campuses. The Athens Business Incubator includes three buildings that house small, local businesses, mostly focused on health and wellness. In addition to physical space, these businesses have access to technical assistance and other types of business support. Also on the Athens campus is the Food Ventures Center, consisting of the Central Kitchen, Thermal Processing Room and Warehouse. This space – one of the first in the country – helps entrepreneurs develop their products and their businesses without having to invest in the overhead associated with purchasing land, building and equipment. In 2013, in response to wider demand outside of Athens (and the need for more space), ACEnet established the Nelsonville Business Center and Food Hub. This 94,800 square foot facility provides a distribution hub for the growing southeastern Ohio food produces and businesses. Entrepreneurs also benefit from a close relationship with Hocking College and their Culinary Arts degree program.

Ohio University operates a business incubator space in Athens. The Innovation Center was the first university-based incubator in Ohio, and it has worked with more than 100 local companies over the years.⁹ According to the Center's 2016 impact report, in 2016 alone the Center worked with businesses that created 227 jobs accounting for \$10 million in employee compensation and generating over \$1

⁹ See Bridget Lair and Dinah Adkins, *Best Practices in Rural Incubation*. National Business Incubation Association, 2013, pp. 60-73.

million in local and state tax revenues.¹⁰ The average annual wage for incubator tenants exceeds the regional average. Not only is the Center contributing to more successful business startup but it is also helping to produce quality jobs in the region. The facility offers office, conference and wet lab spaces as well as 3D printing and other business support services. Innovation Center staff partner with TechGROWTH Ohio to provide support for tenants who are tech-based businesses. The Chamber of Commerce and Athens County Economic Development Council are anchor tenants in the facility, helping them to connect with businesses in the earliest stages of development.

While much of this specialized infrastructure is Athens-centric, the LIGHTS initiative is working with a number of partners to create special spaces across the region. At the time of the interviews for this case study, four maker spaces were planned or already established in the region – Athens Makerspace, Shawnee State Innovation Accelerator, The Epicenter and The IDEA Lab at Zane State College. A fifth – Somerset Innovation Gateway – was in process. Most often, these spaces are targeted for downtown locations and involve creative building reuse. They are spaces where entrepreneurs can come to access equipment (e.g., 3D printers, metal and wood working equipment) to develop product prototypes and even just to tinker with ideas. While makerspaces provide physical access to offices and equipment and proximity to other inventors and entrepreneurs, they also are potentially important parts of building a stronger entrepreneurial community and culture in the small towns in and around Athens County.

Capital

There are a number of unique and important players who provide access to capital for entrepreneurs in the region. In the 1990s, ACEnet provided microfinancing to entrepreneurs. Later they founded ACEnet Ventures to join the growing community development financial institutions movement, only to suffer some major defaults during the Great Recession. ACEnet's focus now is on helping get entrepreneurs "capital ready" through their business assistance. Micro finance (loans of \$10,000 - \$50,000) in the region is now provided by the Athens County Economic Development Council's Small Business Revolving Loan Fund.

Athens County also has an engaged local bank, Hocking Valley Bank. In 1963, there was no commercial bank in the area. A number of local investors started Hocking Valley Bank with a goal of creating an independent, locally owned financial institution. No one can own more than 5% of bank shares and there is an ethic of community leadership that shareholders maintain. In evaluating deals, bank leaders consider what the loan and the business will mean for the community and are not solely focused on loan fundamentals. A number of interviewees identified the bank as an important partner in making business financing deals happen. The bank also partners well with other organizations in the ecosystem, including ACEnet, APEG, the EDC and Rural Action.

TechGROWTH Ohio fills another niche in the capital part of the ecosystem by providing early-stage growth funding to its clients. When appropriate, TechGROWTH Ohio can connect entrepreneurs to a set

¹⁰See: The 2016 Economic Analysis of the Ohio University Innovation Center, <https://www.ohio.edu/research/innovation/upload/2016-Economic-Impact-of-Innovation-Center-5-11.pdf>.

of angel investors associated with a number of funds that work in strategic partnership with TechGROWTH. In addition to this more formal source of early stage funding, interviewees described a number of successful Athens-area businesses that are helping other entrepreneurs with start-up funding.

APEG identified a gap in the capital ecosystem of the region and is establishing a community development financial institution that can provide greater access to working capital and participate with local banks to help get financing to entrepreneurs that are not ideal traditional bank customers. With the CDFI, the region will have a relatively strong and diverse set of capital resource providers that can meet the needs of entrepreneurs, from startup to growth.

Another capital gap identified by interviewees relates to local investing by citizens in the region who are not likely to be accredited investors. Given the strong identity between the region's residents and homegrown entrepreneurial ventures (like Jackie O's and Casa Nueva), there may be latent interest in investing in new business ventures but there are limits to the ability to effectively participate at this time.

Talent

Talent is addressed in an entrepreneurial ecosystem in two ways. One, like many rural regions, entrepreneurial businesses in the Athens area often have trouble finding the talent they need to grow. A well-functioning ecosystem builds connections between higher education and business, between workforce and entrepreneurial development organizations, and between entrepreneurs. For the Athens region, talent development within the local and regional foods sector is most well-developed. ACEnet facilitates skill building for entrepreneurs and their workers through the programming and certification of the Food Venture Center. Hocking College is also building this workforce through its culinary program. Local food entrepreneurs often work together to identify and share talent. In other sectors, talent building is not as well developed. APEG is just beginning to focus on talent development for the wood products industry through a partnership with Shawnee State and Scioto County Career and Tech Center. The County center will create a career pathway for high school students in this sector. Students will get exposed to the industry and, if they demonstrate talent for it, can continue to build skills at Shawnee State. Finally, Hocking College is focusing attention going forward on projecting future workforce development needs in the region so that they can develop programs and training to help people prepare now for the industries that are emerging in the region.

Two, a well-functioning entrepreneurial ecosystem should also help to cultivate entrepreneurial talent by exposing young people to entrepreneurship as a career path and option for the future. A number of ecosystem partners are involved in youth entrepreneurship. Hocking College is partnering with EntreEd in select counties in its service area. Through this ARC-funded effort, local K-12 school systems commit to spend the first year helping to build the skills and tools of teachers around entrepreneurship so that they can bring that knowledge into their classrooms. The goal is to expose every child, in every grade, every year to entrepreneurial concepts. Following a year of professional development, the plan is to

begin programming and to engage the business community in the process through activities like shark tank competitions, product development competitions and others.

Within the local food sector, Community Food Initiatives operates YEAH! Kids (Youth Entrepreneurs at Hope) program at Hope Drive Apartments with funding from the local housing authority. Through the vehicle of a community garden, YEAH! Kids learn about production, culinary arts, sales and money management. In Logan County, the chamber and the school system partnered to bring the Young Entrepreneurs Academy to the county's students (in grades 6-12). Students spend the year learning about entrepreneurship, starting a business and pitching it to a group of local investors and leaders. Marietta College and Ohio University offer pitch competitions to college student entrepreneurs as well as other types of programming offered through the OU Center for Entrepreneurship. The LIGHTS Initiative is also working to do student matchmaking to new businesses and to provide training for employees and teams. One of LIGHTS' makerspaces will be located at The Epicenter, a youth and entrepreneurial development center in Marietta that is being partially supported by the community foundation. Youth and students can work together at the center to develop their business ideas and also work with entrepreneurs-in-residence. With the addition of a makerspace in 2018, Epicenter will provide an even richer environment and culture of entrepreneurship for young people.

The development of young entrepreneurs is closely tied to efforts to build a stronger entrepreneurial culture. One good example of that in the region is TechGROWTH Ohio's Dare to Dream high school pitch competition. This competition started when staff heard, through their regional deal search process, that many high school students in one county "viewed life as not worth living." To try to create some positive energy and attitude, TechGROWTH Ohio seeded the Dare to Dream competition and engaged teams of 3-5 high school students who developed their business idea and pitched it to a panel of judges. The competition continues.

Effective Regulations

The Athens region has a good network of mayors and county commissioners who are supportive of entrepreneurship as a development strategy and are open to innovative projects and initiatives. The region, generally, is viewed as a good place to start a business and interviewees shared stories of entrepreneurs who had come to the region for school and stayed to start a business or moved to the region for the quality of place and started a business to earn a living. In Athens city, business and elected leaders have worked together to create Special Improvement Districts, the Downtown Redevelopment District and the Innovation District to encourage the further development of local entrepreneurs. New leadership at the university was cited as a positive step toward building a stronger relationship between the city, county and university which should benefit local entrepreneurial development.

A challenge, however, is that the region was described as having limited political clout at the state level – as a region that is often overlooked or an "afterthought" in state policy discussions and decisions. The development of APEG – the region's first economic development entity connected to Jobs Ohio – may serve to overcome some of that isolation.

Given the importance of the local foods sector to the region, food safety regulations create a significant potential barrier to new entrepreneurs. One of the important benefits of the shared use kitchen incubator at ACEnet is regulatory compliance. The Food Ventures Center holds several licenses related to food safety and also assists client in obtaining licenses.

The primary challenge cited on the regulatory side was inconsistent zoning, code and other regulations across the city, county and other government agencies. However, most of those interviewed felt that entrepreneurs were able to overcome these challenges with the support of the ecosystem partners.

Summary Assessment of the Athens Ohio Ecosystem

The Athens entrepreneurial ecosystem, developed over more than three decades, is proof positive of the power of strong grassroots leadership and collaboration. It also demonstrates the importance of effective engagement of all sectors – public, private and philanthropic – in the development and implementation of programs that support the ecosystem. The Athens ecosystem experience is also a story of innovation and evolution. Many of the organizations that are anchors of the system now – ACEnet, Rural Action, Ohio University – have changed their focus in response to changing demand from entrepreneurs and opportunities that have arisen in the broader Appalachian Region, such as the POWER initiative. In spite of this evolution, however, the organizations remain committed to asset-based sector development and to enhancing what has made the Athens ecosystem unique and successful to date. In spite of this success, interviewees did identify some ways in which the ecosystem could be strengthened, some of which are already being addressed.

- The ecosystem is strongest in and around Athens city and becomes less robust in smaller communities. However, the LIGHTS initiative, ACEnet's expansion into Nelsonville and Rural Action's entrepreneurial communities work hold great promise for extending ecosystem elements more uniformly throughout the broader southeastern Ohio region. APEG also plays a role in establishing a more regional footprint with its wood products industry work.
- Related to the regional footprint of the ecosystem, interviewees suggested the need to strengthen the pipeline of entrepreneurs in the region. Many smaller communities have limited capacity to do entrepreneurial development and, as a result, their entrepreneurs may have trouble finding the resources they need to grow. Again, partners in the region are trying to innovate through both the LIGHTS efforts and Rural Action's work.
- Interviewees noted an important community/higher education divide with Ohio University and Hocking College. However, new leadership at both institutions was credited with creating greater openness to strengthening community connections and using the resources of these institutions in support of entrepreneurial development. Ohio University's willingness to step in to fill the Manufacturing Extension Partnership gap is one example. Hocking College's focus on future workforce development is another.

- Broadband was cited as an important challenge to the entrepreneurial ecosystem. Access to markets – a real strength of the system – may be limited without adequate broadband infrastructure. The region’s lack of a strong political voice at the state level may play a role in limiting broadband opportunities.
- Working capital and growth capital were both identified as limitations of the system. While the EDC operates a small business revolving loan fund, it is not clear that this fund totally replaces the microfinance capacity that existed in the region in the 2000s. These capital gaps deserve more attention and, potentially, innovation including the idea suggested by TechGROWTH Ohio of creating more opportunities for citizen engagement in local investing.

Lessons Learned for Other Communities and Regions

Athens has been a model for other communities and regions, particularly in terms of local and regional food system development. The Food Ventures Center has inspired many other communities and key ecosystem actors in the region have been generous in sharing their models with community leaders outside the region and the state. The lessons from this sector and from the broader history of innovation and development are instructive for other parts of the Appalachian Region.

Strong social capital and commitment to collaboration matter. Particularly at a time and in a region with limited resources, the strong network created by anchor institutions like ACEnet and Rural Action helped to lay the foundation for a true spirit of collaboration in the region. Organizations worked well together, shared credit and leadership and, as a result, were able to work together to find solutions to the economic development challenges that the region faced. Collaboration bred an extraordinary level of innovation, putting Athens at the forefront of entrepreneurial development in the local foods sector, in microenterprise development and in regional flavor and branding. This innovation has continued with the more recent focus on wealth creation and sector development. Taking the time to build trusting relationships among the key players in the ecosystem is an important lesson for communities at the front end of ecosystem development. Economic development is a complex undertaking, requiring the work of many actors and true collaboration is key to success.

Effective leadership is key. Most of the interviewees for this case study acknowledged the important role that a number of leaders – mostly women – had played over time. June Holley and Leslie Schaller at ACEnet, Carol Kuhre and Michelle Decker at Rural Action, Paige Alost at the Athens Convention and Visitors Bureau and, more recently, Jen Simon with LIGHTS, John Glazer and Faith Knutsen at TechGROWTH Ohio work well together and have collectively built the strong social capital that exists in the region. This leadership was critical to position the community and the region to take advantage of opportunities as they emerged, such as the ARC POWER grant process.

Asset-based development and ecosystem building go hand in hand. Many of the organizations that make up the ecosystem in Athens practice asset-based development. The commitment to map the

region's assets and build an ecosystem that advantages those assets was critical to success. Local foods, tourism and the more recent work in the wood products industry are all examples of how the ecosystem has developed around the region's assets. Other community and regional leaders interested in building a strong entrepreneurial ecosystem should begin with a thorough understanding of their assets and design a system to capture as much value from those assets as possible. This asset focus also extends to the ecosystem actors. For example, ecosystem development in Athens benefitted from the presence of a strong community bank. Early ecosystem actors engaged the bank as a partner, working to build a strong and reciprocal relationship with the bank that is not present in all communities. Communities should identify and actively engage banks and other service providers early on so that they can see the benefits of being part of a responsive ecosystem.

Talk to entrepreneurs and community residents. The Athens ecosystem is demand driven not supply-side focused. The strong elements in the system – Food Ventures Center, Nelsonville Food Hub, OU Innovation Center and now LIGHTS' makerspaces – were developed because of identified needs in the community. Once those needs and desires were identified, community partners began to innovate and identify solutions. This approach helps to avoid the “build it and they will come” syndrome that affects too many communities, resulting in underutilized spaces and programs.

Focus on opportunities, not just the gaps in the system. It is easy to focus on what does not exist in a system; the Athens experience suggests that an opportunity focus can be much more productive. APEG's work with entrepreneurs in the wood products industry is illustrative of this approach. Beginning with a thorough understanding of the market for the region's products and the existing and extensive number of small firms in the sector, APEG worked to understand these ventures and to address the barriers to their growth. Out of that organizing work, they identified a gap that could be filled by establishing a dry kiln cooperative, which is now in process. The lesson for other communities is to start with the entrepreneurs you have, work to strengthen their operations and address gaps in the ecosystem as they are identified.

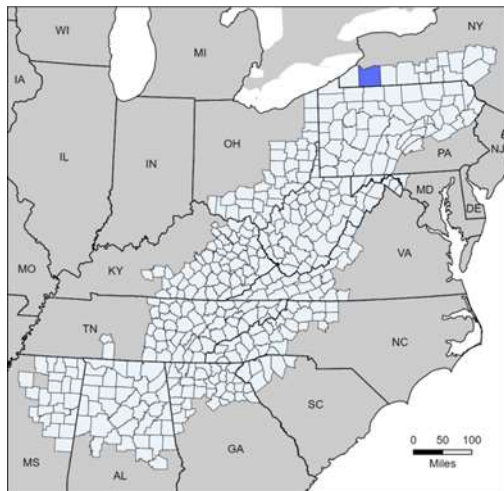
An effective entrepreneurial ecosystem requires cross-sector involvement. Entrepreneurial development is an important economic diversification strategy for Appalachian communities and regions. In Athens, the strong ecosystem in evidence today benefitted from the active involvement of organizations across many sectors – non-profits, higher education institutions, K-12 systems, philanthropy, workforce and regional development organizations. The commitment to networking that earlier actors in the system had, including ACEnet and Rural Action, helped to build connections between these diverse actors and, in the end, build a stronger system. What these organizations had in common was a commitment to advancing the economic prospects of the community/region. Other community leaders should learn from the Athens experience and foster strong cross-sector partnerships in building an entrepreneurial ecosystem.

Entrepreneurial Ecosystems in Appalachia: Case Study of Cattaraugus County, NY

Description of the Place

This case study examines the process of entrepreneurial ecosystem development in Cattaraugus County, NY. Located in the Southern Tier of New York State—a geographic region that extends along the state’s border with Pennsylvania—the county has an overall population of around 80,000. It is part of the Olean, NY Micropolitan Statistical Area, which is part of the Buffalo-Cheektowaga Combined Statistical Area. The Allegany Indian Reservation of the Seneca Nation of New York is also located in the county.

The City of Olean is the county’s hub with approximately 14,500 residents. Located in the southeastern corner of the county, Olean is home to St. Bonaventure University, a Franciscan university with



approximately 2,000 students. The combination of Olean’s density and university presence make it the backdrop for most of the economic activity in Cattaraugus County according to interviewees, though business resources are spread throughout the county. Outside of Olean, the town of Ellicottville is the county’s secondary economic center of about 1,600 residents. It is best known for its popular ski resort, Holiday Valley. The city of Salamanca contains about 5,800, and its main attraction is the Seneca Allegany Resort & Casino, which—while located in Salamanca—is owned by the Seneca Nation.

Founded in 1808, Cattaraugus County initially grew as a result of its strategic location on the Allegheny River. While early settlers originally envisioned the area becoming a western navigation hub, the lumber industry more significantly enabled the local economy to thrive. The Allegheny River was a popular transportation route for lumber headed toward larger cities such as Pittsburgh and Cincinnati. Lumber industry success tapered off by the 1850s with the completion of the Erie Canal and Erie Railroad, which diverted most of the shipping activity north. By the 1870s, however, Olean began capitalizing on nearby oil fields and became the railroad center of petroleum operations in the region. The oil industry played an important role in supporting the regional economy until about 1930, though this then tapered off due to the discovery of better quality oil in Texas and Oklahoma.

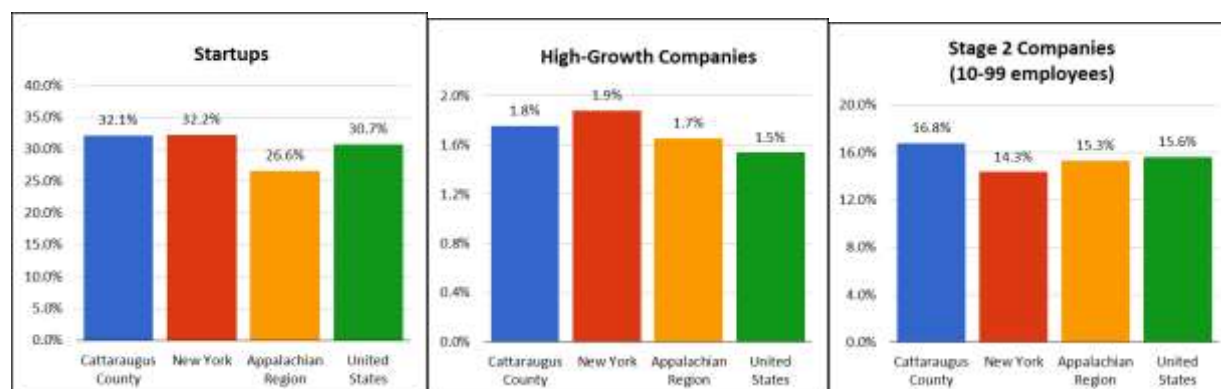
Today, given its access to major markets in the Northeast, Midwest, and Canada, Olean is a commercial and industrial shipping center for Cattaraugus County and nearby counties in New York and Pennsylvania. Some of the area’s largest companies are manufacturers such as CUTCO Corporation (which makes high-quality kitchen cutlery) and Dresser-Rand Company (a global supplier of custom-

engineered rotating equipment for the petrochemical, military, and other industries), as well as employers in the “eds and meds” sector such as Olean General Hospital, The ReHAbilitation Center, and St. Bonaventure University. According to the Olean Chamber of Commerce, the county hosts various small manufacturers with less than 100 employees as well.

Cattaraugus County: An Entrepreneurship Data Snapshot

Generally, entrepreneurship data is limited in terms of content and geographic scope, but a brief profile of recent business data provides some insight before delving further into the conversation about regional ecosystem development. As Figure 6 indicates, Cattaraugus County has performed strongly on key measures of entrepreneurial dynamism. The regional economy outperforms national and Appalachian Region benchmarks in all cases and performs at our near statewide averages as well.

Figure 6: Entrepreneurial Dynamism in Cattaraugus County, NY: 2011- 2015.



Cattaraugus County: A History of Entrepreneurial Ecosystem Development

It is important to provide an overview of geography and economic development at the state level, as it impacts entrepreneurship activities in Cattaraugus County. The county is part of a larger geographic region called the Southern Tier, which spans New York’s southern border along the Pennsylvania line. Southern Tier West Regional Planning & Development Board (STW) serves as the region’s Local Development District and works to improve quality of life in the region—specifically, social, physical, and economic development in Allegany, Cattaraugus, and Chautauqua Counties (all neighbors, all in Appalachia). The organization undertakes the Comprehensive Economic Development Strategy for the three counties and has been active in more recent efforts to boost entrepreneurial support services.

STW's roots go back to 1969 when the three County Legislatures adopted a resolution to create the organization under the authority of Article 12B of the New York State General Municipal Law.¹¹

Fast forward to 2011, when New York State adopted Regional Economic Development Councils (REDCs) to encourage a more bottom-up approach to economic development planning. The premise was that local stakeholders knew their regional economies best, so it was important to engage them in the planning process. This was especially important in such a diverse state (New York City is merely a few hours away from Appalachian New York, yet they are economically and culturally worlds apart). To acknowledge this economic diversity, the state was divided into ten Councils—public-private partnerships comprised of local experts and stakeholders that compete for state investments. Cattaraugus County falls under the Western New York Regional Economic Development Council, which centers on the Buffalo-Niagara metropolitan area. The REDCs align more or less with New York State geography, though not perfectly. While there is a Southern Tier REDC, Cattaraugus County is not part of it.

Cattaraugus and its neighboring counties have not historically been recognized for entrepreneurship or economic diversity. For decades, the Southern Tier—as with most of Upstate New York—has suffered from the repercussions of a decline in manufacturing. Per capita income in the region is \$37,493 compared to \$59,563 for New York State as a whole. Much like other Appalachian communities, years of negative economic outlook contributed to a “brain drain” of the area’s young talent. Moreover, Cattaraugus County’s rural location has made business recruitment difficult and costly. A combination of these factors led economic development, workforce development, and higher education stakeholders to think about new approaches to cultivating and capturing more of the area’s homegrown talent. The economic restructuring at the state level via the REDCs also influenced new ideas around economic development, particularly when it came to promoting better cooperation between local stakeholders and embracing new types of development approaches. Interviewees commented that the REDCs spurred a renewed focus on workforce investment, training, and entrepreneurial support services versus relying on a “silver bullet” to reinvigorate Cattaraugus County’s economy.

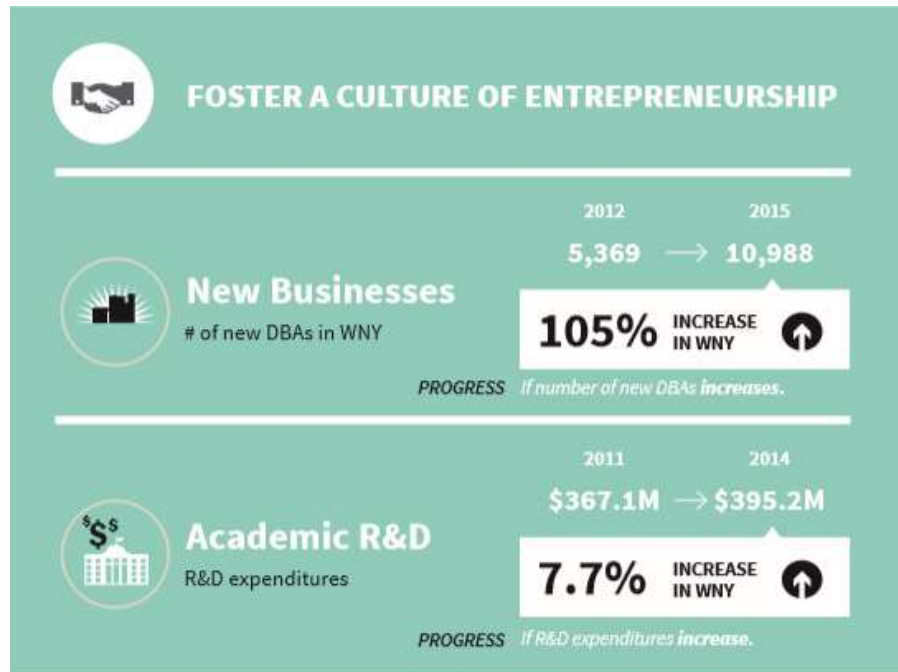
These new approaches are further elaborated in the Western New York REDC’s 2011 “A Strategy for Prosperity in Western New York,” which sheds light on regional entrepreneurship strategies. Western New York REDC—which includes Cattaraugus County—cites “Foster a Culture of Entrepreneurship” as a strategy to advance the region’s economy and discusses how the region can better support and fund entrepreneurs. Figure 7 identifies the goals within that strategy (first column) and how the region plans to measure success (second and third columns).¹²

Figure 7: Measuring the Success of Entrepreneurship Efforts in the Western New York REDC¹³

How will we measure success?			
Entrepreneurship	Performance Measure	Benchmark	Source
Foster and support entrepreneurs	Business start-ups	3,200 new reporting units (2010)	Research Organizations
	Strategic partnerships	To be measured	
Fund entrepreneurs	New firms Angel investors Venture capital (VC) funds in the region	3,200 in 2010 Baseline data on angel investors and VC funds yet to be calculated	NYS DOL Quarterly Census of Employment and Earnings

In 2016, the Western New York REDC assessed its progress over five years of supporting the strategy to foster a culture of entrepreneurship. As Figure 8 notes, researchers identified significant progress at the regional level between 2011 and 2015.

Figure 8: Progress of Entrepreneurship Efforts in the Western New York REDC¹⁴



Cattaraugus County’s Comprehensive Plan Vision 2025 provides additional insight into the region’s approach to entrepreneurship as a growth strategy. The plan’s second goal states that “Cattaraugus County Will Have a Strong, Sustainable Economy Where Residents Can Support Their Families and Their Quality of Life” with an objective of promoting “development of new businesses through entrepreneurship and encourage locally grown businesses.” Furthermore, this objective includes the following strategies related to bolstering entrepreneurship:

- Continue to facilitate the Cattaraugus County Economic Development Team to strengthen the County’s ability to provide: opportunities for local businesses, appropriate job training (both basic job readiness and advanced skills), and entrepreneurial support.
- Encourage entrepreneurship through support of incubators, training and brokering connections between entrepreneurs, potential investors and available technical assistance and resources.
- Support appropriate job training (both basic job readiness and advanced skills) and entrepreneurial assistance by working with local educational institutions at various levels (secondary, higher education, and vocational).¹⁵

¹⁴ Western New York Regional Economic Development Council (2016).

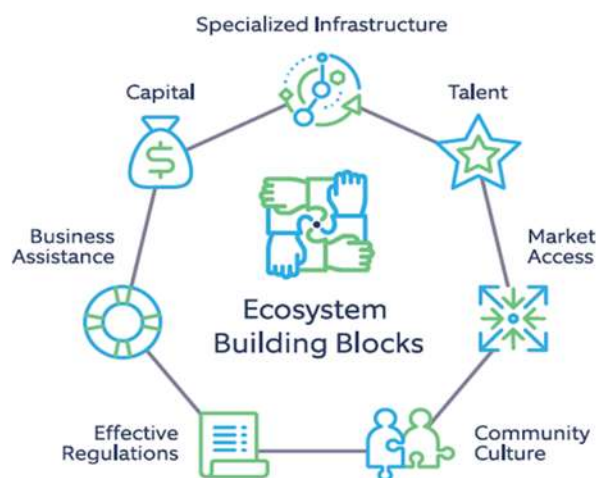
¹⁵ Cattaraugus County Department of Economic Development, Planning and Tourism (2015)

Outside of STW and the county itself, some of the main stakeholders in the region’s entrepreneurial ecosystem include the Cattaraugus County Industrial Development Agency (CCIDA), the Olean Business Development Corporation, the Greater Olean Chamber of Commerce, St. Bonaventure University, Jamestown Community College (JCC), and several local employers. These entities have different missions in the ecosystem, and, until the last ten years or so, they did not work extensively together on addressing the region’s economic and workforce challenges.

A decrease in grant opportunities, a change in county leadership, and the eventual statewide shift to the REDC model prompted new levels of cooperation among local stakeholders, which also triggered a cultural shift among support providers. In years past, potential entrepreneurs would piece together different resources to start a business. As one interviewee described it, business owners would call whomever they could find, and the person they connected with would share the one thing he or she knew without pointing the caller to anyone else for help. Today, that individual is more likely to think beyond his or her organization and connect business owners with other resources in the ecosystem. There is a growing emphasis on the whole entrepreneurial ecosystem working together to support business owners.

Today, the business support community in Cattaraugus County actively organizes roundtables once or twice per month to bring all entrepreneurship stakeholders together. Attendees include representatives from CCIDA, STW, the County, the Cattaraugus-Allegany Workforce NY (the workforce investment board), Olean Business Development Corporation (OBDC), various lenders, and others. At these roundtables, attendees discuss specific entrepreneurs and which local entities can best provide support based on local business needs. Furthermore, the roundtables occasionally bring in speakers from the state to discuss labor statistics and how the attendees can work together to pool resources. One interviewee noted that a shift in the attitude coming from county leadership was critical to the success of these roundtables—namely, it was important to prioritize partnership over competition between local entrepreneurship stakeholders. Roundtable attendees now even have a listserv to continue supporting entrepreneurs outside of their monthly meetings.

Assessment of Cattaraugus County’s Entrepreneurial Ecosystem



Drawing on a body of extensive research, we have identified a set of common entrepreneurial ecosystem elements to frame our analysis of Cattaraugus County, NY. The ecosystem elements that form the basis of the analysis are noted in the accompanying diagram.

Market Access

Through Empire State Development—the umbrella organization for New York’s economic development

financing entities—entrepreneurs can visit Entrepreneurial Assistance Centers to work with counselors on early-stage marketing plans, market research, product development, exporting, contract procurement, and licensing. Allegany Business Center—which is part of the ACCORD Corporation’s Business and Community Development Division—administers the Entrepreneurial Assistance Program in Cattaraugus County.¹⁶

Entrepreneurs can also search market access resources through the Cattaraugus County Department of Economic Development, Planning and Tourism website, though it is more a directory for national resources than for local services providers. For instance, a page titled “How to locate assistance for exporting” introduces entrepreneurs to the different websites offering export assistance, such as Export.gov, SBA U.S. Export Assistance Centers, Export-Import Bank of the United States, and the International Trade Administration.¹⁷ In this case, entrepreneurs interested in exporting need to do a lot of their own navigating to find relevant information.

The county’s roundtables are also an opportunity for entrepreneur support providers to exchange knowledge about providing market access on a case by case basis. However, there does not appear to be one comprehensive, local resource that directly engages entrepreneurs in market access education. The Olean Business Development Corporation (OBDC)—funded by the Cattaraugus County Industrial Development Agency (CCIDA)—aims to continue moving into this role as the “front door” for entrepreneurs and will ideally provide better connections to insights on market access.

Specialized Infrastructure

The Olean Business Incubator is a collaborative effort between the Greater Olean Area Chamber of Commerce, the Cattaraugus Empire Zone, and the OBDC. These entities partnered to support the incubator as a way to more easily convene entrepreneurs, anchor tenants, and offer business services in one place. Its strategic location in downtown Olean is part of a larger focus on redeveloping the city, as stakeholders maintain that the larger region cannot grow without the infrastructure and aesthetic to attract and maintain a qualified workforce.

Similar sentiments from community members influenced the City of Olean to apply for and receive a TIGER grant in 2014 to redevelop $\frac{3}{4}$ of a mile of downtown Olean. The grant provided an opportunity to create a downtown destination in Cattaraugus County, cluster entrepreneurial support services, and create a more pedestrian-friendly community. Revitalization work—wiring, installing benches, landscaping, etc.—concluded around the end of 2016.¹⁸ And, there is even more to come: in September 2017, an article indicated that Olean had received an additional \$10 million through the Western New York REDC for its Downtown Revitalization Initiative, which includes \$300,000 for a Strategic Investment Plan.¹⁹

¹⁶ Allegany Business Center (2017)

¹⁷ Cattaraugus County Department of Economic Development, Planning and Tourism (2015)

¹⁸ Walkable Olean (2016)

¹⁹ Olean Times Herald (2017)

As part of the downtown redevelopment strategy, the 20,000-square foot incubator space opened in 2016 and is home to OBDC, the Cattaraugus Region Community Foundation, and SCORE. It is also located across the street from Jamestown Community College. This density of players interested in entrepreneurial support did not exist until last year, and interviewees commented that the network is still coming together from an infrastructure standpoint. The aim of the incubator is to serve as the main physical hub for local entrepreneurship from a programmatic perspective. In other words, while business support services are located there, the businesses themselves are located elsewhere.

Capital

Entrepreneurs in Cattaraugus County can tap into a number of publicly-backed loan programs. Revolving Loan Funds started in Cattaraugus County in the late 1990s, thanks to funding from the Appalachian Regional Commission and the US EDA. Over the years, the funds evolved into financing options from both Cattaraugus County and the City of Olean. Interviewees commented that the revolving loan funds administered by STW in particular have been very active in Cattaraugus County. However, funds are limited and STW is actively working with the state to secure money for the funds that it manages. Popular loans include:

1. **Southern Tier Enterprise Development Organization (STEDO)** – the county’s primary revolving loan fund, which started in the 1990s. It is approximately \$2 million with 20-25 outstanding loans and funds about 4-10 new loans per year. STEDO currently offers four different, flexible grants, and the only thing a business cannot do is refinance.
2. **Western Region Corporation** – a \$300,000 fund (state-funded) for IDAs in five counties. Both STW and the Erie County IDA administer the fund, which is for working capital only. The challenge is that New York State took back administrative dollars, so STW is working with the state to change and keep the fund going.
3. **City of Olean Community Development** – the City of Olean has its own funding through the Olean Revolving Loan Fund for small businesses and the Downtown Property Improvement Program for businesses located in the commercial area of downtown Olean (both offering \$5,000-\$30,000 in loans).²⁰

In addition to these three loan funds, the Cattaraugus County Economic Development Team provides an extensive list of financing options available to entrepreneurs in the county. This includes both local and state-administered financing. Examples include the Cattaraugus County Microenterprise Development Fund, the Salamanca IDA, Empire State Development, the Small Business Administration, and the New York State Business Development Corporation.²¹ Interviewees also referenced LAUNCH NY but commented that it mainly served bigger downstate cities with an interest in high tech and bioscience.

²⁰ City of Olean Community Development, <http://www.cityofolean.org/CommDev/programs.html> (2017)

²¹ Cattaraugus County Economic Development Team <http://www.ccbizhelp.com/content/finance-loan-grant-opportunities> (2017)

Outside of the revolving loan funds and programs listed on the Economic Development Team’s website, interviewees noted that there has been a real need for gap financing since the Great Recession, as well as an overall lack of angel investors and venture capital. Some local and regional banks have played an important role in providing next-level funding for entrepreneurs, and STW often encourages entrepreneurs to work with commercial banks to grow their businesses. Interviewees also commented that many individuals come to entrepreneurial support organizations looking for startups grants, which are not available. However, as of Fall 2017, OBDC was in the process of applying for state microenterprise grant funds that might help fill this startup funding gap.

Talent

Interviewees felt that local workforce stakeholders were making progress, but still have a lot of work to do when it comes to growing, attracting, and maintaining entrepreneurial talent in Cattaraugus County. The main organizations working to cultivate entrepreneurial skills include Jamestown Community College, OBDC, STW, the Cattaraugus-Allegany Workforce Investment Board, and local chambers of commerce.

From a higher education perspective, Jamestown Community College offers an in-person or online entrepreneurship certificate program which students can complete in 30 weeks. Courses provide students with a baseline understanding of accounting, marketing, business law, and management related to business ownership. Students can also take electives to learn more about specific areas of business and develop more advanced skills.²² St. Bonaventure also offers entrepreneurship courses in its business school, and also has several clubs focused in this area. One interviewee mentioned that it would be great to capture more talent coming out of St. Bonaventure; but, because of its larger geographic pull, students typically move elsewhere after graduation.

OBDC aims to compliment Jamestown Community College’s entrepreneurship curriculum by hosting frequent seminars on business topics such as social media, marketing, business development, and human resources issues. An interviewee stated that OBDC hopes to continue fostering a relationship with the community college to expand local entrepreneurs’ access to professional development opportunities. Similarly, the organization is working with business owners to create a series of four- to eight-hour courses that drill further into priority topics. OBDC is also creating a mentorship program to help new entrepreneurs while engaging existing business owners as well.

In order to build an interest in entrepreneurship among local youth, STW has a program in the works called the Cattaraugus-Allegany Young Entrepreneurs Academy (YEA). STW connected with representatives from the YEA program based in Rochester, NY, which aims to foster an entrepreneurial mindset among middle and high school students. YEA is organized as a 30-week course targeting 25 students. Participants meet weekly, attend field trips to local businesses, and work with volunteer instructors to start their own businesses. By the end of the course, students present to an investor panel

²² Jamestown Community College (2017)

and can get funded to implement their business plans.²³ An interviewee from STW indicated that as of September 2017, local companies and agencies had committed \$8,000 to the program.

In addition to the aforementioned programs, interviewees noted that the Cattaraugus-Allegany Workforce Investment Board and local chambers of commerce play a role in supporting entrepreneurship training in the region. While the WIB is based in Olean, it has satellite offices that bring training resources to more rural parts of the county. The Greater Olean Area Chamber of Commerce also has on-the-job training fund that employers can access to train new hires. These organizations also partner with local training providers such as Jamestown Community College and the Board of Cooperative Educational Services (or BOCES, tied to local school districts) for business training and career and technical education, respectively.

Business Assistance

Some interviewees felt that technical assistance is still a key missing piece in Cattaraugus County's entrepreneurial ecosystem. Specifically, there is not a dedicated organization that provides technical assistance to businesses to ensure that they are in good standing after receiving funding. Cattaraugus County provides templates to help entrepreneurs assess their businesses' standing, but it is not a one-on-one experience. Through its Small Business Development Center, Jamestown Community College runs marketing strategy workshops, but outreach is not highly proactive. In both of these examples, interviewees felt that businesses had to find these programs themselves.

However, in last six months, Professor Todd Palmer from St. Bonaventure has partnered with STW to develop a program that professionalizes student consulting while providing technical assistance to local entrepreneurs in the process. The program—Cattaraugus County Consulting Corps (C4)—trains students on topics such as project management platforms, digital billing applications, and online collaborative technologies. Local entrepreneurs—who pay a fee to establish some skin in the game—can then enlist the help of C4 student teams to increase their own businesses' capacity. To address confidentiality concerns, C4 teams sign non-disclosure agreements with each participating business. C4 also refers entrepreneurs to STW for additional support throughout the process.

The Cattaraugus County Department of Economic Development, Planning and Tourism also offers some technical assistance on topics such as marketing, grant writing, and business research. A related group, the Cattaraugus County Economic Development Team, consolidates resources and outlines steps for starting a business on its website. Figure 5 shows a portion of this website's "Start a Business" section.

OBDC also offers a physical location for entrepreneurs to bounce ideas off one another and access various resources in one place. The organization partners with business consultants to offer information on accounting, legal matters, and marketing to entrepreneurs. Beyond downtown Olean, county economic development offices provide information on market access in more rural areas.

²³ Olean Times Herald (2017)

The Greater Olean Chamber of Commerce, the Cattaraugus Empire Zone, and OBDC are looking to enhance their business assistance services through the Olean Business Incubator. The goal is to provide a space for entrepreneurs to grow and develop their businesses while having easy access to the building's anchor tenants, who are support providers themselves (e.g., the Chamber). Interviewees noted that while the incubator and its programs are still getting up and running, the building reflected the entrepreneurship community's efforts to better collaborate and make support services more easily accessible to the public.

Finally, Jamestown Community College offers resources to help entrepreneurs build their skills. The college's Small Business Development Center, which opened in 1986, assists entrepreneurs with business plan development, seeking funding sources, e-commerce, and navigating licensing and regulations, among other things. The college also opened up its Manufacturing Technology Institute to train individuals for careers in advanced manufacturing. The institute—located across the street from the Olean Business Incubator—allows entrepreneurs to access machinery for product testing and to take classes to further advance their skills.²⁴

Community Culture

Placemaking as a tool to support entrepreneurship was not uniformly accepted by the whole community at first. For decades, many locals sought a “silver bullet” to spur the economy in Cattaraugus County. It was not until a business owner began learning and sharing information about placemaking that the topic started to pick up steam in the region, primarily in Olean. This business owner became very engaged with the Western New York REDC, the City of Olean, and other players who had a stake in the revitalization of Olean. Different interviewees felt that this consistent focus and knowledge-sharing began to resonate more and more with the community over time. They also see placemaking as part of a holistic approach to keeping entrepreneurs in the community, as people will start businesses in places where they enjoy living.

A culture of cooperation among business leaders and regional stakeholders has helped propel the region's interest in entrepreneurship as well. One interviewee described how a CEO group occasionally meets to discuss their business needs, which has had a ripple effect throughout the community. When this group prioritizes entrepreneurship, other stakeholders follow suit. In fact, it was the business community that invested in the Olean Business Incubator, buying the building from near-foreclosure and investing over \$1 million in its redevelopment. Many business owners connected to entrepreneurial support efforts by serving on boards of the different local and regional organizations such as OBDC and STW.

While interviewees noted a positive shift in attitudes around economic development, they commented that there is still a sense of impatience among much of Cattaraugus County. For example, some individuals are skeptical of new ideas when they cannot see an immediate change (e.g., “We revitalized the street, so why haven't more businesses moved here yet?”). Interviewees expressed some frustration that people cannot always see that their community is on a good track. The entrepreneurial

²⁴ Jamestown Community College (2017)

support providers address this challenge by emphasizing the importance of focusing on the long-term payoff.

Figure 9: How to Start a Business in Cattaraugus County²⁵

Step 1. Gather Information

Empire State Development has developed a resource guide to help you start your small business. Download "[A Guide to Owning and Operating a Small Business in New York State.](#)" A great guide to understand and learn all of the aspects of becoming a business owner.

Step 2. Create a Business Plan

Many businesses fail without a well thought-out business plan and most banks will require that you have one before being considered for a loan. The **Cattaraugus County Department of Economic Development, Planning and Tourism** can assist you with writing your business plan. The **SCORE** program provides low and no-cost assistance in the creation of business plans. You can also find assistance from the **New York State Small Business Development Centers**. Sample business plans may be downloaded for free from www.bplans.com.

Step 3. Determine Business Legal Structure

There are many structures a business can take in New York State such as a sole proprietorship, partnership, corporation, S corporation or an Limited Liability Company. Consult an attorney to determine the legal structure of your company.

Step 4. Determine a Business Name

If you have decided the legal structure will be a sole proprietorship, choose your name and register a "Doing Business As" or DBA certificate with the Cattaraugus County clerk's office. If you have chosen another legal structure for your business your attorney will file the business name with the NYS Dept. of State. There are several sites that can assist you, from the SBA at <http://www.sba.gov/content/how-name-business> to Creative Marketing Solutions at <http://www.yudkin.com/>. Choose carefully because some sites may want money for assistance.

Effective Regulations

Interviewees felt that the relationship between businesses owners and local government has improved in the last decade. OBDC has played an intermediary role communicating entrepreneurs' needs to government, while in turn helping entrepreneurs navigate the requirements to start a business. Efforts to help local government be more welcoming and friendly with code enforcement, permit approvals, etc. have helped build stronger relationships in the community.

Changes within the state-level economic development structure, as mentioned earlier, have certainly played a role in entrepreneurship in Cattaraugus County as well. The formation of the REDCs across the state influenced Western New York counties to pull together an array of stakeholders to achieve consensus on a strategy for the economy and workforce. The increased focus on entrepreneurial support in Cattaraugus County emerged from this renewed interest in regional workforce investment

²⁵ Cattaraugus County Economic Development, Planning and Tourism (2017)

and training, which the REDCs facilitated. One interviewee felt that if county legislators more actively shared their visions for the regional economy, they could help advance entrepreneurship even further.

The Cattaraugus County Ecosystem: A Summary Assessment

Cattaraugus County is still in the early stages of developing its entrepreneurial ecosystem, but it has a number of efforts in motion to more solidly establish support services for entrepreneurs. The collaboration between businesses owners and other ecosystem providers is unique in this region, and the fact that various leaders serve on each other's boards contributes to a shared vision for entrepreneurship. The County-facilitated roundtables between support providers is just one clear example of how collaboration benefits the business community at large. Looking ahead, it is evident that establishing clear roles will be important as members of the ecosystem determine the best ways to support entrepreneurs.

Efforts with YEA and C4 at St. Bonaventure also present promising opportunities to engage students in entrepreneurship. Since these programs are only a couple of years old, it will be important to think about how to best track outcomes to be able to justify future funding. This not only includes outcomes related to businesses that the programs serve, but how many alumni ultimately choose to start businesses in Cattaraugus County.

With this progress in mind, it is also important to recognize that services and revitalization efforts are highly concentrated in Olean. While it is certainly helpful to work within an existing downtown infrastructure to cluster services, it will be important for the county to think about ways to service other hubs. Interviewees commented that focusing on entrepreneurship in Ellicottville is a logical opportunity, as the area already has a successful tourism industry with Holiday Valley ski area. Interviewees demonstrated that they are thinking ahead in terms of the world of work, paying particular attention to the fact that many entrepreneurs can work from anywhere. Given that trend, it is encouraging to see that entrepreneurial support providers are thinking about ways to prime places such as Ellicottville to accommodate business owners.

Lessons Learned for Other Communities and Regions

- **Bring support providers together consistently:** Interviewees frequently discussed how Cattaraugus County's monthly roundtables are a key feature of its entrepreneurial ecosystem. In small communities where many of the entrepreneurship support providers already communicate regularly, it is helpful to have one time and place where everyone can meet. At the same time, Cattaraugus County demonstrates that when support providers communicate regularly in person, it can influence greater cooperation once everyone is back at the office. As

one interviewee described, this is evident through support providers' frequent emails to each other about where to point individual entrepreneurs. Other Appalachian communities may consider identifying a facilitator to convene monthly entrepreneurship roundtables to address local and regional priorities, stay abreast of visions and activities among each support provider, and strategically plan for the future.

- **Engage higher education institutions:** While St. Bonaventure's C4 program is still in its early stages, the concept of professionalizing student consulting to provide entrepreneurial support is promising. Since students can readily learn and then teach skills on topics such as social media and accounting software, programs like C4 may effectively supplement existing entrepreneurial support services. There are a couple of challenges that make this program difficult to replicate in other Appalachian communities: namely, lack of a university presence and lack of broadband connectivity in very rural locations. Other locales interested in engaging educators to provide additional support services should carefully assess local institutional capacity to run such a program and how to best connect those services to entrepreneurs.
- **Consider placemaking strategies:** Various communities in Appalachia have started exploring placemaking as a way to spur economic development. In Cattaraugus County, the City of Olean's focus on downtown redevelopment is not only a tactic to attract and retain talent, but an opportunity to cluster entrepreneurship support services in and around one building. It will be interesting to follow how the Olean Business Incubator evolves in the years ahead and see if there is a measurable impact on the local economy. For other Appalachian communities looking to increase collaboration between entrepreneurial services providers, it may be worth tying an incubator strategy to a larger downtown or main street initiative. However, this will likely be a challenge for more rural communities without a distinct downtown hub. In those cases, perhaps a standalone facility can provide enough space and connectivity to accommodate multiple support providers.
- **Incorporate county-level work into larger regional strategies:** A key feature of Cattaraugus County's experience is that local stakeholders operate in an environment that has already undergone a larger regional economic development strategy via the Western New York REDC. This played an important role in shifting attitudes among ecosystem members, particularly when it came to creating a well-rounded economic development strategy rather than relying on a "silver bullet" to save the economy. By engaging with larger regional strategies, ecosystem members in other parts of Appalachia may find that there is already a useful framework in play to guide local initiatives that support entrepreneurs.

Entrepreneurial Ecosystems in Appalachia: Case Study of Chattanooga, Tennessee

Description of the Place

This case study examines the process of entrepreneurial ecosystem development in Chattanooga, TN. Located in Hamilton County, TN, Chattanooga has an overall population of around 176,588, with a metro area population of about 547,776. The Chattanooga TN-GA MSA includes six counties: Catoosa County, GA; Dade County, GA; Hamilton County, TN; Marion County, TN; Sequatchie County, TN; and Walker County, GA. This



study specifically focuses on the entrepreneurial ecosystem in the city of Chattanooga, an area which has also undergone a tremendous physical transformation since the 1960s. This transformation is a key piece, but not the only piece, of how the city's entrepreneurial ecosystem has evolved. Conversations with community and business leaders revealed an ecosystem that was heavily shaped by community collaboration and facilitated by deliberate placemaking efforts.

Founded in 1839, Chattanooga grew in the mid-1800s as a result of its river commerce and new rail line.²⁶ While the city's economy initially centered around corn and cotton trade, it shifted to the iron and steel industries by the 1880s. The boom and subsequent bust of the metals industry happened quickly; but, by 1899, three Chattanoogaans secured exclusive rights to Coca-Cola bottling. This was a pivotal moment in the city's history, as it breathed new life into the local economy and grounded the city in a philanthropic environment that still exists today.

World War II brought an uptick in Chattanooga's industrial activity, which continued after the war as well. With the city's manufacturing environment, however, came its reputation as one of the most polluted cities in America. Around the same time (in the 1950s and 1960s), civil rights activism and desegregation were met with resistance from much of Chattanooga's population, contributing to racial tensions in the area. This social climate, coupled with pollution issues, painted a troubled picture of the city. In the decades that followed, these challenges forced many community leaders to rethink what Chattanooga needed to thrive.

"As it turned out, issues around the environment were a great way of connecting people in the community – you can't be rich enough to escape bad air," said one interviewee as he discussed the impact of Chattanooga's rating as "America's Dirtiest City" in the late 1960s. "Factory owners realized

²⁶ For background on Chattanooga's history, see The Tennessee Encyclopedia of History and Culture (2010) <http://tennesseeencyclopedia.net/entry.php?rec=226>

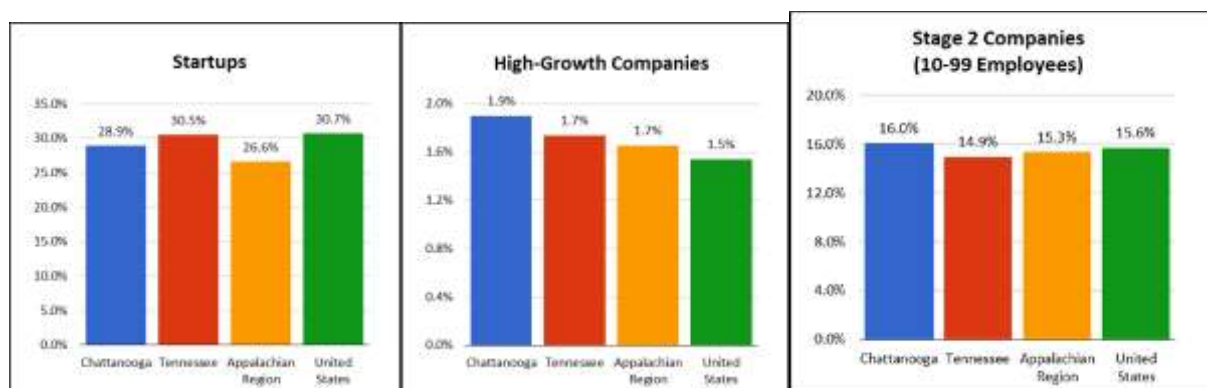
that they needed to clean the air, and job opportunities dried up for their kids and other people’s kids”; air quality did not discriminate along economic lines. Despite the income disparity that divided much of the population, there was diverse buy-in among Chattanoogaans to do something about their pollution problem. This shared vision for the future resulted in various place-based initiatives, which most interviewees believed laid the groundwork for an entrepreneur-friendly city. Collectively, these efforts are often referred to as the “Chattanooga Way.”

Community work to address environmental contamination reflected and further solidified the city’s tradition of local philanthropy. Organizations—namely, the Benwood and Lyndhurst Foundations (both with historical ties to Coca-Cola)—helped fund community planning efforts to reorient the city toward its waterfront and downtown. As we will see, these efforts had lasting effects on Chattanooga’s entrepreneurial ecosystem today.

Chattanooga: A Data Snapshot

A review of entrepreneurial dynamism data for Chattanooga highlights the region’s strong economic performance (see Figure 10). While startup rates slightly lag national averages, Chattanooga’s share of high-growth ventures far outpaces national and state benchmarks. This performance suggests that the region has excellent capacities to support growing companies.

Figure 10: Entrepreneurial Dynamism in Chattanooga, 2011-2015.



History of Entrepreneurial Ecosystem Development

While the data are somewhat incomplete, anecdotal reports suggest that place-based planning played a key role in building the local entrepreneurial ecosystem. However, it is important to note that philanthropic support from the Benwood and Lyndhurst Foundations was critical to making those efforts come to fruition. As community conveners and cheerleaders for both entrepreneurs and the built environment, the foundations have played a crucial role in elevating both local and outsider interest in Chattanooga. Some interviewees commented that they grew up in Chattanooga with the understanding that foundations were just part of how civic life worked. And, with links to the founders of Coca-Cola Bottling, both foundations have consistently maintained a focus on Chattanooga’s well-being from the

beginning.²⁷ The role of foundations, and the community's many other partners, are considered to be a core part of what local leaders identify as "the Chattanooga Way," a commitment to smart investments in public private partnerships to revitalize the city and to build civic capacity. Chattanooga's ecosystem has emerged as strong partnership that engages multiple organizations that bring a variety of perspectives, resources and expertise to the table. They include public programs, non-profits such as the Enterprise Center and CoLab, and funders, including foundations, angel investors, and others.

Downtown Revitalization: Waterfront Redevelopment and Innovation District

Chattanooga's riverfront was completely industrial in the mid-1980s, and residents were concerned about living in "America's Dirtiest City." In 1984, this prompted the Lyndhurst Foundation to fund an initiative called Vision 2000, which was a community goals-setting process to explore Chattanooga's ideas about how to reconnect their city with its waterfront. The Tennessee Riverpark Master Plan came out of this process, jumpstarting the revitalization of the land along the Tennessee River. As part of this initiative, Jack Lupton (son of John T. Lupton, Lyndhurst's founder) also gifted the Tennessee Aquarium to the community, which drew even more attention to the riverfront. By supporting citizens as they imagined how to transform Chattanooga's appearance, local foundations became part of the growing conversation around how to bring new residents and businesses to the city's riverfront and downtown core.



Chattanooga Riverfront (Photo Credit: River City Company)

²⁷ Yasuyuki Motoyama, Emily Fetsch, Chris Jackson, and Jason Wiens, "Little Town, Layered Ecosystem: A Case Study of Chattanooga, Ewing Marion Kauffman Foundation report, 2016. Available at: http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2016/chattanooga_entrepreneurship_ecosystem_study.pdf. Hereafter referred to as Kauffman 2016.

This deliberate focus on placemaking is important to Chattanooga’s entrepreneurial history because it invigorated a sense of pride and possibility among residents and business owners. Foundations and their partners used “place” as a framework to put efforts related to entrepreneurship into motion. As the 2000s went on, the riverfront and downtown evolved into entrepreneurial hotbeds. The community conversation shifted to focus on expanding opportunities first for creative professionals, then for entrepreneurs more broadly.

“CreateHere” and “InnovateHere”

By the 2000s, Chattanooga had come a long way since its days as “America’s Dirtiest City.” However, citizens still felt that more could be done to rethink the relationship between placemaking and the local economy. In 2007, a group of concerned citizens established “CreateHere,” a nonprofit project that encouraged Chattanoogans to explore urban revitalization by fostering businesses in the creative arts.²⁸ Funding for this initiative came primarily from the Lyndhurst Foundation, which also partnered with the Chattanooga Neighborhood Enterprise (CNE) to provide financial tools to help creative arts professionals buy homes. One tool, for instance, offered \$15,000 to artists and creatives for a second mortgage that could be forgiven after a five year period if the homebuyer met certain qualifications.

In some cases, the people that bought homes using these tools eventually started their own businesses. With CreateHere, Lyndhurst experimented with commercial grants to help those creative entrepreneurs access capital for their businesses. The Foundation also provided curb appeal grants and tenant recruitment support to foster a greater density of talent in the Southside neighborhood. As Main Street became a creative talent hub through the work of CreateHere, Lyndhurst considered applying a similar effort to strengthen entrepreneurial support services (particularly from a financial perspective). The thought was that if the Chattanooga community could use creativity and innovation to change its culture, it could then change the direction of the city.²⁹ Thus, InnovateHere was born in 2009 to parallel and build on the success of CreateHere.

InnovateHere helped entrepreneurs scale and provided them with up to \$150,000 in forgivable loans if they moved their businesses to Main Street. A group of active community members and businesses came up with ideas that Lyndhurst then helped implement (e.g., program participants could not obtain a lease without a business plan, creating a level of accountability among businesses and funders). CNE also provided a \$1.3 million loan fund to finance the initiative.

According to one interviewee, neither initiative would have been possible without a sense of placemaking. It appears that concentrating the efforts around Main Street helped create “collisions” of creative professionals who were invested in the city’s future. In 2010, one of the Main Street tenants—The Company Lab (CO.LAB)—stepped up to sustain the entrepreneurial support services that came primarily out of CreateHere. CO.LAB has shifted its focus on entrepreneurial support from the arts to technology over the years, and its CO.STARTERS program (funded by Benwood and Lyndhurst) has

²⁸ CO.LAB (2017) <http://colab.co/about-us/colab-history/>

²⁹ Nonprofit interviewee (2017)

gained popularity throughout the U.S. But, CO.LAB still takes a grassroots' approach to helping local entrepreneurs become more efficient and successful.

The Gig

In the years leading up to CreateHere and InnovateHere, city leaders had been challenging the Electric Power Board (EPB), the city's primary power utility, to rethink how it contributed to Chattanooga's well-being. EPB approached this with the mindset of sponsoring a way to attract businesses to the city. So, in 2010 (coincidentally during the same era as CreateHere and InnovateHere), EPB debuted the Gig—a one gigabit fiber Internet service, which was also funded largely by local foundations. This timing was important because, rather than attracting businesses to Chattanooga, the Gig somewhat unintentionally elevated the entrepreneurial activities already taking place in the city.³⁰

As a symbol, the Gig served as a rallying point for support organizations, encouraged collaboration, and solidified the city's entrepreneur-friendly reputation. However, various interviewees acknowledged that the Gig's success would have been impossible without the financial backing of local foundations. Since most regions do not have this magnitude of financial support, it may be more helpful to think broadly about cultivating a partner to provide a level of consistency with advancing community projects.

Continuing the Chattanooga Way

As a way of building on the momentum of entrepreneurial ecosystem development in recent years, the Benwood and Lyndhurst Foundations have continued evolving to focus more heavily on funding entrepreneurial support services. According to one representative from the Benwood Foundation, these efforts need to be led by entrepreneurs. She hopes that Benwood can continue working to advance diversity within entrepreneurship, and would love to see the buzz around entrepreneurship extend beyond profit to include social issues like education. She can see Benwood continuing to invest in placemaking as a part of its strategy to foster entrepreneurship, and hopes that the Foundation will be a resource to help entrepreneurs access mid-level capital from places like Atlanta, New York City and Silicon Valley.

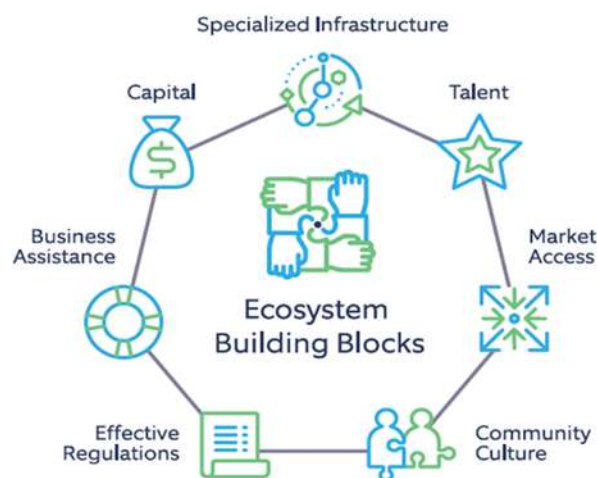
Similarly, a Lyndhurst Foundation representative noted that, while its ultimate role is providing entrepreneurial support services, neighborhood and community development will continue to be major focus areas. Now that Chattanooga has seen some level of success with its entrepreneurial ecosystem, Lyndhurst is continuously looking for innovative ideas to grow and experiment with entrepreneurial frameworks (like CreateHere). As a Foundation, Lyndhurst can take risks with its entrepreneurial initiatives and operate under a longer-term view—something that the private sector cannot afford to do. He believes that foundations and nonprofits have played a key role in creating Chattanooga's landscape and making entrepreneurship available to everybody—not just for the high-tech startups, but for the mom and pop businesses too. Looking ahead, Lyndhurst is conducting studies to gauge how effectively Chattanooga's entrepreneur services have been working. It will be interesting to see if this

³⁰ Kauffman 2016.

research includes an assessment of how efforts like CreateHere, InnovateHere, and the Gig have impacted entrepreneurship in Chattanooga.

Meanwhile, the city continues to engage in research and development related to the Gig through The Enterprise Center, which we discuss in the next section. The Gig's stakeholders hope to further increase its speed (now at 10 gigabits per second) to foster and attract startups to Chattanooga. Placemaking efforts also continue to attract entrepreneurs in new ways. For instance, Lamp Post Properties is the company behind the Tomorrow Building, which offers a co-living concept in the Innovations District, micro-unit apartments, and short-term leases—all recent trends in real estate, and particularly targeted at recent transplants to the city.

Assessment of Chattanooga's Entrepreneurial Ecosystem



While foundation support, placed-based revitalization, and the Gig undeniably played big roles in propelling Chattanooga's entrepreneurial ecosystem forward, numerous other players have helped to shape entrepreneurship opportunities in the city. The accompanying figure describes the building blocks of an entrepreneurial ecosystem derived from the research literature. The rest of this section provides an assessment of each element for Chattanooga's ecosystem, highlighting the ecosystem's strengths and areas for improvement.

This assessment is based on interviews with over 20 professionals from startups, entrepreneurial support providers, foundations, and local government that currently make up the ecosystem.

Market Access

As previously mentioned, The Enterprise Center plays a key role in providing market intelligence around the Gig, as well as establishing Chattanooga as a hub for innovation. The organization's focus on research and application development related to the Gig has been an important way of promoting Chattanooga as a living laboratory for entrepreneurs looking to test their products using the fiber optic network. Examples of work include the *Chattanooga Forward: Technology, Gig and Entrepreneurship Task Force Report* and a study on innovation districts.³¹ The Enterprise Center provides a level of consistency around supporting and assessing the Gig that makes Chattanooga stand out to entrepreneurs in the tech field.

³¹ To learn more about Chattanooga Forward, visit <http://www.chattanooga.gov/mayors-office/chattanooga-forward>.

Several interviewees commented that Chattanooga would benefit from focusing more on diversity and inclusion in its entrepreneurship efforts. While interviewees commented that the community still has room for growth when it comes to expanding market access for underrepresented business owners, there are some efforts underway. For example, the Chattanooga Area Chamber of Commerce’s website includes a resource inventory for business owners, and also provides information about Your Supplier Network, a networking platform designed to engage underrepresented business owners in the public procurement process. Similarly, BrightBridge—a private, non-profit corporation focused on financing as a tool for local economic development—provides resources specifically for women business owners through its Women’s Business Center (WBC). The WBC partners with larger national organizations such as the Small Business Administration, the Appalachian Regional Commission, and National Association of Women Business Owners, to enhance market access opportunities for female entrepreneurs. Additionally, interviewees noted that the City’s Office of Multicultural Affairs has gained a more prominent role in recent years and has been influential in raising awareness about diversity and inclusion in the business community. One of the office’s goals is to “provide the resources and information [that] small, minority, and women-owned businesses need to compete for business opportunities with the City of Chattanooga.”

Chattanooga is unique among other communities with its market access opportunities related to the Gig. Interviewees felt that positioning the city as a “living laboratory” will continue to be a draw for entrepreneurs. However, they frequently noted that the city will stand out even more if local government and support services emphasize helping all community members access business opportunities—particularly minority, women, and disabled business owners.

Specialized Infrastructure

Interestingly, there was consensus among most interviewees that—although it is indeed fast and convenient—the Gig in and of itself had a minimal impact of quality of life or entrepreneurship in Chattanooga. Rather, it was a great marketing tool and a symbol of “the Chattanooga Way,” i.e. community entities working together to create a better city. It provided a strategic direction for support organizations like The Enterprise Center, whose goals focus on coordinating the Innovation District, developing research and applications for Gig technology, and promoting digital equity for Chattanooga’s businesses and residents. The Gig also inspired the establishment of CO.LAB, whose accelerator programs act as a “front door” to entrepreneurs looking to get started in Chattanooga. It activated a general interest in startups, high tech, and Chattanooga as a thought leader.

In particular, CO.LAB plays an important role in promoting collisions in the Edney Innovation Center—a ten-story building in the heart of Chattanooga’s Innovation District open to public, private, and non-profit tenants. Today, much of the city’s entrepreneurial activity is concentrated downtown in the Innovation District and just across the Tennessee River in the NorthShore neighborhood, where the Chamber’s Business Development Center (BDC) is located. While these neighborhood entrepreneurial hubs are not directly next to each other, one can still walk between the two and enjoy various amenities.



Edney Innovation Center (Photo Credit: Caleb Timmerman)

While the Gig infrastructure was important largely from a marketing perspective, Chattanooga’s focus on neighborhood infrastructure to support placemaking has been crucial to fostering a welcoming business environment. Entrepreneurs affirmed that accessibility to services and other entrepreneurs was a major selling point, commenting that Chattanooga’s focused downtown core, riverfront amenities, and walkability were some of the main reasons that they located to the city.

Capital

According to interviewees, capital and finance in Chattanooga is best characterized by investments of at least \$50,000, but with few opportunities to access seed funding or large investments (typical of the Southeast U.S.). Securing first round or Series A funding is challenging, and local exits are also rare. As one nonprofit interviewee explained, “Chattanooga’s ecosystem is still so young that you don’t see the big exits, but it also doesn’t have the funding to eventually get to those exits. It’s a Catch-22.” The Lamp Post Group—a self-identified “venture incubator”—focuses on high growth companies by providing capital and mentorship to startups. On the other end of the spectrum, bootstrapping is common among entrepreneurs in the early stages of business ownership. Places like LAUNCH Chattanooga are working to help entrepreneurs (particularly in underserved communities) access funding under \$50,000, and the organization hopes to eventually create a revolving loan fund. Otherwise, this level of early stage financing is difficult to secure.

While members of the ecosystem recognize the gap in seed and venture capital, many stated that it is notably easier to access to angel capital. For instance, the Chattanooga Renaissance Fund (CRF) has traditionally kept a broad vision of entrepreneurs when considering who to fund, though it has begun to narrow its focus to companies that are capital efficient: in other words, those that have raised a reasonable amount of capital, are technology focused, and scalable in region. CRF investments typically

fall in ranges from \$50,000-\$600,000. Jump Fund, on the other hand, raised \$5-7 million, which it distributes to women-owned businesses. Its average check size is \$100,000. Both CRF and Jump Fund prefer equity over debt financing. BrightBridge, in contrast, uses all tools available from the debt perspective (e.g., New Market Tax Credits, 7a lending through SBA Community Advantage) and is in the process of becoming a Community Development Finance Institution.

As lenders in Chattanooga think about ways to better support the local startup community, it will be important to focus on opportunities at the lowest and highest ends of the spectrum (seed and venture capital). For the latter, several interviewees suggested that the business community advocate for better connections with venture capitalists outside of the Southeast U.S.

Talent

Despite the positive activity around startups in Chattanooga, many interviewees attested to the city's challenges recruiting and retaining managerial level talent. This, combined with an orientation toward high tech companies in niches like 3-D printing, has raised the need for new strategies around talent planning to sustain the entrepreneurial ecosystem. Various interviewees from tech startups commented that they get high quality interns for technical level positions from the University of Tennessee at Chattanooga, and that it is feasible to train workers on simple processes. However, they noted that the real need is for management and executive level talent.

Another challenge is that Chattanooga lacks “density of opportunity”—so, even if a startup successfully recruits an executive or manager from outside of the region, there are not enough local opportunities for that individual should he or she decide to change jobs. There has certainly been a big push for fostering homegrown talent through things like coding programs, but those programs have been difficult to sustain due to a lack of talent to manage them. Some interviewees felt that without a research university to drive local talent growth more aggressively, companies will continue facing talent retention problems.

Outside of the tech realm, the Chattanooga Area Chamber brings the conversation about entrepreneurship into the classroom. According to its website, the Chamber offers programs in all 18 Hamilton County Department of Education high schools, reaching approximately 15,000 students each year. Some of the Chamber's programs include career fairs, courses on budgeting, and a job search workshop. The Chamber also provides in depth look at the region's workforce resources in its Workforce Development Manual. The manual catalogs higher education and credential providers (e.g. adult basic education, apprenticeship programs, and employers' customized training and management) and is provided for free on the Chamber's website. This guide is something Chattanooga startups may consider utilizing to understand how they might build more stable talent pipelines.

LAUNCH Chattanooga also offers a series of educational opportunities for current and future entrepreneurs. The organization's Business Entrepreneurship Academy is a 10-week program geared toward both new and existing entrepreneurs. The program teaches students how to create a business plan and do market research, customer development, financial planning, marketing, branding, social media, etc. Once the program ends, graduates can work with a business coach or mentor and attend

monthly roundtables with their peers. LAUNCH also organizes a High School Entrepreneurship Program to get younger Chattanoogaans interested in entrepreneurship. The program, offered at four local high schools, provides student teams with a simulated entrepreneurship experience in which they are mentored by local business leaders. Students learn early on how to develop a business plan, identify market opportunities, etc., and eventually pitch their business plans at the end of the semester.

Even with these programs in place, some interviewees felt that there was still room to engage community members beyond exclusively tech entrepreneurship. In particular, one interviewee commented on the need to better engrain entrepreneurial values within the public school system as a way to engage students in business at a younger age. Outside of entrepreneurship in schools, some interviewees made a side note about wishing that they had learned more about grant writing to advance their businesses.

Business Assistance

High growth entrepreneurs find value in CO.LAB's CO.STARTERS, Accelerator and GIGTANK programs. For the new entrepreneur, CO. STARTERS offers a nine-week process where each week focuses on a different component of business development. Participants start in Weeks 1 and 2 with guidance on "Knowing Yourself" and "Knowing Your Customer," move through the different components of developing a business plan, and end the program with "Pitch Night/Sharing Your Story" in Week 9. Next, the Accelerator is a 100-day program built around mentorship opportunities for participants. GIGTANK is similar concept, but it is a yearlong program geared specifically toward tech entrepreneurs (primarily in the 3D printing, healthcare, and software defined networking) looking to test and scale their business using the city's fiber optic network.

If CO.LAB helps entrepreneurs flesh out their purpose, the Chattanooga Area Chamber provides next-level technical assistance by connecting entrepreneurs to courses through the Tennessee Small Business Development Center (TSBDC). TSBDC conveniently holds lunch and learn meetings in the BDC facility, making it easy for tenants to engage in conversations with each other. The Chamber also offers a three-year incubator program through the BDC, which hosts about 50 startups.



Meeting space at the Business Development Center (Photo Credit: Chattanooga Area Chamber of Commerce)

The Urban League of Greater Chattanooga started its Entrepreneurship Center in 2011 to engage women and minority owned businesses in the city. One of its programs, NextLevel, focuses more specifically on helping existing small businesses grow. To enroll in the seven-month program, participating businesses must have been open for 3+ years, have \$250,000-\$10 million in annual revenue, and have at least one full-time employee (besides the owner). By the end of the program, participants walk away with a customized action plan to achieve their business goals.

With these programs in mind, it is apparent that Chattanooga does a great job of creating opportunities for new businesses to take advantage of educational resources. As referenced in the Capital and Finance section, a next step for support providers might involve increasing opportunities for mature startups to enter the next stage of growth.

Effective Regulations

City government has certainly helped spur and support entrepreneurship in Chattanooga. Most notably, the city-funded Enterprise Center exists primarily to guide community initiatives related to the Gig. This includes overseeing the Innovation District, promoting Chattanooga as a “living laboratory” to study the Gig’s impact, and fostering an environment of digital equity and inclusion. The City also plays an important role in ensuring that underserved populations connect to entrepreneurial support services through its Office of Multicultural Affairs. Furthermore, city government continues to streamline requirements for starting a business, such as its online business licensing center which has a 24-hour turnaround time. Finally, from a marketing perspective, the City plays an important role in vocalizing support for organizations and programs that work for local entrepreneurs (e.g., CO.LAB).

Various interviewees felt that although the City does not necessarily take the lead role in the entrepreneurial ecosystem, its activities are vital in providing services for a diverse population of business owners.

Community and Cultural Support

As mentioned earlier, collisions between members of the entrepreneurial ecosystem characterize Chattanooga's sense of community and cultural support. In particular, CO.LAB offers programs and events that are fun, but also serve as educational and networking opportunities and recruitment tools for new entrepreneurs. Based on interviewees' comments, these initiatives help local entrepreneurs build both relationships and new skills.



Event at the Edney Innovation Center (Photo Credit: Caleb Tillerman)

These collisions, however, are not solely limited to entrepreneurs based in the Innovation District. The BDC's location in the nearby NorthShore area makes it is easy for tenants to secure the industrial space they need, access support services from Chamber staff, and collide with like-minded people both in the building and in the larger neighborhood. Again, the proximity of the Innovation District and NorthShore neighborhoods plays a big role in encouraging collisions between entrepreneurs and business support services. Underpinning the collision culture is "the Chattanooga Way," which is an inherent sense of collaboration among public, private, and nonprofit stakeholders.

Chattanooga: A Summary Assessment

Chattanooga's entrepreneurial ecosystem is perhaps best described by its level of community collaboration. More specifically, interviewees frequently referenced "collisions" as a way to describe opportunities for entrepreneurs to meet in person—both unintentionally and on purpose. After interviewing over twenty members of Chattanooga's entrepreneurial ecosystem, it was clear that timing was one of the most important factors in the city's entrepreneurship story. Interviewees commonly stated that there is no "one" factor that enabled Chattanooga's entrepreneurial ecosystem and its focus

on collaboration and collisions. Rather, the seemingly perfect timing of CreateHere, InnovateHere, city revitalization efforts, the Innovation District, and the Gig—combined with local government support—made for a swift transformation of the city’s business environment. Moreover, it would have been difficult for most of these efforts to come to fruition without funding from local foundations.

Even with its notable progress, the ecosystem still needs to make some headway with capital and talent. While Chattanooga has a plethora of entrepreneurial support services to help get businesses off the ground, as well as access to loans between \$50,000 and \$1 million, entrepreneurs regularly hit a speed bump when they are ready to scale up. Assuming that greater access to venture capital will put more companies in a position to grow, Chattanooga has a chance to build its “density of opportunity”—a greater concentration of managerial-level jobs—more quickly. Consequently, it might be easier to convince new talent to move to the area and remain there for future opportunities.

“Collisions”

The placemaking initiatives that began with Vision 2000 and CreateHere facilitated the ability for entrepreneurs to collide, because those initiatives a) generated an interest in promoting Chattanooga’s riverfront and downtown, and b) linked neighborhood design and business support. One foundation interviewee reinforced this idea, noting that bringing urban revitalization and the innovative economy together has helped make great things happen in Chattanooga. Likewise, interviewees from The Enterprise Center commented that the proximity of resources and walkability in downtown Chattanooga allow for collisions between different entrepreneurs and the organizations that support them. This started organically, but ultimately came to be by design. The Enterprise Center continues to play a significant role in linking the entrepreneurial community with a sense of placemaking, given its role in coordinating the Innovation District (and the Edney Innovation Center that anchors it).

As Chattanooga’s ecosystem evolved, various new spinoffs emerged to expand services to support the growing entrepreneurial community. For example, the Society of Work was founded when a group of professionals realized—after meeting for years at a local coffeeshop—that they would benefit from a coworking space. Located in the Edney Building, Society of Work’s location allows members easy access to other entrepreneurs and support services provided by The Enterprise Center and CO.LAB. And, when member companies outgrow Society of Work, they have the option to relocate to a different office space in the Edney building. The draw for companies is clear, as Society of Work increased from 8 to 80 members between 2013 and 2017.



Edney Innovation Center (Photo Credit: Aubrian Watson)

CO.LAB also plays an important role in promoting collisions in the Edney Building. The organization offers programs and events that are fun, but also serve as a recruitment tool for new entrepreneurs.³² High growth entrepreneurs find value in CO.LAB's GIGTANK and Accelerator programs, and new entrepreneurs can access initial support developing and testing business plans through the CO. STARTERS program.

Today, much of the city's entrepreneurial activity is concentrated downtown in the Innovation District and just across the Tennessee River in the NorthShore neighborhood (where the Chattanooga Area Chamber of Commerce's Business Development Center, or BDC, is located). While these neighborhoods' entrepreneurial hubs are not directly next to each other, one can still walk between the two and enjoy both neighborhoods' amenities. Entrepreneurs affirmed that this accessibility is a major selling point, commenting that Chattanooga's focused downtown core and riverfront were some of the main reasons why they located to the city. Outside of the Innovation District, the BDC's location in a nearby, developing area makes it is easy for tenants to secure the industrial space they need, access support services from Chamber staff, and collide with like-minded people both in the building and in the larger neighborhood.

Access to Capital

While the local ecosystem remains robust, some problem areas still exist. Like much of the Southeast U.S., Chattanooga's entrepreneurs are often starved for capital. Securing first round or Series A funding is challenging, and local exits are also rare. "Chattanooga's ecosystem is still so young that you don't see

³² Small business interviewee (2017)

the big exits, but it also lacks the funding to eventually get to those exits. It's a Catch-22." On the other end of the spectrum, places like LAUNCH Chattanooga are working to help entrepreneurs (particularly in underserved communities) access funding under \$50,000, which is also difficult to secure. While members of the ecosystem recognize the gap in venture capital and seed funding, many stated that it is notably easier to access angel capital thanks to groups like the Chattanooga Renaissance Fund and others.

Talent

Despite the positive activity around startups in Chattanooga, many interviewees attested to the city's challenges recruiting and retaining managerial level talent. This, combined with an orientation toward high tech companies in niches like 3-D printing, has raised the need for new strategies around talent planning to sustain the entrepreneurial ecosystem. Various interviewees commented that it is feasible to train workers on simple processes, but the real need is for management and executive level talent. Another challenge is that Chattanooga lacks "density of opportunity"—so, even if a startup successfully recruits an executive or manager from outside of the region, there are not enough local opportunities for that individual should he or she decide to change jobs. There has certainly been a big push for fostering homegrown talent through things like coding programs, but those programs have been difficult to sustain due to a lack of talent to manage them. Some interviewees felt that without a leading research university to drive local talent growth, companies will continue facing talent retention problems.

Lessons Learned for Other Communities and Regions

Chattanooga's entrepreneurial ecosystem does not rely on a single factor, but rather a combination of efforts and partnerships. One important thing to acknowledge is that Chattanooga is an anomaly in Appalachia, particularly given its size and legacy of foundations. However, there are still some lessons that other communities may find valuable.

- **Consistency is important.** Local foundations were a key part of the equation for Chattanooga's entrepreneurial ecosystem, as they provided consistent funding and city-centered programs. Hard work and innovation were behind many of the city's current entrepreneurial support services, but nearly all interviewees alluded to foundational dollars as the pillar for those services. We recognize that this level of foundational support is not readily available for most small and/or rural communities. However, there is something to be said for having one or more local entities provide a consistent focus on community betterment, even just in terms of organizational mission. With this in mind, other communities may consider identifying a partner that can provide this consistency in lieu of a foundation.
- **Placemaking can foster entrepreneurship.** Personal interviews provided insight on the specific programs that linked urban revitalization and innovation to spur a place-based approach to building Chattanooga's entrepreneurial ecosystem. Multiple interviewees claimed that CreateHere inspired this approach. In Chattanooga, deliberate efforts to link business and built environment contributed to collisions of like-minded entrepreneurs, and the momentum continues to build today. If other Appalachian communities resonate with the idea of connecting placemaking with the local economy, they might consider engaging a facilitator (if not from

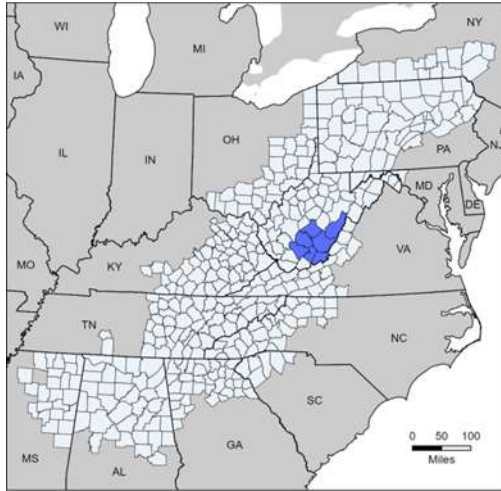
foundation, then perhaps from another organization or agency) to start the conversation. As one interviewee suggested, that conversation might involve identifying a community's distinct advantages, taking note of what is already happening, and then building momentum around those assets.

- **Build consensus on goals.** Consensus building among Chattanooga's civic, community, and business leaders provided a baseline for entrepreneurship efforts. This was evident in the city's early revitalization efforts related to tackling pollution, and later extended to placemaking as a way to support local innovators. There was also a similar level of consensus in using the Gig as a tool to cultivate awareness about local entrepreneurship. Perhaps other communities can look to Chattanooga for ideas on how to organize a goals-setting process (e.g., programs like CreateHere, town halls, etc.). From there, it is important to encourage partnerships between different entities with common goals. By seeking out these partnerships, smaller communities may have a better shot at securing the staff and funding they need to advance a goal. With the right partnerships in place, it becomes easier to achieve goals and implement a vision that initially seemed impossible.
- **Timing matters.** Several interviewees commented that, even with the support from foundations, the success of Chattanooga's entrepreneurial ecosystem boils down to good timing. The Gig did not emerge strictly because of placemaking efforts or vice versa; rather, these initiatives happened to align at the right time, and their work complimented and elevated each other. Other Appalachian communities may find it beneficial to take inventory of ecosystem-building activities and see if there are opportunities to make higher level connections between those efforts.
- **Local government support makes a difference.** Local government can play an important role in building the entrepreneurial ecosystem even if it does not lead the effort itself. City government in Chattanooga did this through organizing The Enterprise Center, which, as we have seen, is pivotal in providing support services and research related to the city's startup community. By engaging in a regular dialogue with other ecosystem stakeholders, listening to their concerns, and learning about past and current initiatives, local governments in Appalachia can identify new ways to support entrepreneurs.

Entrepreneurial Ecosystems in Appalachia: Case Study of New River Gorge/Greenbrier Valley, West Virginia

Description of the Place

This case study examines the process of entrepreneurial ecosystem development in the New River Gorge/Greenbrier Valley region in southeastern West Virginia, a region that is served by two regional economic development organizations: the New River Gorge Regional Development Authority (NRGRDA)



and the Greenbrier Valley Economic Development Corporation (GVEDC). The region encompasses seven counties³³ ranging over 4,740 square miles, which makes it larger than the combined size of the states of Delaware and Rhode Island. The distance from the northernmost town (Wildell) to the southernmost town (Lindsie) is just over 100 miles, but it takes well over two hours to drive due to the area's mountainous terrain. This large geographic area has only 221,389 residents, so much of the region is quite isolated and rural, with a population density of around 46 people per square mile. The geography of the region is dominated by rolling hills, with small towns connected by

two-lane roads. The exception here is the 4-lane highway of I-64, which connects Lewisburg in Greenbrier County, in the eastern part of the Region, to Beckley in Raleigh County, in the western part.

While many communities within the seven-county area have been historically dependent on coal mining, the coal industry is concentrated in just a few locations. The town of Beckley was devastated by the loss of coal jobs. Meanwhile, Pocahontas County is struggling with related challenges due to the decline of its timber industry. In Lewisburg, the local economy is driven by tourism and has felt few ripple effects from coal industry cutbacks. This regional distinction between the coal-reliant communities and others, and the importance of these differences on community culture in relation to entrepreneurship, will be discussed later in this study.

The bulk of local employment across the region can be historically attributed to larger employers, especially those related to coal. Yet the volatility of these industries, and particularly the coal industry, has meant that for generations, locals have become used to boom and bust economic cycles. According to some local leaders, this cycle has in some ways influenced the local population's view of entrepreneurship. Entrepreneurship has not been a prevailing component to people's work history, education, or life experiences.

³³ The seven counties that are included are Fayette, Nicholas, Raleigh, Summers (all served by the NRGRDA); and Greenbrier, Monroe and Pocahontas (served by the GVEDC).

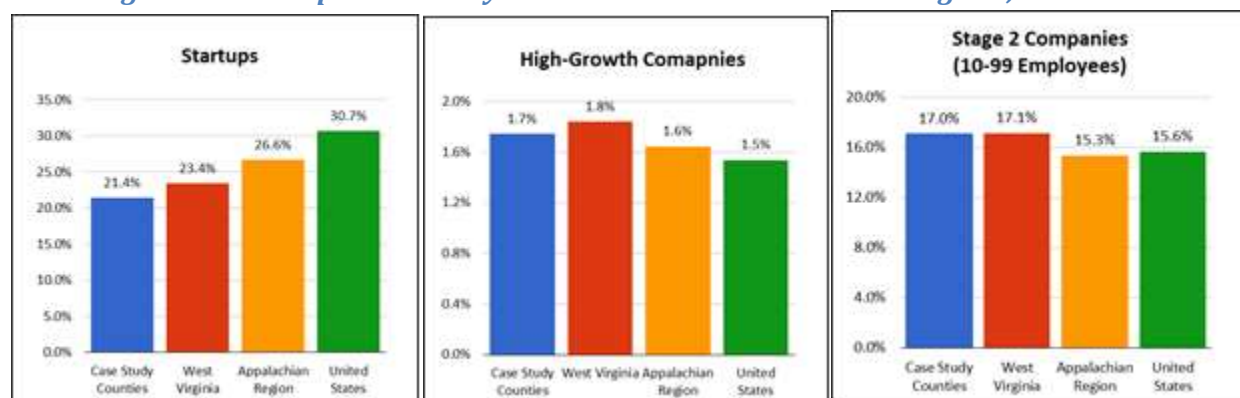
However, the current downturns in both coal and timber employment may be changing the historical mindset, with many residents now concluding that these large employers are not coming back and that a different approach may be required to get West Virginians employed. As such, local interest in entrepreneurship is slowly on the rise. More local people are looking for ways to both contribute to the economy and sustain their way of life. Entrepreneurship gives them that opportunity. While entrepreneurship is not yet a pervasive or obvious choice for most, there is an emerging sense of its potential.

Local economic developers are responding to these new perspectives. Most recently, this policy shift was demonstrated by the 2015 establishment of the HIVE, a Beckley-based regional hub for local innovators and entrepreneurs. The effort was kicked off by NRGRDA and accelerated thanks to a 2016 ARC POWER grant targeted to coal-reliant communities. With start-up funds in place, the HIVE is now in the process of establishing itself as the go-to resource for entrepreneurs in the region. While this case study focuses on the importance of the HIVE and its potential impact in supporting entrepreneurship, it also covers the other elements of the entrepreneurial ecosystem that currently exist in the region. The case study also provides a snapshot of what gaps the HIVE might fill as it matures over the next few years.

New River Gorge/Greenbrier Valley: A Data Snapshot

Generally, entrepreneurship data is limited in terms of content and geographic scope, but a brief profile of business data from the seven-county area (see Figure 11) provides some insight before delving further into the conversation about regional ecosystem development. The region's performance in terms of supporting Stage 2 and high-growth ventures is fairly strong, but regional startup rates lag far behind other benchmark regions.

Figure 11: Entrepreneurial Dynamism in Southeastern West Virginia, 2011-2015.



New River Gorge/Greenbrier Valley West Virginia: Entrepreneurial Legacies

As the manager of the HIVE, the New River Gorge Regional Development Authority (NRGRDA) is a core part of the regional ecosystem. The NRGRDA, which serves Raleigh, Fayette, Nicholas, and Summers Counties, has been in operation since 1988. The Greenbrier Valley Economic Development Corporation (GVEDC) serves Greenbrier, Monroe and Pocahontas Counties. Both EDOs offer a typical mix of business support services, including revolving loan funds, industrial parks, and business retention and expansion programs. NRDRDA places great emphasis on business retention and expansion; its program visits and supports around sixty local businesses per year. However, neither group has an extensive history of supporting start-up businesses or counseling entrepreneurs prior to the development of the HIVE concept.

In addition to these EDOs, local business owners have tapped into other publicly-funded programs and non-profit organizations, such as the West Virginia Manufacturing Extension Partnership (WV MEP), based at West Virginia University in Morgantown. The MEP supports small manufacturers, who are especially prevalent in the region. Statewide, 80% of manufacturers employ less than 15 people. The WV MEP works primarily with existing businesses; however, its Innovation Engineering Program has been used to help individuals develop and commercialize new product ideas. Further support comes from the West Virginia Small Business Development Center (SBDC) network. More recently, these federally backed efforts have been supplemented and strengthened by the work of non-profit groups, such as Downtown Appalachia, Create WV, Refresh WV/Appalachia and Unlimited Futures.

These groups collaborated in the past, but connections were often informal. Before creation of the HIVE, there had not been a concerted local or regional effort to spur entrepreneurship in the seven-county area. The HIVE covers 12 counties, seven of which are covered in this case study. The HIVE is staffed by two business advisors and just completed a national search for an Executive Director. It offers business coaching, incubator space, access to a mentor network and can provide small amounts of funding to entrepreneurs. In short, the HIVE is designed to be a one-stop-shop for entrepreneurs across the 12 counties.

Even in the absence of concerted public backing for entrepreneurs, the region is home to a number of inspiring entrepreneurial achievements, which have revolved primarily around three sectors: the arts, tourism, and agriculture. The town of Lewisburg, and the nearby Greenbrier Resort, has emerged as a regional hub for heritage tourism and creative arts and culture-related businesses. Beckley is home to Tamarack, a world-renowned center for locally produced art and handcrafts. Fayette County has succeeded in becoming a globally-recognized center for whitewater rafting, providing many local jobs and attracting thousands of annual visitors.³⁴ More recently, Sprouting Farms, with ARC POWER

³⁴ Longwoods International, "Can Tourism help Revive West Virginia's Coal-based Economy?" January 28, 2016. Available at: <http://longwoods-intl.com/can-tourism-help-revive-west-virginias-coal-based-economy/>

backing, has emerged as a major center for training new farmers and for incubating food-related businesses.

These successes hint at the fact that something is happening in West Virginia, although it is slow and incremental; the state ranked 35th in the US in terms of growth entrepreneurship activity according to the 2017 Kauffman Index of Entrepreneurial Activity. This ranking represents an improvement over previous years where the state ranked among the lowest in the US.³⁵ While West Virginia has a poor historical track record of nurturing entrepreneurs, there is cause for optimism.

The New River Gorge/Greenbrier Valley Ecosystem in 2017

At first glance, the entrepreneurial ecosystem in New River Gorge/Greenbrier Valley has many gaps in the core areas noted in the accompanying diagram. At best, the regional ecosystem can be defined as nascent or emerging, except for more established efforts within the sectors of agribusiness and tourism. These challenges were recognized and were a primary driving force around the creation of the HIVE, the very purpose of which is to close these ecosystem gaps. Local leaders and business owners see a distinct place for the HIVE and expect that it will quickly contribute to the area's capacities for expanding entrepreneurial activity.



Market Access

There is limited local capacity to help entrepreneurs generally access markets, although a number of organizations and efforts have been emerging in agribusiness and tourism. Like much of Appalachia, both the state and case study region are investing in development of food corridors, and many area organizations support local food production and distribution. For example, Appalachian Sustainable Development (ASD) helps new farmers develop marketing plans, and also matches them with specific marketing outlets, as well as producers with distributors. Another example is the Green Mining Model

³⁵ The 2017 Kauffman Index of Growth Entrepreneurship, State Trends, p. 16

Business Program (GMMBP), which works with former miners and other mining related workers and has helped develop a thriving lavender industry. GMMBP teaches individuals the many skills associated with harvesting lavender that range from the planting to the science behind developing products, such as nutritional supplements and fragrances. As such, GMMB provides in-depth market intelligence on potential lavender product manufacturers and consumers. A similar initiative, the Sustainable Jobs Initiative at the Canaan Valley Institute, focuses on the maintenance of bees and the production of honey and honey-related products. Finally, the Central Appalachian Network, a group of nonprofits (supported in part by ARC funds) dedicated to building out food related businesses across a number of Appalachian states, provides market intelligence and market development support to interested entrepreneurs in the region.

Tourism has been an economic mainstay in the New River Gorge area. Whitewater rafting, biking and hiking outfitters have been proliferating in the area since the 1970s. Whitewater rafting experienced a dip in visitors during the recent economic recession. This prompted four local businesses to partner together as Adventures on the Gorge, which actively markets the area as an outdoor recreation destination. The website provides visitors with access to area tourism businesses, and helps them to explore lodging, dining and adventure options. Furthermore, the site promotes adventure packages offered by the various kayaking, climbing, fishing and white water rafting outlets, thus further opening up market access. Another example of a tourist related joint marketing campaign to open up new markets is through the Hatfield McCoy Regional Recreation Authority. The Authority oversees off-road utility vehicle access in southern West Virginia, and is also in the process of developing an expansion plan for such access. The goal is to build a series of trails in the region and market the trails, attracting users and thereby creating new jobs and businesses.

While there is activity to grow the above two markets (agribusiness and tourism), more traditional resources that provide assistance in market access appear to be underutilized. The WV MEP is extremely knowledgeable and has a great deal of experience helping businesses find new markets, and the state's development office also has an export assistance program. But the WV MEP's effort to bring market access assistance to the region has been difficult; a roundtable comprised of nine market access resources did not attract a single attendee. Other organizations, such as the SBDC and regional EDOs, have played a role in helping entrepreneurs determine key markets; however, it is not a core service.

Local business leaders recognize the importance of these services while also noting that large capacity gaps do exist. Local business owners cannot access market intelligence assistance or business development support, and local economic developers do not have a good source of information on what local businesses need. The HIVE intends to fill this gap. Its current coaching program works with customers to identify their business's key value proposition, and also to identify new markets for existing products and services. For example, a recent HIVE engagement assisted a local welder seeking new markets after losing work in the coal industry. With HIVE support, he has retooled his service offerings, become a licensed manufacturer, and successfully captured new clients outside of the coal industry.

Capital

Start-ups almost always face barriers in accessing outside capital, but small business owners in West Virginia do have a variety of financing options. There are a surprising number of regional banks in the area that are open to considering small business loans. Conversations with interviewees indicated that these community and regional banks, such as the Pendleton Community Bank and the Fayette County National Bank, tend to be more small business friendly than larger national bank chains. Rather than immediately turning away a customer, these banks will take the time to sit down with a potential client and walk through the lending process. Like many banks across the country, these regional banks are reducing their overall small business lending activity, but local observers report that they still remain committed to assisting local entrepreneurs. Local banks have also been reducing their volume of SBA lending because of concerns about new SBA underwriting guidelines. However, some interviewees noted that the region could do more to bring together the various regional and community banks that still do small business lending in the region.

Local RLFs are another important source of business finance. The NRGRDA runs two revolving loan funds, one funded by ARC, the other funded by the US Department of Agriculture (USDA) and the US Treasury. These sources typically support firms seeking up to \$200,000 in working capital. In the past, GVEDC operated a small fund that provided loans valued up to \$15,000, but that fund no longer operates. Additional funding is also now available from the Natural Capital Investment Fund (NCIF), an affiliate of the Conservation Fund. It provides loans as a subordinate lender providing working capital up to \$750,000 for some businesses. With ARC support, NCIF has also recently capitalized a new RLF focused on tourism-related ventures. This fund expects to finance as many as twenty local companies.

Equity capital is very difficult to access across West Virginia. The state is home to only one small angel fund and hosts no private institutional venture capital investors. However, the West Virginia Jobs Investment Trust Fund (WVJITF) is a publicly-backed venture investor that has invested in a number of companies, including some located in southeastern West Virginia. As of June 2017, the WVJITF had invested approximately \$11 million in twenty different companies.³⁶

Workforce/Human Capital

The workforce system, K-12, technical and community colleges, and the regional Workforce Development Board do not currently have a formal system designed to support entrepreneurship. Some newer efforts are underway, with some of the most exciting things happening at the K-12 level. However, there is no one program that reaches uniformly across the region.

³⁶ West Virginia Jobs Investment Trust Board, *Annual Investment Analyses-June 30, 2017*. Report available at: http://wvlegislature.gov/legisdocs/reports/agency/J02_FY_2017_13758.pdf.

K-12 Systems: West Virginia has been a national leader in terms of instilling entrepreneurship training into its K-12 educational programs. For many years, it was one of the few states to employ a full-time staff member to coordinate and promote entrepreneurship education. More recently, the Charleston-based Consortium for Entrepreneurship Education has been leading an ARC-backed Entrepreneurial Schools Initiative to test new approaches to teaching youth entrepreneurship. This initiative was field-tested in three school systems in WV before being launched across the Appalachian Region in 2016. The Governor's School for Entrepreneurship runs a three week intensive summer boot camp for high school students from across the state. Participants learn the basics of business, and they can also participate in start-up and pitch competitions. Similarly, the West Virginia Simulated Workplace introduces entrepreneurship to students in the state's career-technical education programs. In this project, students create simulated businesses in their respective fields, such as auto repair or cosmetology. Originally designed to teach soft skills, teamwork, and leadership, the simulated workplace also introduces students to the real life issues that come with running one's own company.

Because many high school graduates are leaving the area, K-12 teachers are increasingly becoming interested in providing entrepreneurship-based projects to their students. They are driven by wanting to show their students that there are local resources to help one start a business in order to encourage them to stay in the area. Based on our conversations, those interviewed believed that entrepreneurship is best introduced to middle school students in order to make a life-changing impact. New youth programs include the Fayette Institute of Technology, a high school/middle school that teaches students how to create business and marketing plans, and VisAbility, an eight-week program that teaches students entrepreneurship based on the philosophy that entrepreneurship and the development of a product are essential problem-solving skills. VisAbility is currently operating in two schools within the region (embedded in regularly scheduled health classes) and is looking to expand to additional schools.

The region's Next Generation Entrepreneur/STEAM Academy (Science, Technology, Engineering, Arts and Math), which started in December 2015, is now co-located with the HIVE. The program is open to K-12 students and introduces children to the concept of developing a business while exposing the students to learning in areas like robotics, coding, 3D printing, website development and virtual reality. The program is free; operations are supported by small grants and in-kind donations with partners such as TechConnect West Virginia, the Muster Project in Beckley, a non-profit that provides mentoring and education programs for youth, and the HIVE. About 70 students have participated in the program.

Higher Education: The College of Business and Economics at West Virginia University in Morgantown operates the Brickstreet Center for Innovation and Entrepreneurship, which serves college students all over the state. The Center provides research in entrepreneurship, student internships, and also sponsors a statewide business plan competition. It also hosts the Experiential Learning Center, where students can receive all the services geared towards opening a business, marketing plans, feasibility plans, market research, etc. Students may opt to minor or major in entrepreneurship and innovation.

Raleigh County is also benefitting from the recent move of the West Virginia University Institute of Technology to its new home in Beckley. WVU Tech kicked off its inaugural school year in Beckley in the fall of 2017. Current enrollment is estimated at around 1,400 students, 60% of whom are enrolled in engineering programs. While there is no official tie between the WVU Tech students and the HIVE, WVU Tech has provided office and lab space to the HIVE, and the hope is that WVU Tech graduates will take advantage of HIVE's offerings.

A number of Community and Technical Colleges operate in the region, and the network across West Virginia is a strong one. While these colleges provide an opportunity to introduce entrepreneurship to students, there is no prevailing collaborative effort across the schools to do so. There have been some isolated efforts to support business development and growth, such as the short-lived sector strategies approach to match students with businesses at the New River Community and Technical College, but there is not one particularly strong program that has stood out as a major success story. Many interviewees expressed a common theme that the region needed more focused technical training, and that high schools should promote the benefits of attending a 2-year school and gaining specific technical skills that can sometimes lead to entrepreneurship.

The Robert C. Byrd Institute (RCBI) at Marshall University has been offering support to entrepreneurs, especially in the area of manufacturing, since the early 2000s. It offers an accelerator program, Ten50, and runs a business competition whose winners receive grant funds, access to office space, and business coaching assistance. Space is also available to paying entrepreneurs. RCBI has a new facility where it provides customized free training in both high- and low-tech skills for area business employees.

Workforce Development Board: The local Region 1 Workforce Development Board (WDB) is now actively working with NRGRDA and GVEDC in the area of workforce development and entrepreneurship. The relationship is relatively new but contains much promise. The WDB offers customized training or incumbent worker training to existing businesses, and the organization is currently determining how it can work with the HIVE going forward. One area for consideration is self-employment training, which is now an authorized activity for workforce training under WIOA. The WDB can also support youth entrepreneurship programs via workshops and other educational offerings.

Non Profits: As mentioned previously, there is a concentrated focus to open up the local foods market in the region. Many of these initiatives also provide training services. This includes the Sustainable Jobs Initiative, Sprouting Farms, and the Green Mining Model Business Program, which train individuals to harvest honey and lavender, respectively, while also providing training to develop and market related products. The Coalfield Development Corporation also provides training and technical assistance, including a large new program focused on building social enterprises that also provide training and career development opportunities for local students.

Business Assistance

Our local interviewees all agreed that there were limited resources in the area for business technical assistance in absence of the HIVE and the local SBDC office. When providing business assistance, organizations like NRGRDA and GVEDC rely on traditional networks to make referrals for specific needs such as workforce training or business loans. However, they were less certain about how to help new entrepreneurs seeking peer networking, coaching, and more generalized support. Several interviewees mentioned the WV Hub, which works with communities to engage leaders and identify assets to respond to specific local issues. The Hub is currently focused on helping build community capacity to help entrepreneurs, but it does not provide direct business assistance itself. Other service providers, like the WV MEP and others, do not really target early stage startup companies. At present, the SBDC network and the HIVE are the primary organizations focused on this customer base.

A number of Chambers of Commerce operate in the region, but it was not apparent that any one of them offered direct business support services. Many Chambers also manage Convention and Visitors' Bureaus (CVBs). Because of the large local tourism industry, these CVBs often manage sizable operations that could potentially be utilized to support local entrepreneurship-related efforts.

As the HIVE matures, it can potentially fill a big hole in the entrepreneurial ecosystem, becoming the go-to resource for entrepreneurs seeking business assistance. The HIVE currently employs two business coaches whose primary duties are to provide technical assistance to entrepreneurs. However, because the HIVE is so new to the area, many interviewees were not aware of the full suite of services the HIVE has to offer. As awareness of the HIVE grows, there may be additional demand for more staff to provide their services.

At the time of our interviews in September 2017, the HIVE team had signed formal engagements with 24 businesses. Within this cohort of "on-boarded" clients, half of the firms were existing businesses seeking to either expand or explore ways to capture new markets with their current services and products. The remaining customers were new entrepreneurs with new ideas, requiring support with a mix of business needs. Another 37 businesses have been "engaged," i.e., they are talking with HIVE business counselors and are in the process of completing the paperwork to become an on-boarded business. A HIVE business counselor estimates that they get at least one lead a day.

Providing access to business mentors was intended to be a core HIVE offering, but it has been more difficult to find mentors than originally imagined. A similar challenge has faced the local SBDC network in its efforts to recruit SCORE volunteers.

Several other programs target specific industries, especially agriculture. Similar to the business assistance that Sprouting Farms provides to its clients, the Value Chain Cluster (VC2) is an initiative through NCIF that provides technical assistance to small agriculture-related businesses, primarily farms and local food providers. It operates in 17 counties around West Virginia, which are divided into four regional clusters. Two of the regional clusters incorporate the seven counties that are a part of this case

study. VC2 provides hands on business assistance and coaching services to those involved with producing local foods. It has been considered a noteworthy program for technical assistance, particularly in the growing food sector, though VC2—as well as and Sprouting Farms—remains focused on just this sector.

Specialized Infrastructure and Facilities

One of the main goals of the HIVE when it was first established was to serve as an incubator space for entrepreneurs. With the move to Beckley, the HIVE was successful in securing space at WVU Tech and occupies several rooms within the Innovation Building. There has been a lot of talk about other locations for HIVE programs. Although it currently appears that the HIVE plans to open up a few more locations, the prevailing sentiment expressed by most interviewees is that the HIVE will need to have an office presence accessible to potential clients in each of the communities they hope to serve.

The Launch Lab is an initiative that was first formed at West Virginia University in Morgantown and is in the process of expanding to the West Virginia University Institute of Technology in Beckley. In Morgantown, it operates as an incubator space that provides business planning, market research, and some legal services to students. It also serves as a space for students to gather, for businesses to meet up, and even as a classroom. It has been highly successful in its efforts in Morgantown and just won EDA funding for statewide expansion, including potential onsite programs in Beckley.

The Tamarack Arts Center also serves as a unique regional ecosystem asset. Since opening in 1994, Tamarack has worked with more than 2,000 artisans from all over the state. In addition to displaying and marketing these products, the Tamarack Foundation for the Arts provides artisans and craftspeople with a variety of resources for growing their own business. While focused solely on the artistic community, it does serve as an example of how to nurture those interested in pursuing entrepreneurial avenues.

Finally, the GVEDC operates three technology and business parks. These facilities are primarily targeted to larger firms and companies considering relocation to the area, but they do offer potential expansion space for area start-ups and other businesses.

Community Culture

There is no one voice promoting entrepreneurship in the region. It is a collection of voices that are starting to more actively promote entrepreneurship as an economic development opportunity. There has been a sense of urgency over the past five years with the realization that larger companies may not be returning to the state and offering employment opportunities. This includes the local Chambers of Commerce, the Convention and Visitors' Bureaus, the economic development organizations, elected leadership and now, most recently, the HIVE. There are several independent entrepreneurial movements in the region—specifically around the arts, tourism, and local foods—that have successfully gained momentum.

The legacy of coal affects the local entrepreneurial culture in many ways. Local people are hardworking, but they have limited experience with entrepreneurship. For decades, most residents have been able to rely on employment from major employers in the mining and timber industries. The decline of these sectors has spawned a sense of loss and despair among many local people, and the opioid epidemic is just one symptom of these challenges. Local leaders are seeking to tackle this culture of despair. With these leaders embracing and supporting entrepreneurship, community attitudes are beginning to change.

A successful example of setting the cultural tone for supporting entrepreneurship is Destination Downtown Oak Hill. The effort was started by a small group of local business owners who came together to clean up and revitalize downtown Oak Hill. Along the way, they have held many community events that not only promote downtown businesses, but they also promote entrepreneurship as a life choice and Oak Hill as a good place to get started. A similar effort is now underway with the Downtown Beckley Business Association (DBBA). Downtown Beckley is distressed, yet the DBBA is looking beyond the distress (half of the store fronts remain vacant) and is instead building excitement about the assets that are downtown, creating a sense of pride for the downtown area and, as a result, encouraging entrepreneurship.

Effective Regulation

Regulation did not appear to be a hindrance to entrepreneurship in the region. There was discussion that the state is making an effort to enact legislation to support entrepreneurship, such as exploring how to improve broadband across the state. However, the state's current budget crisis may place constraints on future investments. There were comments that though the state does invest in water and sewer infrastructure, it has not actively invested in the infrastructure of crumbling downtowns, such as setting up incentives for downtown redevelopment or even supporting a façade program, similar to those in Virginia and elsewhere. Another topic of discussion was the competition between local governments within the region. This sense of competition has made development efforts—such as promoting tourism—more challenging.

Yet the level of local government support for entrepreneurs was encouraging. We had the chance to hear from two mayors within the region. Both were extremely passionate and dedicated to entrepreneurship as a way to vitalize their downtowns. They each had their own vision of how entrepreneurship could become the leading driver of downtown health. For example, in Marlinton, Mayor Sam Felton has plans to upgrade dilapidated downtown buildings and designate the new spaces for artisan groups. He then plans to provide them with affordable rental rates, offer training in creative industries, and eventually build an amphitheater downtown to attract outsiders.

New River Gorge/Greenbrier Valley: An Ecosystem Assessment

The New River Gorge/Greenbrier Valley area is on the move, and there is a lot of local enthusiasm about embracing entrepreneurship as a regional development strategy. However, the most successful activity is found specifically in the tourism, agriculture and arts sectors, and further efforts to build linkages across these sectoral strategies are needed. More generally, major ecosystem gaps still exist, but the regional ecosystem can currently be described as emerging and promising. Areas of promise include the development of new business assistance resources at the HIVE and elsewhere, and the emergence of new capital resources, as well. In addition, state and local governments have made major commitments to be more entrepreneur-friendly. Less developed areas include workforce and talent development, and also the availability of specialized facilities and infrastructure for new business owners. Community culture remains a core challenge area, and continued efforts to promote entrepreneurship as a career option and as a community strategy will be needed.

Great progress has been made in recent years. Business assistance for small start-up companies is now available through both the HIVE and the SBDC, which offer business planning support, and in the case of the HIVE, one-on-one coaching. There are resources available to manufacturing and more technical sectors, such as the RCBI Centers, TechConnect, and the MEP; however, these resources serve a larger portion—or the whole state—and are not concentrated in the study area. The HIVE fills a key gap here.

Community culture and specialized infrastructure (incubators and facilities) are in the active process of maturing. Access to capital and effective regulations are in place, but they will need to evolve as the regional ecosystem further develops.

Capital is available through small business loans, whether offered through one of the regional non-profits (such as NRGRDA, the HIVE, NCIF) or one of the regional banks. But loan dollars, especially those available through the NRGRDA and the HIVE, are finite, and the amounts available are too small for larger capitalization projects between the range of \$50,000 to \$5 million, and high-risk capital overall is lacking. As the number of small businesses looking for loans expands, and business venture ideas require higher amounts of start-up money, additional financing options will need to be considered.

While the HIVE does have some funding to capitalize small business loans, its leadership team will need to consider whether this is the most effective use of the HIVE's limited dollars. Other capital sources are available, even if funding levels are limited, and HIVE resources may be more effectively deployed in other areas. The HIVE should also determine how it will work with the numerous regional and community banks in the area.

Currently, it does not appear that there are regulations in place that are hurting the development of small businesses at the local, regional or state level. However, this may change as more small businesses emerge, and as the needs of start-ups mature.

The focus on entrepreneurship as a driver within the region is slowly on the rise. The culture is changing; however, some of those that we interviewed were adamant that one could not look at the culture of entrepreneurship in the region without addressing the impact that ups and downs in the coal industry have had on the community.

For many West Virginia communities, a sense of worth and pride continues to be tied to the coal industry. Working in coal is a tough job. One common refrain is that most parents who worked in the coal industry would not want their children to be coal miners. At the same time, coal mining is viewed as a decent and honorable profession, and coal miners have typically been community role models. Industry pride is deeply rooted.

The legacy of coal affects local attitudes toward entrepreneurship. Many residents continue to hope for the return of coal jobs, or that a new major employer will come in and create jobs, thus saving the region. Others recognize that coal is not returning in any significant way and feel a sense of urgency to identify other economic drivers that will create community prosperity. Many see an opportunity to take the skills that former coal miners have and direct them to the development of new products (e.g., lavender oil). With this realization, there is increasing attention to entrepreneurship as a way to rebuild West Virginia communities. This idea has been seeded and can be further nurtured in other coal-dependent areas.

Lessons Learned for Other Communities and Regions

Entrepreneurship is gaining traction in the region and community leaders are extremely optimistic and energized about the potential impact of new programs and investments. Early successes with programs like the HIVE can help build momentum for further ecosystem developments. As the region further explores entrepreneurship as an option for its citizens, interviewees made several observations that other communities can learn from:

Promote Entrepreneurship as a Career Option. Spread the word within the community that entrepreneurship is an option, and start early. Many interviewees argued that the region would benefit from a concerted effort to educate residents that entrepreneurship is an option for supporting oneself and to paint a realistic picture of what entrepreneurship entails. In their view, many local people still do not consider business ownership as a real option in their lives. Providing them with a spark of inspiration—and support for taking the leap—could reap great dividends. Local people generally want to stay in the region, and entrepreneurship offers a means to discover new ways of making a living based on their creativity and harnessing local spirit.

Another challenge is to catch people interested in entrepreneurship early on, before an investment in the business is made. Interviewees shared many stories of local people who started or invested in failed business ventures. Countering these negative stories requires early outreach so that better business planning and development efforts can be put in place before business crises emerge.

We heard strong consensus that that creating an atmosphere conducive to nurturing the entrepreneurial spirit must start with children, who benefit from early entrepreneurship training and hands on experience. This begins with the practical application of learning to run a business, teaching finances, payroll, projections, pricing points, marketing and branding.

Formalize Partnerships. Collaboration will be the key to success for entrepreneurship. As pointed out earlier, there are numerous organizations and initiatives across the region involved in entrepreneurial development – there needs to be a common link between these resources via hub organizations like the HIVE or others.

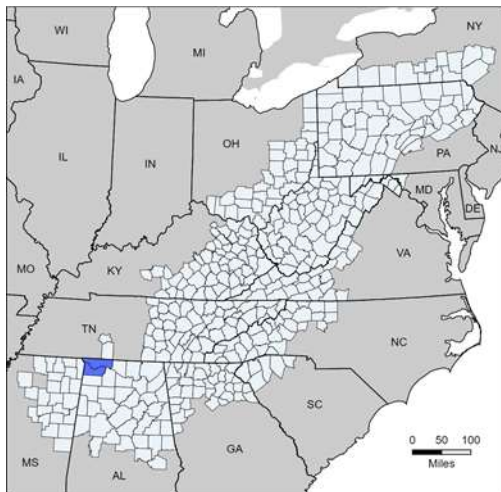
Establish a Circle of Champions. The region is home to many champions and advocates for entrepreneurship, but they are disconnected and operating in silos. In addition to formalizing partnerships, the region would benefit from regular convenings of area service providers, ecosystem builders, and entrepreneur advocates. The HIVE could fulfill this function, but other partners are needed as well. The recent West Virginia Good Jobs event, held in Beckley in November 2017, offers a model for such programming. Organized by Strong Mountain Communities, the conference brought together dozens of key organizations that need to partner with one another and who are already champions of entrepreneurship. Keeping this collaboration, joint programming, and marketing alive could greatly benefit the region’s ecosystem builders.

There are numerous efforts to promote entrepreneurship across West Virginia, and even more specifically in the seven-county area selected for this case study. However, there is no overall linking thread between these efforts. While there are some partnerships among small groups of these organizations, there is no network hub that weaves these resources together in one place. This role is well suited for the HIVE, and other regional partners could be engaged as well. By linking the disparate parts of the regional ecosystem, this effort would support multiple roles, including enhancing regional awareness of entrepreneurship, providing direct business services or referrals to other service providers when needed, and identifying and closing gaps within the regional ecosystem.

Entrepreneurial Ecosystems in Appalachia: Case Study of The Shoals Region of Alabama

Description of the Place

This case study examines the process of entrepreneurial ecosystem development in The Shoals region in Alabama. The Shoals, which refers to the Florence-Muscle Shoals Metropolitan Area, is largely a rural area that includes the four cities of Florence, Muscle Shoals, Tuscumbia and Sheffield and the counties of Lauderdale and Colbert. The total population of the two counties is just under 150,000; however, the



economic market spreads out 100 miles, pulling from Northeast Mississippi, Southern Tennessee and other counties in Alabama. The Shoals region has a long history as one of the first settled regions of Alabama. The region also has a long history as a center for music. Blues originator W.C. Handy and Sam Phillips, the record producer who discovered Elvis, were both born in Florence, and the Shoals region is globally known as a recording center for rock, gospel, and country music. Shoals has also capitalized on a long historical connection with the Tennessee Valley Authority (TVA). The nearby Wilson Dam was the first dam on the Tennessee River and later became the first dam

under TVA's authority. Even today, TVA maintains a large presence in the Shoals. The region has no major interstate and has seen a decrease in flow through traffic since the completion of I-22, which connects Birmingham, AL to Memphis, TN.

The three main drivers of the economy are: 1) health care, with Florence serving as home to the ECM Hospital system, which employs more than 1200 people and builds on synergies with the UNA School of Nursing; 2) retail, with Florence emerging as a major retail center for the surrounding region, attracting numerous shoppers from local regions as well as those from Mississippi and Tennessee; and 3) tourism, which is growing rapidly due to the natural resources, such as the Tennessee River, and the music industry, which has spawned many local events and festivals, such as the W.C. Handy Music Festival, and the region's location along Alabama's Robert Trent Jones Golf Trail.

The tourism industry in Shoals was built around fishing and fishing competitions and then increased significantly after 2004 with the opening of the Robert Trent Jones golf course and Marriott resort. As for music, the state of Alabama invested in the Alabama Music Hall of Fame in the early 90's, seeding the focus of music as a tourist attraction; the WC Handy Music Festival is celebrating over 30 years and a documentary on the history of music in the region has reignited the region's interest in capitalizing on its rich musical heritage.

The region played a critical role in economic development debates of the early 20th century, and the local waterways and dams were the first infrastructure managed by the Tennessee Valley Authority in the 1930s. The presence of TVA and cheap power sources helped the region become one of the South's first areas to attract heavy industry. This included major employers such as Occidental Chemicals, Reynolds Aluminum and Ford Motor Company that had good paying jobs that people would drive over an hour to fill. Sears and Best Buy also had a large presence. However, like many parts of the traditional "Rust Belt," Northwest Alabama manufacturers were hard hit in the 1980s and the local economy suffered major setbacks and over the years many of the larger employers have closed.

Historically, the region's economic development efforts have been driven by the traditional approach of business attraction. The dedication to this approach to economic development is exhibited by the fact that over the past 10 years there has been a half-cent sales tax instituted in the region specifically for the attraction of manufacturing activities to the region. While this funding pool is widely publicized, the region has not succeeded in attracting major new employers in recent years, even as other parts of Alabama have recruited major employers such as Mercedes Benz and Airbus.

One of the first steps to bring entrepreneurship to the region was the launch of the Shoals Entrepreneurial Center (SEC), the region's business incubator, in 1992. The original target of the SEC was to establish more manufacturers in the region. The building was in fact designed to accommodate small manufacturing, which supported the formation of many companies.

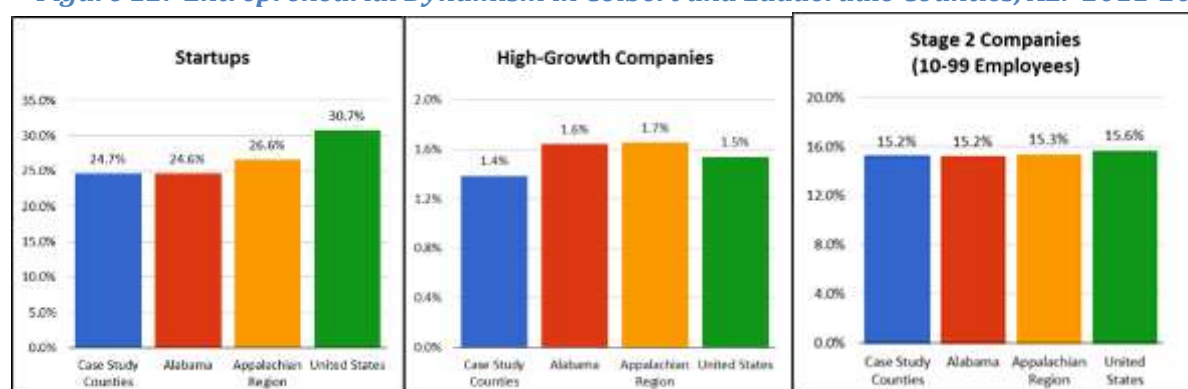
As the pace of business relocation slowed, and as the global economy diversified beyond manufacturing, local leaders began to consider other approaches to economic development that focused more on the retention of existing jobs or the creation of new jobs through entrepreneurship. This effort received a major push from Joel Anderson, a local entrepreneur and philanthropist, who started promoting the idea that if a company starts in the region, it would be less likely to leave.³⁷ In many ways, Anderson epitomizes the type of individual targeted in the Shoals' new approach to economic development. Although he can afford to live anywhere in the world, he has opted to live, work, and invest in the Shoals region. Along with Anderson and other partners, a small group of community members began thinking about entrepreneurship and innovation as way to strengthen the local economy, and to broaden the community's view of economic development.

The Shoals Region: A Data Snapshot

Generally, entrepreneurship data is limited in terms of content and geographic scope, but a brief profile of Colbert and Lauderdale Counties, AL provides some insight before delving further into the conversation about ecosystem legacies. The data in Figure 12 suggest that the Shoals region is a favorable location for more established Stage 2 companies, but that the region's capacity to spur new ventures and fast-growing ventures could be improved.

³⁷ <http://www.madeinalabama.com/2016/08/alabama-innovation-awards/>

Figure 12: Entrepreneurial Dynamism in Colbert and Lauderdale Counties, AL: 2011-2015.



Shoals Region Entrepreneurial Legacies

While traditional economic development organizations in the Shoals region focused on business attraction, the Shoals Entrepreneurial Center, located in Florence, AL, has long served as the region's prime advocate for entrepreneurship. The SEC was begun with \$1M in funds from the Tennessee Valley Authority (TVA) and serves as a traditional business incubator working with start-up and emerging companies. The SEC was the first attempt to strengthen the ecosystem with the idea of diversification and to foster local startups. It was officially launched in 1992 with support through the TVA and the state of Alabama Department of Economic and Community Affairs for the buildings and programming. Funds from the Appalachian Regional Commission (ARC) and the US Economic Development Administration (EDA) have been invested to grow SEC's reach and increase its impact, and the Center is now self-sustaining with private and local funding.

The Center supports start-up and emerging companies to help them successfully launch and grow. The SEC offers shared space, equipment and resources in a controlled-overhead environment. Because those costs are controlled, start-up businesses can allocate more of their limited resources to other things that help their businesses grow. The SEC offers a cluster of commercial space, business counseling and technical assistance, and a wide-ranging network of partners to provide a critical framework to help entrepreneurs meet their business goals. The SEC has proven to be a major part of the Shoals area economic development team.

It has four different locations, each serving a discrete set of industries, including a Culinary Complex (opened in 2002) to support food-related businesses. Since 1992, the SEC reports that it has incubated more than 150 businesses, which have created more than 1,500 jobs, along with major impacts on the regional economy.³⁸ For many years, the SEC was the heart and soul of the Shoals entrepreneurial

³⁸ See <http://www.shoalsec.com/about-us/>

community. It developed key partnerships with local banks, the University of North Alabama, and others, and it helped spawn many of the region's leading growth ventures.

In addition to the SEC, the region is also supported by a Small Business Development Center (SBDC) at the University of North Alabama serving seven nearby counties. The Northwest Alabama Local Council of Governments (NACOLG) serves eight counties, providing a variety of support services, including a revolving loan fund program for new and expanding businesses.

Regional enthusiasm about new approaches to entrepreneurship picked up pace over the past few years, as new leaders stepped up at various economic development organizations. A Shoals Chamber of Commerce survey found that local business owners sought a stronger regional focus on innovation and economic development. These findings sparked conversations between the Chamber of Commerce, the SEC and UNA Faculty who began talking about entrepreneurship and innovation as an economic development strategy to grow and support the economy. Collectively, they noted that local firms were late adopters of new technology solutions, and they identified digital technology as a new regional focus area. Under a new strategy, now known as Shoals Shift, these partners are supporting local businesses to apply digital tools and adapt technology into their daily business operations.

Shoals Shift and Strategic Doing

Shoals Shift focuses on taking existing assets and developing creative ways to grow businesses by better incorporating broadband applications and thus accelerating the growth of a digital economy. In 2016, ARC recognized Shoals Shift's role in diversifying the regional economy by awarding the project with \$997,150 POWER (Partnerships for Opportunity and Workforce and Economic Revitalization) grant. The funds are being used to offer a wide range of entrepreneurial programming, including improved access to capital and credit and development of strategies to increase the profitability of the region's start-ups and existing businesses through more efficient use of broadband technologies. The programming includes training and activities for community members and student entrepreneurs from middle school all the way to the university level. Funds have been also used to help businesses identify ways to benefit from today's technology to improve their sales, marketing and operations performance.

Shoals Shift is led by a fifteen person leadership group, who committed to regular meetings and collaborations. Since 2014, the group's regular meetings have created a strong bond, and have helped spur the creation of many spin-off programs-- most of which have required very little funding. This close collaboration and trust have been key ingredients in the region's success to date. Most of this work has been self-funded, via small donations and volunteer power. With new support from the ARC grant, expanded efforts to market these initiatives are now underway.

These informal gatherings of entrepreneurship champions have been strengthened by the team's adoption of the "Strategic Doing" methodology. Developed by researchers at Purdue University, Strategic Doing helps community leaders identify core regional assets, and develop actionable work plans to achieve key economic development goals. The approach builds on short term successes and measurable outcomes, building momentum along the way. Shoals Shift partners have found this approach to be energizing, helping to engage often busy and time constrained volunteers. Small

successes have added up and have made Shoals Shift a visible and respected presence within the community.

Shoals Shift spin-off initiatives include:

- *The Shoals Idea Audition:* An annual contest that provides business owners with a forum to pitch new business ideas to a panel of business leaders and experts. Participants prepare a three minute pitch, and they are required to participate in a three hour pitch camp training session to prepare for the opportunity. Winners get prizes and connections to local mentors and investors. Several new business investments have emerged from this process.

The Shoals Idea Auction has been highly successful from Day 1. In 2014, thirty-one local people pitched their ideas. The auction's winner, PartCycle, an online market for auto parts, has enjoyed great success ever since. In addition to winning the Auction, Part Cycle has also received investments from Alabama's statewide Launchpad program and a \$1 million equity investment from a local angel investor. They have hired nine employees, and the site is currently in the beta launch phase. The 2015 Auction winners have enjoyed similar success. Ark Labs, designers of a smart water flow device, has been recognized for innovation across the region. Ark Labs has been nominated by the Chattanooga Technology Council for the Early Innovator Award and the Chattanooga Area Chamber of Commerce's Spirit of Innovation Awards. The founder participated in The CoLab's 2015 Gig Tank and will soon be working with Vision Hospitality Group to beta test the company's product.

- *The Shoals Big Idea Contest:* Begun in 2015, this annual competition seeks new ideas that make the Shoals better prepared for the digital technology industry. The competition is open to all with new ideas, and it offers awards for big ideas at the middle and high school level, for university students, and for community ideas. Two of the big ideas—creating solar power charging stations and electric bike stations—are now in the implementation phase.
- *Mane Capital Fund:* Shoals Shift has also helped spur the creation of a local equity pool, the Mane Capital Fund. Created with support ARC and Alabama's Department of Economic and Community affairs, the Mane Fund will serve as key equity investor the Shoals' emerging entrepreneurs.

The Mane Fund operates as an organized angel fund. In addition to ARC and state funds, it also engages local investors and partners with Angel Capital Group, a Knoxville-based investment group. The local accredited investors in the Mane Capital Fund have a strong desire to invest in regional sustainable companies while enhancing economic development for the region. Teaming with the Angel Capital Group brings critical expertise and national collaborations that will be critical to achieving the long term goals of the fund.

- *Smart Start Weekend:* An annual three day weekend program that is open to UNA students with an interest in business start-ups. The effort was very successful in both 2015 and 2016, attracting many students and also engaging local business leaders as mentors and judges.

Students in a learning-by-doing environment progress through a series of modules that include: Ideation, Team Formation, Customer Discovery, Rapid Prototyping, and Pitch Workshops. Students are encouraged to apply and join the Generator to receive additional mentoring and secure a place to work on their idea.

- *The Generator*: An incubator space for UNA students that has operated since 2015. The Generator is open to all UNA students interested in innovation and entrepreneurship.
- *Co-Starters*: Co-Starters is a nine-week entrepreneurship program that was adopted from the successful Co-Starter program in Chattanooga. Seven people graduated from the first class in 2016. It is sponsored by the Shoals Chamber of Commerce.
- *Innovation Week*: For a week in February, events around innovation and entrepreneurship are planned throughout the region and open to the public.
- *Launchpad*: Innovation Week culminates in Launchpad, a competition to pitch one's start-up idea. This successful program debuted statewide as the Alabama Launchpad, and was introduced to the Shoals region thanks to Shoals Shift. In 2017, nine individuals applied for the program, eight people pitched their ideas for five businesses, and all five business ideas were funded out of a pool of \$100,000. Winners pitched ideas ranging from new shoelace technologies to swaddling blankets for babies to a physician referral company.
- *Bizz Buzz*: A monthly meet-up group for business connections. Meetings focus on a 10 minute presentation by a specific business owner who shares the experiences and challenges of being an entrepreneur and launching the business. The remainder of the time is for questions and for attendees to network with one another.

The business community is deeply involved in these events by either volunteering or providing sponsorships. Annually, the events require close to \$200K of prize monies. Business leaders are also funding startups through the Mane Capital Fund and on their own. The businesses are diverse, representing financial institutions, insurance companies, manufacturers and the retail industry, and include attorneys and accountants.

Shoals Shift is now in its third year and the group has been successful at both starting the above programs and bringing regional attention to entrepreneurship as an economic development tool. While the effort started off small with small outcomes, larger outcomes can now be demonstrated.

Institute for Innovation and Economic Development

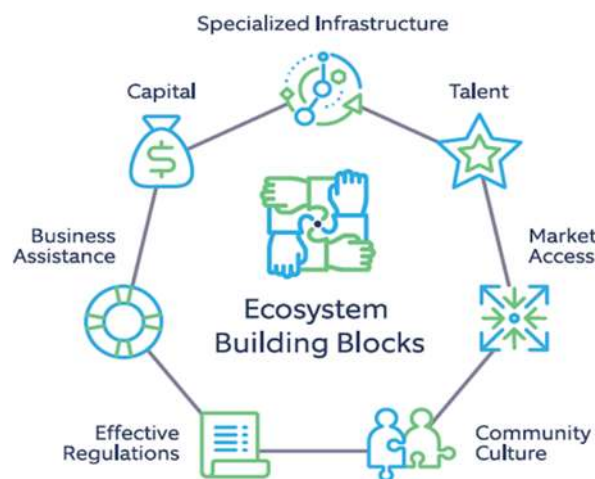
UNA has been one of the main players in the entrepreneur scene, and has played a role on the boards of both the SEC and the Shoals Chamber of Commerce. UNA has long been an important player, and has long hosted the local SBDC office, for example. In recent years, UNA has stepped up its engagement efforts, in part due to its interest in more local career opportunities for its students who hope to remain in the region.

Much of UNA's current engagement, including its work with Shoals Shift, is based at its Institute for Innovation and Economic Development, opened within the School of Business in 2016. It seeks to "enhance the economic well-being of the region by assisting businesses, government and community organizations with technical support using the assets of the Institute and its partners." The Institute acts as a resource for students, industry and government in the areas of innovation, economic development, corporate consulting and strategic doing.

The Institute engages both faculty and students in community building. Student fellows are available to local industry to work on specific projects that support regional entrepreneurial and economic development activity. Ten fellowships are awarded to UNA students through a grant from the Daniel Foundation of Alabama and ARC, and each student is mentored by a UNA College of Business faculty member. Projects may include providing consulting for a startup or other local firm, performing studies/data collection to assist local growth efforts, furthering a startup effort, analyzing a new product line, or other options.

The Shoals Entrepreneurial Ecosystem in 2017

As Shoals Shift has gained traction, other groups have stepped to build on the early foundational work of SEC and its initial partners. Today, the SEC operates in close alliance with UNA and the Shoals Chamber to develop new programs and opportunities for innovators and entrepreneurs. As the discussion below highlights, a strong and healthy regional ecosystem is beginning to emerge in the Shoals. Some challenge areas exist, but great progress has been made over the past several years. The accompanying figure below highlights the building blocks that contribute to the Shoals' entrepreneurial ecosystem.



Market Access

Many organizations within Shoals Shift are helping entrepreneurs identify, access, and succeed in new markets. They help residents to refine their business models, define markets, identify customers and develop stronger networks. SEC and the Shoals Chamber lead this work with a strong network of service providers, all linked into the Shoals Shift website and regional identity. The networks keeps all partners

informed and ensures that entrepreneurs are referred to the right local, regional, or state level service provider. The team closely engages state agencies' technical assistance programs and provides access to the Alabama International Trade Center.

Capital

Local leaders argue that business capital is readily available in the region. Members of Shift Shoal describe the access to capital in the area as robust. UNA's Small Business Development Center works with entrepreneurs to access traditional bank loans, including SBA-subsidized lending. The Mane Capital Fund acts as the key regional angel fund. The fund was started in 2015 through the collective efforts of UNA and SEC who raised \$1 million of committed capital. Organized venture capital funds are not based in the region, but anecdotal evidence indicates that there is a concentration of wealthy individuals in the area who have indicated an interest in investing in new business ideas.

The region is also home to two revolving loans funds, managed by NACOLG and by Huntsville-based Neighborhood Concepts, Inc. (NCI) a newly certified Community Development Financial Institution (CDFI). NCI's North Alabama Revolving Loan Fund provides microloans and business development resources to clients. The RLF services a five county region that includes Colbert and Lauderdale counties. Both RLFs provide loans to small businesses, seeking funding levels between \$5,000 and \$150,000-\$250,000.

Shoals Shift leaders would also like to tap into funding in the region's Economic Development Fund, which is controlled by the Shoals Industrial Development Committee (SIDC). Funded via a regional half-cent sales tax, the Fund now contains nearly \$70 million in capital. At present, the fund's capital can only be invested to support recruitment of new manufacturing related industries. Shoals Shift leaders hope that the fund's charter can be revised to allow for some investing in start-ups and high growth companies in a more diverse array of industrial sectors.

Workforce/Human Capital

At present, the Shoals region does not host any regional initiatives focused on talent development or addressing the skills gap facing many major employers. Community leaders recognize that the region needs to rethink how it develops and supports local talent, but these efforts are in their early stages. Much of the current local debate has focused on how to better train and retain students attending UNA or the Northwest Shoals Community College. Several interviewees suggested that a more focused effort, perhaps similar to Chattanooga's 2.0 programs (<https://chatt2.org/>), be developed.

The region also has few efforts targeted at entrepreneurship education. At the youth level, 4H and FFA chapters operate in the region, but no other formal youth entrepreneurship programs are in place.

Business Assistance

The region has quite a few resources for providing entrepreneurs with technical assistance: the SEC, the Shoals Chamber of Commerce, the SBDC, and the recently implemented Co-Starters program. UNA's Institute for Innovation and Economic Development also serves as a resource, primarily for UNA students. The Chamber supports a NextGen group of young professionals that is becoming more active in supporting entrepreneurs. Given the relatively small size of the community, and the close working

network of Shoals Shift participants, connections to specific technical assistance resources are easily facilitated.

Specialized Infrastructure and Facilities

The Shoals region is well- served with business incubation facilities and co-working spaces, with most new business owners tapping into facilities at various SEC locations or students at the UNA Generator. Additionally, a private co-working space recently opened in Florence, where a second space is also under consideration. UNA has recently opened ThinkSpace, a collaborative space for students. Managed by student volunteers, it is equipped with 3D printers and other technologies and tools used in maker spaces.

SEC's facilities, located in three different Florence locations, are considered to be state-of-the art for rural incubation programs.³⁹ Each location offers different resources and support. SEC's main facility operates as a mixed-use incubator. Its other locations include the Jerry W. Davis Complex for Manufacturing (targeting small manufacturers) and a commercial kitchen facility that has served over 200 clients to date. Many of the region's leading growth companies, such as Forsythe and Long Engineering, Ark Labs, and Geo-Source, got their starts at the SEC.

Community Culture

The biggest "shift" engineered by Shoals Shift has been to change the local conversation about entrepreneurship. Few community leaders embraced entrepreneurial development as recently as five years ago. Most public attention—and economic development resources—remained focused on business attraction strategies. Startups were growing at SEC and elsewhere, but they operated behind the scenes with little public attention. Now, thanks to the Shoals Shift effort, the idea of innovation and entrepreneurship as a regional strategy is widely embraced and pervasive across institutions. Shoals Shift has been extremely successful in lifting the image of entrepreneurship, and its "cool" factor, to the forefront of community thinking. Over time, the work of Shoals Shift has garnered more attention in the community and the media, which has become a strong proponent. For example, the 2017 Launchpad Competition was a front page story in the *Florence TimesDaily*. Entrepreneurship has become a core part of the Shoals identity.

Effective Regulation

Government interaction with Shoals Shift and intervention into business regulation has been limited; although changes in local government leadership have meant more awareness and political support for Shoals Shift activities. The City of Florence has established a business one-stop shop. The office provides one location to help businesses in permitting, signage and approving contractors. There has also been an increase in downtown revitalization in the cities of Florence, Tuscumbia and Sheffield, creating more mixed use space with retail on the ground floor and apartments above; space that could be used by aspiring and established entrepreneurs alike.

³⁹ Bridget Lair and Dinah Adkins, *Best Practices in Rural Business Incubation*. National Business Incubation Association report, 2013.

The Shoals Region: An Ecosystem Assessment

A culture change is occurring in Shoals due to the efforts of Shoals Shift and its partners. Interest and participation in new entrepreneurship programming is growing rapidly. Jobs are being created. Entrepreneurship and innovation are appealing to all generations. Shoals Shift is fostering a cultural shift, and bringing a new movement to the region.

Yet, the entrepreneurial ecosystem as a whole is in its infancy stages. Examination of Shoals Shift indicates that two ecosystem elements are relatively strong (specialized infrastructure and facilities and community culture), three are in the development phase (business assistance, capital and market access), and two need further attention (workforce/human capital and effective regulation). Finally, the region's poor broadband access creates other obstacles to regional development, and will need to be addressed for Shoals Shift to further progress.

Strong Ecosystem Elements

Thanks to the work of the SEC, the Shoals region has long had excellent access to specialized infrastructure and facilities. This element continues to be strengthened with the addition of spaces such as the Generator and UNA's ThinkSpace. The SEC has expanded over the years to include new specialized spaces and resources for emerging industries like food systems. Over time, we can expect other specialized programs and facilities to emerge at UNA and across the region.

The community culture has quickly changed to embrace entrepreneurship as a growth strategy due to the perseverance of a few individuals and the success of their events. This may be the main key success of the Shoals Shift movement. The overall mentality of most community leaders has not only shifted towards entrepreneurship, but the importance of entrepreneurship is now engrained and accepted into the culture by those individuals and the institutions that they represent. For example, the Shoals Chamber of Commerce, a lead partner, just recently hired a new President in part for her role in leading Launchpad and the Co-Starters program in the region.

Maturing Ecosystem Elements

Ecosystem elements are relatively strong in the areas of business assistance, capital and market access. However, none of these elements is effectively mature. The existing resources for business assistance, capital and market access is sufficient for the current needs of businesses, but as start-up companies in the region mature over time, these elements will need to mature as well in order to meet the needs of businesses that require more demanding support. There are several organizations that offer traditional support in the areas of business assistance and market access, and the establishment of the Mane Capital Fund is a huge win for the region. However, the existing levels of support may not be sufficient to meet the more sophisticated needs of later stage companies.

Weak Ecosystem Elements

There has been minimal focus on workforce development or building a talent pipeline. While there are some promising education initiatives underway, they remain disconnected from one another and from the larger Shoals Shift movement. While this does not pose an immediate hurdle as the region encourages more start-up activities, it may prove detrimental in the future as these businesses grow to the stage of hiring multiple employees.

Little attention has been brought to the role of government in supporting entrepreneurship. While local elected officials have expressed support of Shoal Shift's efforts, and Florence has established a one-stop-shop, local government has been rather uninvolved in establishing effective regulation. One of the biggest assets that could support and expand entrepreneurship activities is the Economic Development Fund controlled by the SIDC.

Broadband Access

Finally, the lack of fast and reliable broadband is an issue that will need to be solved as Shoals Shift continues its forward momentum. Much of the area is rural and distressed, creating a challenging market for private broadband investments. Fortunately, TVA appears to be stepping in, and has recently announced a project to bring broadband fiber to the rural areas with local utilities providing the last mile connections. Two utilities have begun working with TVA to make these needed improvements.

Poor broadband access could significantly impair Shoals Shift efforts, especially their continued emphasis on embracing new digital technologies. At present, several major employers are considering relocation due to recent problems with local internet services. More robust and sustainable broadband connections are needed.

Lessons Learned for Other Communities and Regions

The Shoals Shift effort formed at the right place and the right time. Local leaders were open to new economic development approaches, and strong local advocates made a convincing case to embrace entrepreneurship as a regional strategy. Shoals Shift leaders also believe that their success can be attributed to the process as well. They built a strong alliance, which was further bolstered by the Strategic Doing methodology. Strategic Doing kept them focused and ensured that they remained accountable and supportive of one another. They are now a strong and dedicated group of volunteers, each of whom is devoted and committed to their shared cause.

Yet, what else can be learned from the Shoals Shift example?

- **Dedication to Entrepreneurship.** Shoals Shift first builds upon the fact that a group of individuals, each dedicated to entrepreneurship and committed to working together, can create a movement. The players around the Shoals Shift table were truly committed to collaboration. They represented different organizations with different missions, but they were able to unite around the shared mission of Shoals Shift. Hence, attitudes of ownership or prioritizing individual organizational missions are absent from discussion. While one entity may have been

responsible for sponsoring or housing a specific event or program, the success of that event/program was attributed to the bigger Shoals Shift umbrella.

- **Just Do Something.** Participants of Shoals Shift consciously embraced a method of doing not waiting. Like entrepreneurs, they were willing to experiment and try new ideas, even in the face of great uncertainty. For example, the first Launchpad event was announced and planned even though program funding was not in place. Yet, the group had self-confidence and trusted that they could find a way to succeed. Via their network, they were soon able to raise the \$50,000 needed for the program. Limited resources were a constraint, but not a barrier to success.
- **Elevate the Visibility of Entrepreneurship.** Like much of the Southern US, the Shoals region has long pursued business recruitment as a core economic development strategy. Changing these practices takes time and commitment, and this was part of the core mission for Shoals Shift, i.e., to shift the regional conversations about business development. It took the effort of a few to implement a handful of successful programs to bring entrepreneurship to the attention of the community as a viable economic development alternative. The result is that entrepreneurship has been quickly embraced and engrained in the local/regional culture.
- **Create Space for Entrepreneurship/Innovation.** The creation of entrepreneur-friendly spaces, such as the Generator and SEC, has value on many levels. First, these places provide physical meeting points for entrepreneurs to share their stories and network. They are also tangible and visible to the public. Second, programs like Co-Starters and the Smart Start Weekend create space for the flow of ideas and sharing of concepts within a structured setting. Incubators also provide a needed leg up—via subsidized rent and equipment access—for new businesses. Third, events like Launchpad and the Shoals Idea Audition create yet another type of space, a space that is public in nature and announces to a wider audience that entrepreneurship and innovation are encouraged and rewarded.
- **Be Creative.** Shoals Shift built on local assets, such as the formidable infrastructure of the SEC and UNA, and creatively leveraged those assets into something bigger. Yet Shoals Shift also creatively took what existed elsewhere and replicated it in the region. Launchpad was originally a state level program that was first adapted to the local level by the Shoals Shift team. Similarly, looking elsewhere towards impactful programs, Shoals Shift identified Co-Starters, a program that had seen great success in Chattanooga, as a resource to bring into the region. Rather than finding the funds to develop a similar program, Shoals Shift used their limited resources, reached out to the founders of Co-Starters, and was able to replicate the program in Shoals.

Efforts of Shoals Shift to support entrepreneurship focused on 3 key strategies, lifting the perception and visibility of entrepreneurship as an effective economic development activity, providing space for entrepreneurs to congregate and innovate, and ensuring that entrepreneurs have access to business support organizations. Armed with few resources, the group managed to establish the Institute for Innovation and Economic Development, create the Generator, and offer a myriad of programs geared towards championing entrepreneurship. One off events like the Shoals Idea Audition, Innovation Week and Launchpad were all successful in bringing attention to entrepreneurship as a legitimate business

development strategy. Ongoing programs, such as the Smart Start Weekend, Co-Starters and Bizz Buzz, are encouraging residents to explore entrepreneurship.

Other communities can learn from these efforts that one need not start with substantial financial support; similar to most good entrepreneurial efforts, one needs to start off with a good idea, dedication and much self-reflection. Shoals Shift exemplifies this. While still in infancy, given how strongly the community has embraced and indoctrinated the idea of entrepreneurship, the ecosystem will most likely successfully mature as the businesses needing that ecosystem matures.

Entrepreneurial Ecosystems in Appalachia: Case Study of Garrett County, Maryland

Description of the Place

Garrett County is Maryland's western-most county, nestled in a region that encompasses western Maryland, eastern West Virginia, and Southwestern Pennsylvania. Garrett is Maryland's third smallest county by population, with 30,097 residents (2010). The larger Western Maryland region, which includes



Allegany and Washington counties, has a total population of roughly 252,000 residents. Cumberland and Hagerstown are the major centers of the Western Maryland region. Garrett County is primarily rural; its largest towns—Mountain Lake Park (2,092 residents) and the county seat of Oakland (1,925 residents) remain quite small. Garrett County's population has remained steady, showing very little growth over the past 10-15 years. However, unlike many other rural counties in the region, Garrett has also avoided major population losses over this period.

Garrett County's economy is heavily dependent on tourism, and attracts a large influx of visitors and second home owners to Deep Creek Lake and the nearby Wisp ski resort. Within Maryland, Garrett County, and the Mountain Maryland region more generally, offer a unique set of amenities, including scenic mountain landscapes and a wide variety of outdoor recreation opportunities such as hiking, fishing, boating, skiing, and river rafting.

Deep Creek Lake is the primary driver of the local economy, and, according to the Garrett County Economic Development Corporation, the resort area accounts for more than half of all local tax revenues. The resorts attract visitors who bring extensive resources and investments to the region, and help to support a strong base of retail establishments. Thanks to this outside revenue, Garrett County has long enjoyed a privileged position as the strongest local economy in the wider nine-county region that includes Maryland, Pennsylvania, and West Virginia.

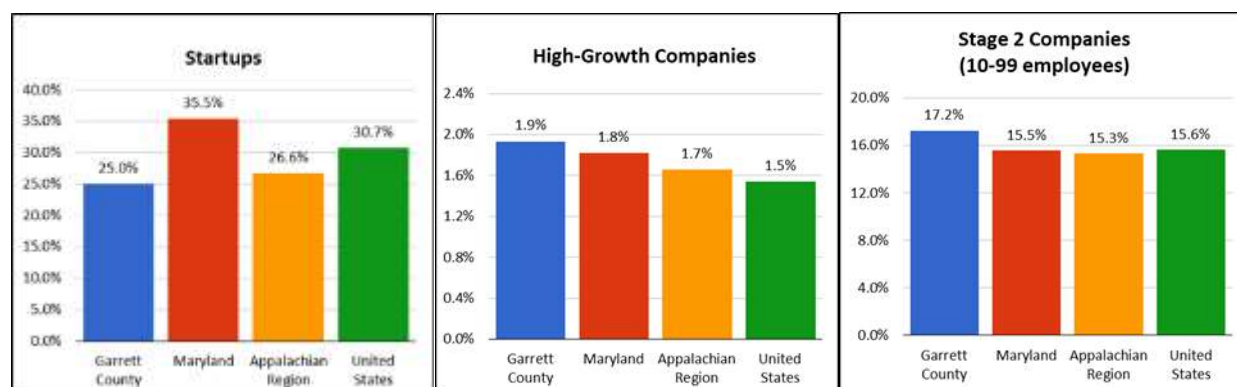
While tourism helps provide a stable economic base, the overall Garrett County economy faces many challenges. The region has remained stagnant for decades, and its economy lags in comparison to other parts of Maryland. Local wage rates remain low, and residents must commute at least 25 miles to find higher paying jobs. Garrett County lacks other strong local economic drivers. It is home to a robust

agriculture sector, but it has not generally succeeded in attracting numerous other employers or industries to the region.

Garrett County: A Data Snapshot

As Figure 13 indicates, Garrett County's recent performance in terms of spurring new startup companies has lagged in the 2011-2015 period, especially when compared to statewide averages in Maryland. However, Garrett County's concentration of high-growth and Stage 2 companies outpaces all benchmark comparisons.

Figure 13: Entrepreneurial Dynamism in Garrett County, MD: 2011-2015



History of Entrepreneurial Ecosystem Development in Western Maryland

Western Maryland faces unique economic development circumstances, especially when compared to the rest of Maryland, most of which is highly urbanized, and boasts some of the nation's highest concentrations of highly skilled workers and technology-focused industries. In contrast, Western Maryland is rural and operates with an economy based on a few core pillars: tourism, agriculture, and manufacturing. The Western Maryland economy shares more commonalities with other Appalachian regions than with the urbanized regions of Maryland.

Maryland's current Appalachian Development Plan identifies entrepreneurship as an important factor in the region's economic prosperity.⁴⁰ The state's regional ARC strategy attempts to align its goals with the ARC's wider strategic plan that does emphasize entrepreneurial development, but its top priorities are focused on broadband, infrastructure development, and promotion of the tourism, energy, and

⁴⁰ Maryland Department of Planning and the Tri-County Council for Western Maryland, Inc. *Maryland Appalachian Development Plan 2016-2020*.

health care sectors.⁴¹ The region's Comprehensive Economic Development Strategy, developed by the Tri-County Council of Western Maryland, does identify entrepreneurship and small business development as one of the area's top priorities.⁴² Recommended action items include expanded financing and counseling for local businesses, and development of new incubator and co-working space for new businesses.

Garrett County's own economic development plan places even greater emphasis on supporting entrepreneurial development.⁴³ The plan recommends a county wide focus on promoting business start-ups as part of a wider goal to increase the number and diversity of growing, profitable businesses that are paying higher wages. Specific recommended action items include:

- Supporting leadership and management development in businesses;
- Enhancing capacity to support and attract high performing businesses;
- Providing opportunities to reduce operating costs;
- Encouraging buy local (business to business) arrangements; and
- Recognizing/highlighting environmentally sustainable business efforts.

Garrett County's current efforts build on a history of supporting entrepreneur and small business development. Thanks in part to investments from ARC and from various state-level programs, Garrett County developed a core infrastructure to support small business development. Garrett County's early formal investments in entrepreneurship support were led by the Garrett County Community Action Committee (GCCAC) beginning in the late 1990s in response to the closure of several major employers, including a large Bausch and Lomb facility that once employed more than 1,000 people.⁴⁴ GCCAC worked with numerous partners including ARC and the local SBDC (based at Garrett College), to develop MicroWorks, a regional microbusiness development effort.

These early efforts were further institutionalized with the 2002 opening of the Garrett County Information Enterprise Center (GIEC). The GIEC, which was funded with support from ARC, EDA, Maryland, and Garrett County, provides incubator space and serves as Garrett County's visible hub for entrepreneurship and small business support. For most of its existence, GIEC operated as a traditional business incubator and also serves as a site where local residents can access other services and support from providers such as the SBDC, TEDCO (the Maryland Technology Development Corporation), and various funding programs offered by the Tri-County Council of Western Maryland and others.

⁴¹ *Ibid*, pp. 9-13.

⁴² Tri-County Council for Western Maryland, Inc. *Comprehensive Economic Development Strategy, 2013-2017*. Updated December 21, 2016, p. 20. Available at: <http://www.tccwmd.org/PDF/CEDS%202017.pdf>

⁴³ Garrett County Economic Development Strategic Plan 2011, p 14. Available at: [http://www.gcedonline.com/resources/gced/pdf/Strategic-Plan-\(Feb-2011---Website\).pdf](http://www.gcedonline.com/resources/gced/pdf/Strategic-Plan-(Feb-2011---Website).pdf).

⁴⁴ Fred D. Baldwin, "A Factory without Walls: Microbusiness in Appalachia," *Appalachia Magazine*, September-December 1999. Available at: https://www.arc.gov/magazine/articles.asp?ARTICLE_ID=91.

Over the course of its existence, GIEC and the wider regional ecosystem building efforts have benefitted from these partnerships with state economic development agencies, regional entities, and the Appalachian Regional Commission. These co-investments in infrastructure and programming were important to starting these efforts and to sustaining them over time.

Beginning in 2012, regional leaders began devising a new approach to energize the region's entrepreneurial ecosystem. This effort coincided with new leadership in the region. Mike Tumbarello took over as GIEC's Executive Director and Richard MacLennan assumed the Presidency of Garrett College. MacLennan's role was particularly important as he expanded the College's involvement in local economic development efforts and encouraged faculty and staff to embrace entrepreneurship as a core offering at the College. These efforts took many forms, as Garrett College became active in the National Association of Community College Entrepreneurship (NACCE) and began offering new classes and new programming at GIEC. At this point, GIEC was also rebranded as the Garrett College Center for Entrepreneurship and Innovation.

In October 2014, these efforts came together in an initiative called the Power of Possibility (POP), what GIEC leaders dubbed as the "Epicenter of Rural Entrepreneurship." POP is a series of events and programs staffed by GIEC and led/managed by a group of community volunteers. POP offered a series of workshops, trainings, and coaching/mentoring opportunities to help get local people interested and excited about the potential for new entrepreneurial ventures. Its ultimate goals were to "elevate the region's entrepreneurial possibilities mind-set, ecosystem/infrastructure effectiveness and the numbers and success rates for entrepreneurs and their start-ups."⁴⁵

POP kicked off with a regional summit and has since spawned a whole host of spin-off programs, events, and activities. These efforts include an annual Summit, the Garrett County Leadership program, local Meet Up Groups, and an annual Garrett County Maker Fest. Since 2014, more than 1,300 people have been engaged in these efforts.

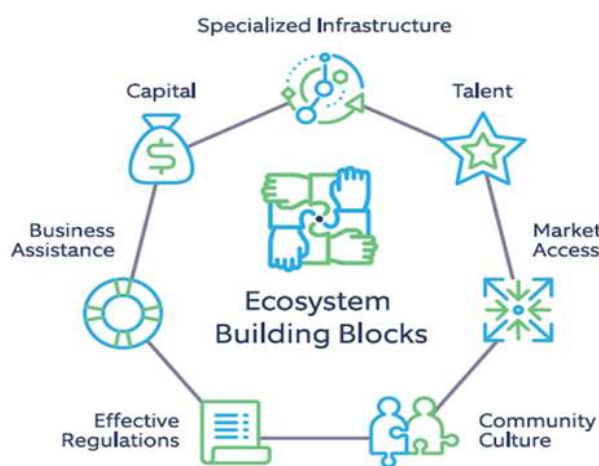
GIEC and its POP efforts remain a key hub for Garrett County's entrepreneurial ecosystem and it engages a host of local partners who will be discussed below. Garrett County's success in ecosystem building is also resonating across a wider regional footprint that engages not only Maryland's Allegany and Washington counties but also neighboring counties in Pennsylvania and West Virginia. These partners are also engaged in regional strategies supported by The Greater Cumberland Committee and a newly created I-68 Partnership of counties surrounding the I-68 interstate highway that bisects the region.

⁴⁵ To learn more, visit <http://www.4ruralsuccess.com/about-us.html>

Assessment of the Mountain Maryland Entrepreneurial Ecosystem

Like many Appalachian regions, Garrett County, and the Western Maryland Mountain region more broadly, first supported entrepreneur-focused economic development as part of a wider strategy to diversify the economy. With relatively small labor pools and limited physical space for large production facilities, the region's economic developers recognized that economic success would also require investments to nurture the growth of home-grown businesses. This regional focus has been further bolstered by Maryland's state level investments to promote rural development and to support industries, like agriculture and manufacturing, that are especially important in rural Maryland.

The graphic below describes the consensus building blocks of an entrepreneurial ecosystem derived



from the research literature. The remainder of this section, based on interviews with community leaders and outside research, assesses the relative strengths and weaknesses of the entrepreneurial ecosystem operating in Garrett County and across Western Maryland. Ecosystem development is never completed, and regional ecosystems are in a state of constant evolution. This assessment reviews progress over the last 10-15 years and also suggests areas for further investment and support.

Community Culture

Building a more entrepreneurial community culture has been the primary objective of recent ecosystem building initiatives such as the Power of Possibility (POP). At the community level, POP is based on the proposition that “the key to rural economic success is bringing the community members together to talk, to learn about, and support entrepreneurs, innovators, and makers.”

POP has served as a regional platform to jump start a host of events and activities designed to change the local conversation about entrepreneurship. In addition to the POP annual summit, this effort has spawned other spin-offs including the Mountain Maker Fest (targeting youth) and Leadership Garrett County. This latter effort is more broadly focused on grooming the next generation of county leaders, but it also includes a heavy dose of entrepreneurship-focused advocacy.

In addition to POP-related events and activities, Garrett County also supports several groups targeting business owners. The Mountain Maryland Tech Network has recently begun regular meetings, and a more informal meet-up group also convenes on a sporadic basis. In addition, local entrepreneurs can also link into more established business networks such as those led by the Garrett County Chamber of Commerce and the Greater Oakland Business Association. Similar local business associations also operate in the smaller towns of Friendsville and Grantsville.

Business Assistance

Thanks to investments and support from the state of Maryland, the Tri-County Council, and other local partners, Garrett County has a fairly strong base of business support organizations. The local SBDC office is based at GIEC, and SBDC consultants provide regular well-received consulting and other services to Garrett County businesses. TEDCO also supports local technology firms via its Rural Business Innovation Initiative.

At the local level, the GIEC is the key player in providing or coordinating services for local entrepreneurs. In addition to its own staff and facilities, it also hosts programs and offices for the SBDC, TEDCO, and other partners. GIEC also receives referrals from other partners such as the Garrett County EDC which is primarily focused on supporting larger employers. In addition to consulting and other services, GIEC also provides credit and non-credit courses in entrepreneurship and in various small business management areas. The GIEC's entrepreneurship courses use the well-known Ice House curriculum, originally developed by the Kauffman Foundation. Garrett College also offers a for-credit concentration in entrepreneurship.

Market Access

The Garrett County ecosystem faces some shortfalls when it comes to market access and efforts to develop more ambitious local businesses that sell around the country and around the world. State programs, like TEDCO and ExportMD, are available in the region. However, interviewees generally noted that Garrett County's entrepreneurs need to think bigger and develop more ambitious business ideas. They also noted that the region has not done a good job of using its natural assets, such as scenic beauty and strong base of local farms, to attract new industry or to build local clusters. A recent target industry study identified agriculture as a potential growth sector for Western Maryland.⁴⁶

Specialized Infrastructure

Thanks to GIEC's local presence, Garrett County has created the specialized infrastructure often needed by new and growing businesses. GIEC operates an incubator facility that can meet a variety of business needs, including an on-site cyber-lab. GIEC also operates a co-working space, known as the Hive. The Hive facility is currently under-utilized but is available for use by Garrett College students and local residents.

⁴⁶ Nick Munson, "Frostburg officials brainstorm ways to boost economic development," LocalDVM.com, February 10, 2017. Available at: <http://www.localdvm.com/news/maryland/frostburg-officials-brainstorm-ways-to-boost-economic-development-attract-businesses/654042252>

Capital

Garrett County is home to a strong and diverse set of business financing resources. The region is home to many sources of bank financing, but it also hosts a diverse array of non-traditional funding sources as well. The Tri-County Council's Summit Financing Solutions offers two programs to finance small business. The Western Maryland Revolving Loan Fund program is a traditional RLF that has operated since 1980 and provides gap finance loans in value between \$10,000 and \$400,000. A newer program, the State Lottery Terminal (SLoT) Fund, reinvests proceeds from Maryland's video lottery terminals. The local fund must invest 50% of its statewide SLoT allocation in small, women or veteran-owned companies located within ten miles of the Rocky Gap Casino in Allegany County. Remaining funds can be invested elsewhere in Western Maryland or across the state.

When seeking equity funding, local firms have two primary options. Programs operated by TEDCO, like its Seed Investment Fund, are available across Maryland, and have been used to finance local technology firms. In addition, the Mountain Maryland Angel Investors Group (MMAIG), an informal group of local investors, was also created to provide seed and equity financing to local firms. While the MMAIG structure is in place, the group has faced major challenges in identifying and sourcing potential investment opportunities.

In addition to these sources of debt and equity capital, local business can tap into several incentive programs. Garrett County provides a business property tax credit for new and growing businesses, and local firms can also tap into Maryland's Job Creation and Enterprise Zone tax credits. Garrett County is home to two enterprise zones that are co-located with major industrial park facilities. Firms located in these zones can tap into tax credits tied to local employment levels and state and local property tax credits.

Talent

Talent development in Western Maryland is primarily centered in the work of the three area colleges and universities: Allegany College of Maryland (ACM), Frostburg State University, and Garrett College. As noted above, Garrett College plays a very active role in supporting the regional ecosystem, via the GIEC and its course offerings as well. ACM and FSU also offer entrepreneurship courses and a certificate in entrepreneurship as well. FSU sponsors a chapter of the Collegiate Entrepreneurs Organization (CEO) within its College of Business.

Fewer resources currently exist in the K-12 system. Regional leaders have tried in the past to introduce the Young Entrepreneurs Academy program in Garrett County, but these efforts proved unsuccessful. At present, there is no single organized effort to promote youth entrepreneurship. Instead, pockets of activity can be found in local robotics programs, business training in the career-technical education system, and in various farm focused efforts like 4H and FFA.

In general, workforce development is widely considered to be a primary challenge for Garrett County and Western Maryland. It receives priority attention in regional and local strategic plans, and the shortage of local talent is widely considered to be a major impediment to future economic growth. Recent strategic plans from the Tri-County Council and Garrett County have identified talent development as core economic development priority.

Effective Regulations

Case study interviewees universally agreed that Garrett County was a good place to do business. County leaders worked together and the community was supportive of local businesses. They noted that the most severe regulatory challenges related to state or federal rules and procedures.

County and local officials strive to welcome new business and existing employers. Garrett County and the town of Oakland both publish business start-up guides and provide grants to local businesses for façade improvements and other needs.

In an effort to maintain the region’s business-friendly reputation, the Garrett County Chamber of Commerce has just commenced a review of the local business climate to assess progress and identify potential roadblocks to business growth.

The Garrett County Ecosystem: A Summary Assessment

Garrett County has made solid strides in building a robust entrepreneurial ecosystem. It is one of Maryland’s least populated counties, yet it is widely respected as a community that works and is a great place to live, work, and play.

The Western Maryland region identified entrepreneurship as an economic development priority back in the late 1990s. At that time, it began building and expanding core business support and development programs developed in partnership with regional, state, and federal partners. Much of the region’s core business support infrastructure, such as the GIEC, local finance programs, and TEDCO backed efforts, date to this period.

A solid core infrastructure for entrepreneurial support was in place by the 2010s, but local leaders were forced to recognize that they had not really “moved the needle” in terms of encouraging more people to start businesses and to grow more successful businesses. The POP program, and related efforts, were designed to re-invigorate and enhance the regional ecosystem.

POP seeks to build an entrepreneurial culture and mindset that supplements the current base of service and finance programs readily available in Western Maryland. This effort has been highly successful in terms of changing local conversations, but they have not yet generated significant and tangible economic development impacts that ripple throughout the region.

Patience will be required. The region has made great progress, and it must continue investing in culture change efforts like POP. GIEC and its partners should further supplement this work by pushing the expansion of POP-like programs into the K-12 education system and to build a wider regional network that more deeply engages partners in Maryland, Pennsylvania, and West Virginia.

Lessons Learned for Other Communities and Regions

- **Culture Matters:** Garrett County has a long standing reputation as a business friendly community with a whole host of programs and partners to support new and growing businesses. These assets have helped sustain the local economy, as they have in many other similar regions facing economic decline. But, they have not triggered a new business boom, prompting new strategies—like POP—that build a culture of entrepreneurship and create new customers for the existing, and underused, business support infrastructure. Traditional business services alone are insufficient; they must be supplemented with efforts to build a local “culture of entrepreneurship” as well.
- **Think Regionally:** Garrett County’s efforts often struggle to gain traction because the County’s population is so small. By expanding to a regional footprint, more customers can be attracted to current program offerings and costs can be shared. Some cooperation presently occurs with Allegany County, but entrepreneurship-focused ties to Washington County (MD) and to areas of Pennsylvania and West Virginia are limited. Revisiting regional partnerships may now make sense as part of the I-68 Partnership or to capitalize on new ecosystem building efforts in Pennsylvania (Startup Alleghenies) and West Virginia University’s many new entrepreneurship initiatives.
- **Embrace State and Federal Partners:** Much of Garrett County’s current ecosystem was developed in partnership with state agencies like TEDCO and Federal partners like the ARC. These outside investments have built infrastructure that can be impossible to finance with local funds alone. Leveraging outside investments is essential to building robust ecosystems across rural Appalachia.
- **Tap into Outside Visitors:** Garrett County and Mountain Maryland have long hoped to tap into the wealth and connections brought to the area from tourists and second home owners. Efforts like the MMAIG capitalize on these residents, and additional efforts to tap their business and financial expertise are needed.

Entrepreneurial Ecosystems in Appalachia: Case Study of Southwest Virginia

Description of the Place

This case study examines the process of entrepreneurial ecosystem development in Southwest Virginia (SWVA). The region encompasses seventeen counties and three independent cities: Bristol, Norton, and Radford.⁴⁷ It is home to a mix of small towns and rural areas, with an overall population of around 647,000.

Like much of Appalachia, the regional economy was built on a mix of agriculture, manufacturing, local trade, and resource extraction, primarily in the form of coal mining. Nearly all of these sectors have



faced significant declines since 1990, generating major negative ripple effects for the regional economy. Between 1990 and 2012, regional employment declines were in double digits for manufacturing (down 49%), mining (down 43%), and agriculture (down 35%).⁴⁸

The impacts of this multi-faceted economic downturn were felt across the region. School enrollments dropped, poverty rates jumped, and a host of other social challenges, especially the opioid epidemic, emerged. Economic decline has also triggered a large drop in tax revenues, placing additional financial pressures on local schools and public services.

The region's entrepreneurial economy was not immune to these impacts. Southwest Virginia was never a strong location for start-ups and growing businesses. Most local people opted to pursue solid jobs in the coal or manufacturing sectors, or relied on traditional work in agriculture or in the area's Main Street businesses. The downturn forced many local people to pursue self-employment as an economic necessity, but the region lacked a deep base of local entrepreneurs and had few resources or programs designed to help local people start and grow businesses. In addition, the region lacked other key components found in robust ecosystems. The local business culture tended to be risk-averse, and there were few entrepreneurial role models—or cheerleaders—to champion them. Successful entrepreneurial ventures did sometimes start, but their success was driven by tenacious leaders or fortuitous market circumstances, often in the face of major obstacles. Most observers agreed that SW VA was not a place where it was easy or common to start a new business.

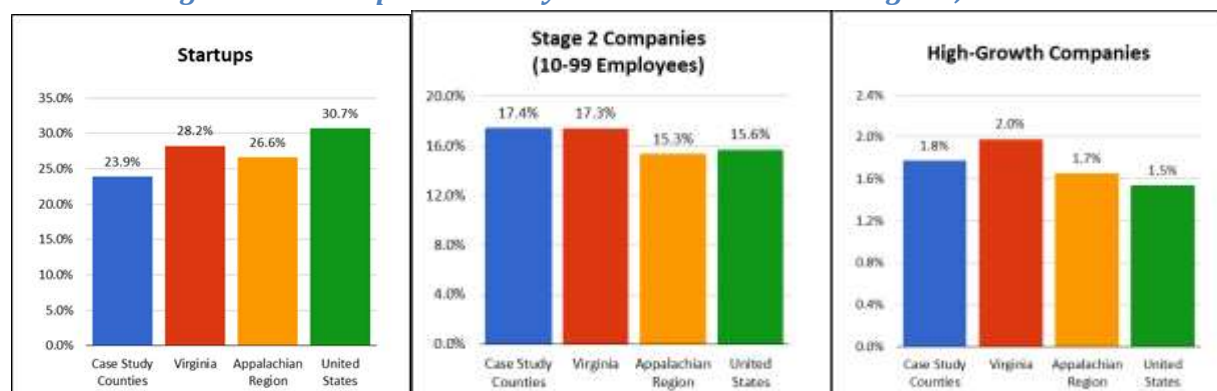
⁴⁷ Counties in the Southwest Virginia region include: Bland, Buchanan, Carroll, Dickenson, Floyd, Giles, Grayson, Lee, Montgomery, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe.

⁴⁸ Jack Morgan, *SWVA Economic Analysis Report*, Friends of Southwest Virginia, 2012, p. 3.

Southwest Virginia: A Data Snapshot

Figure 14 provide data on key components of entrepreneurial dynamism in Southwest Virginia. The region is home to a sizable base of Stage 2 companies, and its share of high growth ventures outpaces US and Appalachian Region averages. In contrast, the region does a poor job of generating new startups, with local startup numbers far below benchmark averages.

Figure 14: Entrepreneurial Dynamism in Southwest Virginia, 2011-2015



Southwest Virginia's Entrepreneurial Legacies

While recent data suggests economic improvements, the region has long lagged in terms of entrepreneurial activity. The many economic challenges facing Southwest Virginia stimulated much local soul-searching in the 1990s and early 2000s as local leaders and residents struggled to identify new economic engines that could help replace lost jobs in agriculture, manufacturing, and mining. Initially, local economic developers hoped to attract new industries to the region via generous incentive programs, industrial parks, and other infrastructure investments. However, by the early 2000s, community leaders began to embrace new asset-based strategies that sought to capitalize on Southwest Virginia's natural and cultural assets.

These new economic development strategies took several forms. The Crooked Road Music Heritage Trail is perhaps the best known of these efforts. The Crooked Road has been hugely successful, helping to directly create more than 100 local full-time jobs and generate more than \$6 million in new local spending over the past decade.⁴⁹ Other ongoing efforts include the Spearhead Trails, the 'Round the Mountain Artisan Network, and the Clinch River Valley Initiative.

These projects were all spearheaded and supported by the Southwest Virginia Cultural Heritage Commission, which also led a major branding and marketing campaign for the region. The Commission

⁴⁹ Sarah Lyon-Hill, Frances Dowd, and Patrick Burke, *An Economic Impact Analysis of the Crooked Road*, Virginia Tech Office of Economic Development, March 1, 2016.

was formally chartered in 2008, with extensive bipartisan support at the local and state level. Its work programs had multiple goals, including improving the region's reputation, attracting new funds and new visitors, creating new business opportunities, developing the region's creative economy, and improving the local quality of life. Program designers and advocates also hoped that these initiatives would help spur a growth in local business start-ups, but this goal was not viewed as an initial primary objective of the Crooked Road and related asset-based strategies.

Additional local efforts focused on revitalizing the region's downtown areas. Towns such as Damascus, Floyd, Abingdon, and Marion all developed strong downtown development or Main Street programs that sought to redevelop downtown real estate and to enliven the communities with events, fairs, farmer's markets, and other activities. These efforts received extensive local support, as well as funds from key state agencies such as the Virginia Department of Housing and Community Development (DHCD) via its Main Street program and other downtown revitalization efforts. The partnerships developed via this downtown development work served as critical foundations for subsequent efforts to build a regional entrepreneur ecosystem.

As the Crooked Road and related efforts began to generate momentum, the potential to help spur local entrepreneurial activity became readily apparent. Local leaders began to think more deeply and systematically about how they could build on this progress, and how to construct a stronger regional ecosystem for entrepreneurs. This effort culminated in the 2012 publication of the *Blueprint for Entrepreneurial Growth and Economic Prosperity in Southwest Virginia*.⁵⁰ The Blueprint process engaged hundreds of local leaders and residents in a series of four community forums to "consider what entrepreneurship means to the region."⁵¹ It presented three strategies, along with action steps and anticipated outcomes. They included:

- 1) Build the Entrepreneurial Ecosystem,
- 2) Grow Entrepreneurs and New Ventures, and
- 3) Promote the Region as a Vibrant Entrepreneurial Hub.

Building Southwest Virginia's Regional Ecosystem: A History

The 2012 Entrepreneurial Blueprint presented a vision that Southwest Virginia would develop a "robust environment for entrepreneurship that retains and attracts talent, capital, and ideas."⁵² From the start, this effort was consciously conceived as part of a wider set of asset-based initiatives, and the 2012 Blueprint report made a conscious connection between ecosystem building and five high profile regional efforts:

- The Crooked Road Music Heritage Trail

⁵⁰ Appalachian Prosperity Project, *Blueprint for Entrepreneurial Growth and Economic Prosperity in Southwest Virginia*. April 2012. Hereafter referred to as *2012 Entrepreneurial Blueprint*.

⁵¹ *2012 Entrepreneurial Blueprint*, p. 20.

⁵² *2012 Entrepreneurial Blueprint*, p.7.

- The Heartwood Center
- Spearhead Trails
- 'Round the Mountain Artisan Network
- The Clinch River Valley Initiative

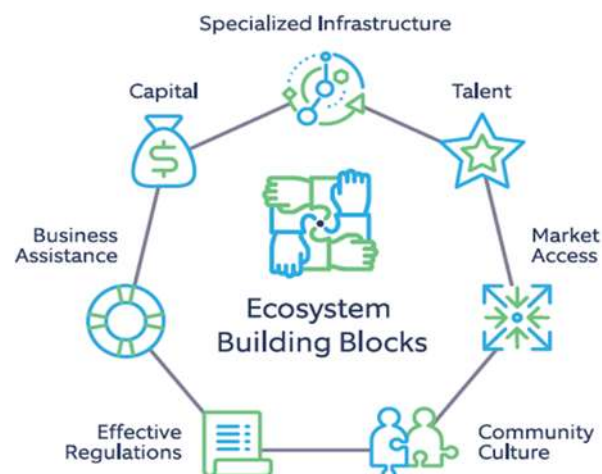
The five regional initiatives served to build a foundation for subsequent ecosystem building efforts. While none of them had an explicit focus on entrepreneurship, they served two critical functions. Most importantly, they showed that regional works. When local counties and towns came together to support regional tourism initiatives, they benefited from increased tourism traffic and the increased local spending that accompanied this influx of visitors. Between 2004 and 2012, tourism expenditures in the region jumped by forty-three percent.⁵³ This spending generated a 23 percent increase in tax revenue, and significant increases in both the number of businesses and workers employed in tourism-related industries.

In addition to highlighting the benefits of regionalism, the initiatives also reminded local residents and community leaders that Southwest Virginia was home to significant resources and assets that were attractive to people from outside the region. It highlighted the potential of alternative futures, beyond the past reliance on coal, manufacturing, and agriculture. Those traditional economic anchors would still matter, but they could be further supplemented by newer economic drivers.

This regional momentum also built on some of the more traditional advantages of Southwest Virginia as a location for new and growing businesses. In particular, the region could also capitalize on its business-friendly environment and lower costs of doing business. Project advocates sought to connect ecosystem support to the region's traditional business development efforts. As Mike Quillen, Founder of Alpha Resources, noted: "Southwest Virginia is unique for the work ethic of its residents and the independence of its business community. With the excellent cost of living, low tax base and strong labor pool, it is an ideal place for entrepreneurs to establish themselves and look to grow and prosper."⁵⁴

While these regional strengths offered a solid foundation for regional ecosystem building, Southwest Virginia also faced critical challenges and obstacles. In fact, the region faced significant gaps and shortfalls in nearly every area deemed to serve as contributing factors to ecosystem development, as depicted in the accompanying figure.

The region suffered from significant capital shortfalls, with limited investment in local firms from banks or equity investors. Local peer networks were limited or non-existent, but local



⁵³ Morgan, p. 4.

⁵⁴ 2012 Entrepreneurial Blueprint, p. 19.

programs to provide small business technical assistance were in place. These included local SBDC programs, several business incubators, and efforts sponsored by County or local Economic Development Organizations (EDOs) or Chambers of Commerce.

Deeper challenges were in evidence related to local talent and the local culture of entrepreneurship. Southwest Virginia lacked a strong history of building strong companies. Local people had a strong work ethic, and a “can-do attitude,” but this typically led them toward small self-employment ventures as opposed to building scale-up businesses. These small ventures could sometimes provide a decent wage for the owner and his/her family, but they did not generate significant levels of new wealth or jobs. Moreover, the region’s lower education attainment levels also limited the number of local people pursuing entrepreneurship in sectors like technology, with enhanced potential for high growth.

Southwest Virginia showed greater strength on several other ecosystem components. In particular, the region was widely recognized as a business-friendly location, with local EDOs and others working to aggressively recruit new firms and to retain existing companies. The region also had some specialized infrastructure for entrepreneurial ventures in the form of business incubation facilities and technology-focused industrial parks. While broadband access in the region could be spotty in some areas, regional leaders had also developed robust broadband capacity in larger towns and in high priority locations such as the Lonesome Pine Regional Business and Technology Park in Wise County.

The region’s initial ecosystem building approaches sought to address its most pressing shortcomings via a two pronged strategy. Via an initiative called My Southwest Virginia Opportunity (later dubbed Opportunity SWVA), regional partners sought to build a local culture of entrepreneurship among local residents and community leaders. At the same time, EDOs aggressively invested in efforts to attract high technology companies to open new facilities at industrial parks across the region.

The Role of My Southwest Virginia Opportunity

My Southwest Virginia Opportunity⁵⁵ was the centerpiece of the regional ecosystem building strategy, and the core organizing network for implementation of *2012 Entrepreneurship Blueprint*. A small group of key regional stakeholders began meeting as the Blueprint was publicly released in April 2012. In all, fourteen different small business support organizations were part of the initial project team; these partners served a region encompassing seven counties and the City of Norton. The effort was subsequently expanded to serve a wider seventeen county region encompassing four regional planning districts.

Their objective was to begin implementation of the many action items included in the Blueprint report. Specific goals, tied to the three strategies noted earlier, included the following:

- 1) Capitalize on the existing skills, knowledge and resources of regional business experts, community leaders, and economic development agencies,
- 2) Create an entrepreneurial mindset as early as possible,

⁵⁵ The effort is now known as Opportunity SWVA and this name will be used throughout the remainder of this case study.

- 3) Encourage networks for entrepreneurs, and
- 4) Celebrate small businesses, new ventures, and all innovations.⁵⁶

The Opportunity SWVA group operated via a loose structure, with work teams focused on key issues or work tasks (See Figure 15 below). Staff from the University of Virginia's College at Wise provided core support, with Shannon Blevins, the school's Associate Vice Chancellor for Economic Development and Engagement, assuming a central leadership role. Later, Robyn Lee was hired to serve as a full time coordinator of the project. The work was further bolstered by a local support team of representatives from key entrepreneur support providers, like the Virginia Small Business Development Center network, regional projects like the Crooked Road, and other key state partners such as the Virginia Tourism Corporation and the Virginia Department of Housing and Community Development (DHCD). VTC and DHCD partnered with UVa-Wise to create the entrepreneurship program coordinator's position which was a critical investment in the initiative. DHCD played an especially important role, as many Opportunity SWVA projects were developed with DHCD financial support. Several projects were funded via DHCD's Building Collaborative Communities initiative. Other local efforts received DHCD support via its Main Street programs or via DHCD's role as the manager of ARC funds for Virginia. These post 2012 investments built on a strong foundation developed thanks to previous DHCD investments in support of downtown development across the region.

Figure 15: Action Teams Operating under the Opportunity SWVA Umbrella



The Opportunity SWVA team opened their public initiatives by focusing on how their work could help build a more supportive entrepreneurial culture in the region. They began their work with the 2013 Entrepreneur Challenge, a regional business competition where local companies and nascent

⁵⁶ 2012 Entrepreneurship Blueprint, pp. 11-14.

entrepreneurs were encouraged to compete for \$10,000 in new business investment. The Challenge program was modeled on similar efforts underway in the region. This included the highly successful Pop Up Entrepreneur Boot Camp begun in Marion, VA. This effort has won numerous awards since it first began in 2008-2009 and played a critical role in the town's revitalization. Since the program started, it has supported 13 classes, and had many other positive spinoff effects, including the training of 237 people, the sale of 10 downtown buildings and leasing 21 additional storefronts, creation of 27 new businesses and over 106 new jobs, and an additional \$1.8 million in private reinvestment. The program also helped drop Marion's downtown storefront vacancy rates from over 17 percent to under 5 percent.⁵⁷

The first regional challenge attracted eleven local entrepreneurs, and was won by Norton's Pathfinder Outdoor Adventures with Clinch River Adventures taking second place. Both of these early winners were also active players in the Clinch River Valley Initiative.

After the success of these first Challenge competitions, the effort expanded rapidly. Competitions were held in individual towns, such as Norton, and a regional Opportunity Cup was also introduced. This



SWVA Opportunity Cup Winners

regional competition awarded \$35,000 in funding, and generated significant publicity across the region. The Opportunity SWVA team provided technical assistance for these efforts and also developed templates and guidelines for how to manage and promote the events. They also sponsored a seminar in mid-2016 to offer coaching and other support for communities seeking to replicate the Challenge Cup model.

Overall, the Entrepreneur Challenge model has been hugely successful and is seen as a core offering by Opportunity SWVA. Through 2016, the project supported 34 competitions that engaged 280 participants. Many of these competition winners and entrants have created businesses that anchor local downtowns. For example, in Norton, Shawn Campbell's Zest Catering has taken over a long shuttered downtown storefront. In addition to catering, Campbell hosts dinners on-site and even offers cooking classes for area residents. While he had been catering for some time, Shawn attributes his move onto Norton's Park Avenue and his business' expansion to the publicity and encouragement that came from Norton's Entrepreneur Challenge.

⁵⁷ See "Marion to offer free business development class," *SWVA Today*, January 19, 2017. Available at: http://www.swvatoday.com/news/smyth_county/article_dc8a3ae0-dd0d-11e6-9dcd-530937ec2828.html. For background on Pop-Up Marion, visit <http://www.marionva.org/business/pop-up-marion>.

Rachel's Cupcakes, also in Norton, emerged in a similar fashion. Rachel Collins was only 22, but had long had the entrepreneurial bug along with a passion for baking. The Norton Entrepreneur Challenge provided her with an opportunity to pursue this dream, and learn the basics of business start-up along the way.

The Entrepreneur Challenge effort was designed to serve several purposes. Helping local people start and grow businesses was its core objective, but it had a larger vision as well. The competitions received significant public attention and required significant investment of time and resources from local leaders and elected officials. Along the way, they got their own education about the importance of entrepreneurs, and they became more open to new and different ways of supporting economic development.

Program leaders cite this shift in public attitudes as one of their most consequential outcomes. Prior to the advent of Opportunity SWVA, the region primarily embraced traditional economic development strategies focused on business incentives, industrial parks and recruitment. Engaging with local entrepreneurs served to broaden horizons and introduced new thinking and new models into the region.

The Entrepreneur Challenge initiatives served as the core work of Opportunity SWVA, but other strategies were also pursued. Efforts to support community capacity building also gained traction via the related Rally SWVA project. Rally (Real Action Leadership Learning Yay!) SWVA is a community leadership training and capacity building exercise that was deployed in numerous communities across the region. It engaged local citizens in projects(s) promoting community revitalization. Specific Rally efforts took many forms and were often tied to wider community revitalization strategies. Three phases of the program were funded, with each phase focused on three communities. In Phase 1, the town of Damascus used the program to develop information kiosks around town and to install local bike racks. In Phase 2, citizens of Haysi focused on their new linkages to the Spearhead ATV trail, developing a new town logo, new gateway signage, and engaging local school students in other activities to promote the town. Phase 3 completed in late 2016, while Phase 4 kicked off in February of 2017. In total, 12 communities will have been engaged in the Rally SWVA program since 2015.

The Rally effort was not limited to the specific town projects. The team also sponsored Community Coaching Summits that provided training and technical assistance to residents from around the region.

A final set of Opportunity SWVA strategies were focused more directly on building regional ecosystem capacities. Three specific projects were supported. A small Capital Access Action Team was engaged in work to develop a new Resilient Community Loan Fund with support from Virginia's Department of Housing and Community Development and Virginia Community Capital, one of the state's leading CDFIs. Housed at VCC, this \$3 million fund would provide growth financing and other technical assistance to businesses in the region. This fund is available for businesses operating in distressed communities across Virginia.

A second initiative sought to build up entrepreneur support capacities at UVa-Wise, one of the primary architects of the Opportunity SWVA effort. This effort began with ambitious plans to engage UVa-Wise

students in entrepreneurial activities, such as Start-Up Weekend, an Innovators Club, and other events. These efforts faced many challenges, with few students participating and little engagement in planned activities. At present, the Opportunity SWVA team has reassessed its approach and is hosting an Innovation Day, which engages students in a student market, entrepreneurship game, and technology-based competition. The support of a local entrepreneurial venture has assisted the institution with launching the “G2K Game,” named after the company. This competition will be held at the end of March and is designed to promote high-growth, technology-based student ventures.

A final capacity building effort is focused on building “The Nest,” an entrepreneurial work space located in the town of Wise. At present, the region has no cowork spaces, and the Nest would serve as the first such space in Southwest Virginia. The team is seeking funds for a feasibility study, is identifying space options in Wise or the surrounding area, and has already undertaken site visits to nearby coworking spaces in Blacksburg, Harrisonburg, and Roanoke.

The work of Opportunity SWVA and its partners did not occur in a vacuum. Regional and local economic development organizations were also engaged in their own efforts to transform the Southwest Virginia economy. Much of this work was focused on business recruitment and workforce training, but several initiatives also sought to build a more robust regional innovation economy. Much of this work was initially laid out in a 2014 Regional Blueprint for Manufacturing, but local advocates, led by several local Chambers of Commerce and the Southwest Virginia Technology Council, also pushed to attract technology firms to the region.⁵⁸ These efforts emphasized the region’s assets in fields like unmanned aerial vehicles and cybersecurity. These included the local presence of UVa-Wise, which has strong capabilities in information technology, offering Virginia’s only undergraduate degrees in software engineering. Additionally, Mountain Empire Community College launched the Virginia’s first training program in drone technology in 2016. The three institutions, including Southwest Virginia Community College, also partnered to develop a regional cybersecurity workforce training program funded by the Appalachian Regional Commission and the Virginia Tobacco Commission.

Southwest Virginia’s Ecosystem: A Summary Assessment

Since regional leaders kicked off with a focused effort to build a regional entrepreneurial ecosystem in 2012, the Opportunity SWVA effort and related initiatives have made great progress. While the loss of mining and manufacturing jobs continues, there are some other bright spots for the area economy. The region’s focus on developing stronger tourism-related resources is clearly paying dividends. For example, between 2011 and 2014, tourism related jobs jumped 14.6 percent.⁵⁹ In addition, the region’s economic diversity performance has improved, and the region’s educational attainment levels have also shown better performance.⁶⁰

⁵⁸ See Tim Thornton, “Wired For Jobs,” *Virginia Business*, March 2017, pp. 30-31.

⁵⁹ Kelli Smith, Friends of Southwest Virginia Annual Impact Report 2017, p. 11.

⁶⁰ Ibid, pp. 16-18.

The Opportunity SWVA effort has generated significant regional momentum. When viewed as part of broader package that also includes the Crooked Road and related initiatives, this work has helped to spark a rethinking about the future of Southwest Virginia's economy. This mind shift may be the most consequential impact of Opportunity SWVA: As one interviewee noted: "The mindset in local government has changed. (Officials) are now more open to seeing entrepreneurs as a key part of the local economic development strategy."⁶¹

Elected officials were not the only target of these cultural change efforts. Local residents and community leaders were also engaged via the Rally SWVA program and related efforts. Tourism promotion advocates also needed to rethink their work. As one interviewee noted, they needed to shift their role from simply putting "heads in beds" to thinking about how tourism assets help create a better quality of life. This enhanced quality of life in turn serves as a magnet to attract talent and entrepreneurs to the region.⁶²

This mindset shift is still a work in progress, with several interviewees expressing a fear that local government budget cuts (due to lower tax revenues) may push elected officials to reduce funding for entrepreneur support programs.

This effort also helped spur the creation of many new local businesses and educated numerous local residents about the potential benefits of entrepreneurship. New businesses have started, and in the process, they have helped spark revitalization in many small towns. For example, in St. Paul, new firms, like the Sugar Hill Brewery and Clinch River Adventures, have started thanks in part to the regional Entrepreneur Challenge efforts. Their success has helped trigger other investments, such as the forthcoming Western Front boutique hotel, located in the center of town. As Shannon Blevins of UVa-Wise has noted, these combined effects were intentional. "Our ecosystem is unique in that we focus on helping communities as much as we help entrepreneurs," she said. "Southwest Virginia is rebranding and developing a new identity at the same time as it's building an entrepreneurial ecosystem."⁶³

This effort also succeeded in "connecting the dots" when it comes to local service providers. Via the Entrepreneur Challenge, regional workshops, and aggressive outreach, the region's residents now appear to have a strong sense of where and how they can get help to start or grow a new business. High quality technical assistance is readily available from sources like the SBDC and from economic development organizations across the region.

Entrepreneurship is now part of the language of economic development in Southwest Virginia. It is viewed as a core strategy in all of the Comprehensive Economic Development Strategy (CEDS) reports developed across the region. The 2015 Lenowisco Planning District Commission's CEDS report offers a typical perspective when it notes: "Industrial recruitment alone is not a realistic long-term solution to

⁶¹ Opportunity SWVA Focus Group held at UVa-Wise, January 16, 2017.

⁶² Opportunity SWVA Team Member, Phone Interview, February 8, 2017

⁶³ UVA Wise Focus Group, January 16, 2017.

economic development problems. Another critical piece of the larger development puzzle is entrepreneurial development.”⁶⁴

While the regional conversation has changed, the development of Southwest Virginia’s entrepreneurial ecosystem remains a work in progress. Two key challenges remain. First, Opportunity SWVA has been able to seed the development of small start-up lifestyle businesses, but it has not yet succeeded in spawning more ambitious scale-up businesses. Most of the region’s new ventures are growing at slower rates, and rely heavily on either the local market or incoming tourist traffic. The region has enjoyed less success in developing scale-up ventures that grow fast and do business across the US and around the world.

On a related note, the region’s ecosystem still suffers from the absence of peer networks for entrepreneurs. Most new business owners connect with service providers and other community advocates, but their connections to peers remain quite limited. Connections outside of the region are similarly limited. However, some nascent efforts to change this equation are underway. In July 2016, UVA Wise signed a memorandum of understanding with Northern Virginia’s Mach 37 Accelerator. This effort seeks to link the university and its students to new cybersecurity business and job opportunities. Progress is already being made, as local hiring by one of the MACH37 companies began in February 2017.

The development of entrepreneurial talent presents a second set of challenges. At present, there is little to no work underway to expand entrepreneurship learning opportunities for area youth. A nascent effort is underway at UVA-Wise, but it has not generated as much as student interest as originally hoped. There is little or no comparable effort to promote entrepreneurship education at the community college or K-12 levels. Opportunity SWVA team members acknowledge this gap in their current efforts, and hope to introduce new youth-focused initiatives in the future.

Lessons Learned for Other Communities and Regions

Beyond the findings listed above, several other important lessons learned emerge from Opportunity SWVA’s ecosystem building experience:

- **Organizational Design Matters:** Opportunity SWVA’s organizational structure played a critical role in ensuring the success of its many projects. The efforts benefitted greatly from the mix of players on their leadership team. The mix of local business service providers and representatives from key state agencies helped ensure that projects reflected local needs, but that they could also tap into needed outside expertise. The role of DHCD was especially important as Opportunity SWVA received funding via DHCD’s ARC-related and Building Collaborative Communities programs.

⁶⁴ Lenowisco Planning District Commission, *Comprehensive Economic Development Strategy: 2015 CEDS Report*, p. IV-6. Available at: http://www.lenowisco.org/uploads/3/0/6/6/30665363/2015_ceds_update.pdf.

Opportunity SWVA also benefitted from its connections to UVa-Wise, and to the funding of a full-time network coordinator. The UVa-Wise link helped open doors, and the university also provided professional staff and student interns to assist with project activities. Most importantly, Robyn Lee's role as a full-time coordinator was critical to the project's success.

- **Culture Comes First:** Recognizing that Southwest Virginia lacked a strong entrepreneurial culture, Opportunity SWVA rightly placed early and extensive emphasis on its role as “cheerleader” for entrepreneurship. This effort was consciously designed to help address the region’s “stark lack of startup activity” and “long standing cultural attitudes . . . and obstacles related to entrepreneurship.”⁶⁵ This focus on changing attitudes proved remarkably successful, and should be considered a core part of Opportunity SWVA’s accomplishments.
- **Link to Other Strategies:** Ecosystem building in Southwest Virginia did not occur in isolation. From the start, Opportunity SWVA directly tied their work to ongoing asset-based strategies like the Spearhead Trails or the ‘Round the Mountain artisan network. These linkages helped local people better understand both the purpose and the intended outcomes of ecosystem development. They turned often abstract ideas into a concrete reality that could be seen and felt in towns across the region. This strategy also presented the region’s citizens with the opportunity of cultivating their natural talents, knowledge and skills into viable business opportunities.
- **Moving from Start-Up to Scale-Up:** The push for a regional culture shift has been successful, but it remains a work in progress. Entrepreneurship is now on the map, but local entrepreneurs remain focused on business opportunities and markets that have lower growth potential. The rise of these start-ups is an important achievement, and should not be underestimated. These firms improve local quality of life, and provide incomes and fulfillment to area residents. Yet, they pack a more limited economic development punch in terms of local job and wealth creation. Leveraging core regional assets such as redundant broadband access and robust electrical capacity left over by the mining and manufacturing industry offers some resources for future work targeting technology-based ventures. Shifting the regional focus to embrace high-growth scale up businesses could be a future focus area for Opportunity SWVA and for the region more generally.
- **Building New Connections:** As noted above, a start-up culture is emerging in Southwest Virginia. It remains inwardly-focused, as new area firms target local markets as opposed to regional, national, or global opportunities. Future ecosystem building efforts should encourage local entrepreneurs to think bigger, and to identify market and business opportunities outside of Southwest Virginia.

⁶⁵ Lenowisco CEDS, p.IV-7.

This new thinking will not emerge on its own. Opportunity SWVA must consciously build these connections, and link local businesses to networks and support providers located outside of the region. The UVa-Wise/Mach 37 MOU is one model for this work, and significant opportunities also exist in the area of recreational tourism. Similar efforts to connect the regional ecosystem with outside partners should be pursued.

The experience of building a regional entrepreneurial ecosystem in Southwest Virginia offers useful insights for other regions, especially those without a strong legacy of entrepreneurial businesses. In many ways, the Opportunity SWVA effort began with a blank slate. Most of the important building blocks for a robust entrepreneurial ecosystem were not in place when this effort formally kicked off in 2012. Traditional service providers, such as the state SBDC network, were providing assistance to local start-ups, but few other resources were available. Moreover, the local business culture did little to nurture or support entrepreneurs.

These challenges dictated that Opportunity SWVA pursue a multi-pronged set of strategies that built local capacity and made the case for entrepreneurship, while at the same time developed new ecosystem capacities. As UVa-Wise's Shannon Blevins stated: "Our work is a tapestry" that weaves together multiple strands and which helps both the community and the individual entrepreneur.