

SITUATIONAL ANALYSIS

HAMPTON ROADS ENTREPRENEURIAL ECOSYSTEM

DECEMBER 2017

EVANS McMILLION
REINVENT HAMPTON ROADS



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757 ANGELS



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RE INVENT

HAMPTON ROADS

December 19, 2017

We are pleased to share the attached "Situational Analysis of the Hampton Roads Entrepreneurial Ecosystem." The need for this research was sparked by the year-long conversations of an informal working group of key ecosystem partners. Through that dialogue, it became clear that we needed to objectively inventory our existing regional entrepreneurship assets and determine if and where we had gaps in the ecosystem. In short, we wanted to know what we had and what we lacked, before we began create our strategic plan.

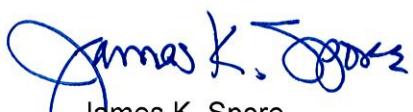
Reinvent Hampton Roads then partnered with 757 Angels to lead an effort to identify the key gaps within our entrepreneurial ecosystem and recommend and prioritize actions needed to close those gaps. To achieve this goal, we:

- Reviewed numerous models currently used to measure entrepreneurial ecosystems;
- Made five site visits to other similarly-situated ecosystems in varying stages of maturity; and
- Conducted a 360° inventory of the Hampton Roads entrepreneurial ecosystem using regional surveys and interviews of various ecosystem actors.

We are excited about the results of this research both because of the depth of the analysis, and the collaborations it has stimulated. Engaging in this process has helped build on the momentum already created by the success of the recent i6 Challenge grant award and the broad coalition that supported it. This group also aligned behind a regional GO Virginia grant request to support a small, seed fund this past fall. We anticipate that this funding will be granted in February.

These are just two of the many activities we know are taking place within the Hampton Roads Entrepreneurial Ecosystem. We hope that this analysis will continue to catalyze the kinds of collaborations, investments, and partnerships that we will need to support the growth of a vibrant entrepreneurial ecosystem in Hampton Roads.

Sincerely,



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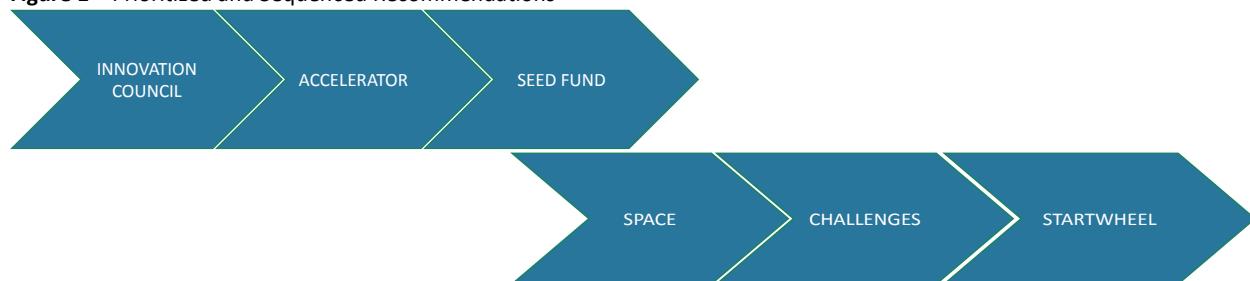
EXECUTIVE SUMMARY

The goal of this situational analysis is to (1) identify the key elements that play a role in creating a thriving entrepreneurial ecosystem; (2) compare the current state of the ecosystem in Hampton Roads to those key elements to determine gaps; and (3) recommend steps necessary to shore up those gaps, including how to prioritize these efforts.

To achieve this goal, Reinvent Hampton Roads and 757 Angels collaborated to engage in significant primary research, including:

- Reviewing numerous current models used to measure entrepreneurial ecosystems;
- Making five site visits to other similarly-situated, entrepreneurial ecosystems in varying stages of maturity to learn best practices; and
- Conducting a 360° inventory of the Hampton Roads entrepreneurial ecosystem by:
 - Surveying 89 entrepreneurs, investors, mentors, service providers, government officials, and economic development professionals regarding their views on the current regional ecosystem,
 - Conducting 11 in-depth interviews of various ecosystem participants to gain a deeper understanding of the current state of the ecosystem.

Figure 1 – Prioritized and Sequenced Recommendations



After compiling the site visit and Hampton Roads inventory data, we reached the following summary conclusions and make the following prioritized recommendations:

1. **MODEL TO MEASURE ECOSYSTEMS:**¹ Successful entrepreneurial ecosystems share five key elements that have led to their success:

Culture	A shared entrepreneur-first, give-first ethos drives all ecosystem activities and participants.
Density	A critical mass of founders, mentors, knowledge workers, and creatives that are connected through networks, spaces, and shared experiences.
Capital	Presence of sufficient, centralized capital sources at all stages that over time

¹ While we reviewed and considered the ecosystem models used in *Measuring an Entrepreneurial Ecosystem*, D. Stangler and J. Bell-Masterson, Kauffman Foundation Research Series on City, Metro, and Regional Entrepreneurship, March 2015, and *Developing a Startup Ecosystem in Richmond*, New Richmond Ventures, April 19, 2013, the synthesized 5-element framework we relied on here was developed by Techstars and reflects their unique expertise. We found that it was the most effective and accurate model to frame and communicate our findings.

	support a diversity of investor types and investment vehicles.
Talent	Universities, colleges, and corporations collaborate to develop, attract, and retain talent with diverse skillsets and the capacity and agility to adjust to changing workforce needs.
Institutional Support	Government, colleges, universities, and large corporations engage to initiate, fund, and sustain the resources and programs needed to support the growth of the ecosystem.

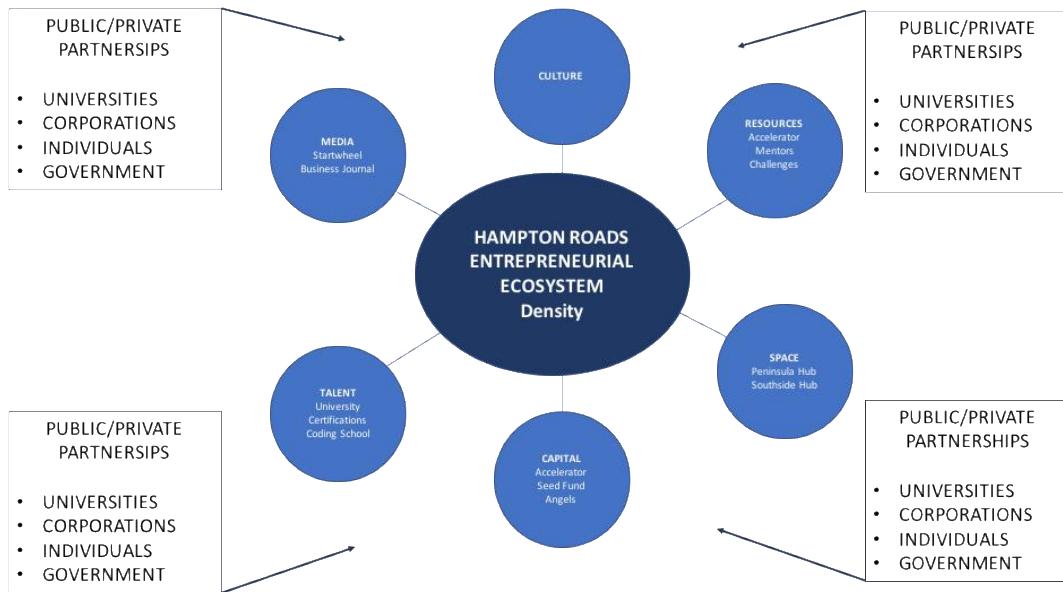


Figure 2 – Entrepreneurial Ecosystem Model

2. **GAPS:** Despite clear interest, activity, and momentum in the entrepreneurial ecosystem in Hampton Roads, the regional startup community remains nascent and not currently structured for success.

Culture	<ul style="list-style-type: none"> Hierarchy prevails over networks. Initiatives are not designed with entrepreneurs at the center Pay it forward philosophy is not widely shared 	
Density	<ul style="list-style-type: none"> Groups of like-minded actors and founders remain fragmented and disconnected Limited connectivity – lack of space to reliably connect (physically and virtually) limits growth Large regional assets are not leveraged to spur innovation and create a pipeline of ideas Attraction and connection are hard to advance without strong media sources to promote the region and raise awareness 	
Capital	<ul style="list-style-type: none"> Capital is present but lacking for companies prior to commercial launch Active investors interested in additional vehicles 	
Talent	<ul style="list-style-type: none"> Talent with sufficient diversity of relevant skill sets is lacking 	

	<ul style="list-style-type: none"> • Net brain drain of skilled technical talent • Efforts to measure and address this need remain siloed and under resourced.
Institutional Support	<ul style="list-style-type: none"> • Institutional support for founders and entrepreneurs is tepid and focused on quick wins rather than the long game • Cities and universities need to collaborate – lace together assets and not duplicate
3. PRIORITIZED RECOMMENDATIONS: Based on significant research, we recommend pursuing the following intentionally sequenced, first-stage initiatives ² to shore up the gaps identified within the Hampton Roads entrepreneurial ecosystem:	
<p>A. Culture: Begin with and maintain a commitment to the entrepreneur-first, give-first ethos and community values and the rest will follow. You cannot construct an ecosystem, but you can create a climate for it to flourish and grow. While communities coalesce around activities, without setting the right tone, the ecosystem in Hampton Roads will not thrive.</p> <ol style="list-style-type: none"> i. Establish an Innovation Council with at least fifty percent entrepreneurs, to set the right tone, foster public-private collaboration, and avoid overtaxing stakeholders with competing initiatives. ii. Engage regional corporations with a shared commitment to the common good to partner with public stakeholders to drive entrepreneur-focused initiatives forward. iii. Consider bringing in an outside voice to directly and efficiently address the critique that Hampton Roads is not seen as entrepreneur-friendly. <p>B. Accelerator: We need to capitalize on the opportunity the i6 Challenge award presents by launching an accelerator and challenge prizes to drive density, and to convene entrepreneurs and related resources to increase connectivity.</p> <ol style="list-style-type: none"> i. To generate density, we need to construct a top-quality accelerator program, delivered in conjunction with a robust challenge prize effort to attract quality founders and startups. ii. We need to leverage the i6 Challenge assets to convene entrepreneurs and other stakeholders for shared programs and events that set the right cultural tone and increase connectivity. <p>C. Seed Fund: We need to create a small \$1.2-\$1.5MM seed fund in Hampton Roads.</p> <ol style="list-style-type: none"> i. Fill the gap left in the innovation pathway by angel investors who are investing in later stage startups. ii. Mobilize the coalition of angel investors and the i6 Challenge supporters that coalesced around establishing a small seed fund to invest in startups prior to angel investment. iii. Increases density of investors and investment vehicles. iv. Helps deploy additional capital not invested due to time constraints. 	

² We list only the top five initiative areas here. There are several additional second-stage projects recommended below in Section III.

- v. Creates opportunity to **increase connections** among investors and provides a chance to share in a liquidity event.

D. Space: We need to establish a front door for entrepreneurial activity in the region.

- i. Answers entrepreneurs' expressed need for **increased connections, proximity to resources, and shared assets**.
- ii. Staff and programs must reflect the **commitment to the right entrepreneur-centered, give before you get ethos**.
- iii. **Access to mentors**, capital, and key service providers will be offered rent free, both in-house and virtually.
- iv. **Curated composition** of tenants and stay keenly focused on the needs of entrepreneurs.

E. Media: We must develop a comprehensive media strategy to draw local attention to entrepreneurial activity and successes, as well as to increase awareness about Hampton Roads from outside the region.

- i. A consistent **barrage of regional stories** will highlight founders, startups, successes, and events within the ecosystem.
- ii. **Need a wider distribution** of articles related to the Hampton Roads ecosystem to attract innovative people and companies to the area; these stories will also help recruit outside talent by allowing us to curate our regional story.
- iii. A strong media campaign will **increase awareness** of the region and our startup companies which is critical to drive density through hosting challenge prizes and marquee events.
- iv. **Mitigates regional competitiveness** by helping cities align behind a shared story that offers broad-reaching benefits.

CRITICAL ELEMENTS FOR A SUCCESSFUL ENTREPRENEURIAL ECOSYSTEM

Each region is unique, with its own history, culture, resources, and industries. Building an entrepreneurial ecosystem can only be done using “a recipe not a playbook,”³ which incorporates the region’s values and assets. There is no silver bullet to accelerate the growth of our entrepreneurial community, but there are certain key elements present in each of the successful ecosystems we studied that are critical to creating a thriving startup community.⁴

A. RESEARCH METHODOLOGY

We focused our ecosystem research on five specific entrepreneurial ecosystems – Richmond, VA; Winston-Salem, NC; Kansas City, MO; Nashville, TN; and Durham, NC. These cities were chosen because either they were of similar size, had previous economic over-dependence on one industry, or represented ecosystems in various stages of maturity. Prior to visiting each city, we did significant secondary research on the development of the ecosystem, the catalytic events, partnerships, or

³ Heivly, Chris, (Durham, NC), September 22, 2017.

⁴ After reviewing other models, we relied primarily on the Techstars Community Maturity Model. Their synthesized 5-element framework most accurately reflected the ethos and activities we observed in each of the successful ecosystems we visited.

activities, and the data and outcomes measuring their success. We then visited each city, toured the major entrepreneurship centers, and interviewed the critical ecosystem thought-leaders and pioneers to learn more about their successes, challenges, and future projects.

B. CULTURE

A community's culture includes the behavioral interactions between its individuals, groups, and institutions, as well as the social norms and beliefs that govern these exchanges. At its most wide reaching, an area's culture is what helps attract and retain residents and businesses and sets the tone for the types of sub-communities people can expect to find there. While a community's culture is broader than just that which is present in the entrepreneurial ecosystem, a healthy startup culture is essential to the success of an ecosystem and a key differentiating factor in larger thriving communities.

In nearly every interview and site visit, it was clear that the culture of a startup community is the most critical element of the ecosystem.⁵ At the same time, all admitted that it is the hardest element to foster and replicate.⁶ Each entrepreneurial ecosystem has its own unique features and attitudes that pervade each of its activities, but in those areas where entrepreneurial activity thrives, the culture includes a(n):

- Openness to new ideas, people, and information;
- Dedication to an ethos of civic responsibility;
- Focus on putting the needs of entrepreneurs at the center of all activities;
- Strong preference for flat networked structures over rigid hierarchy;
- Environment that nurtures and celebrates mentorship and connecting across diverse groups and geographies;
- Acceptance of failure as an important part of the learning process;
- Diversity of groups and interests;
- Celebration of public-private collaboration and communication; and
- Commitment to the long game.

Each of the mature, successful ecosystems we visited are steeped in an entrepreneur-first, give-first culture. They talk glowingly about successful public-private collaborations built by prioritizing connections over hierarchy. They tell numerous stories about the ways in which they slowly built a healthy stable of dedicated mentors and funders who are committed to the long term growth of the ecosystem. While it only makes sense for people to coalesce around activities and initiatives, the communities that are successful, sustainable, and thriving are the ones where entrepreneurs are always at the table, the community evidences a sense of civic responsibility, and the actors and supporters are committed to the long game. In contrast, communities that did not lead with this ethos, have innovation centers filled with service providers instead of entrepreneurs and startup resources that are under utilized and fragmented.

⁵ Heivly, Chris and Klein, Adam, (Durham, NC), September 22, 2017; Kurtz, Nathan, (Kansas City, MO), September 5, 2017; *Developing a Startup Ecosystem in Richmond*, NRV, pg. 9, April 19, 2013.

⁶ Mitch, Jessica, (Durham, NC), September 22, 2017; *Developing a Startup Ecosystem in Richmond*, NRV, pg. 9, April 19, 2013.

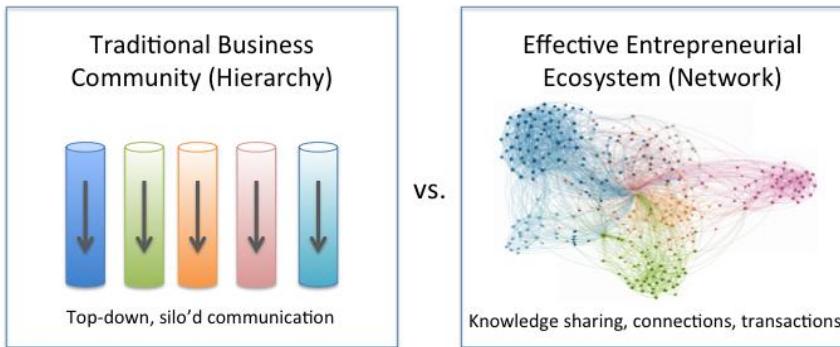


Figure 4 – Network over Hierarchy

Kansas City prides itself on its openness to new things and new ideas. The Hall family, founders of Hallmark, embraced new things early on. To guarantee the availability of innovative food, the Halls insisted that there be four James Beard Chefs present in Kansas City restaurants at all times.⁷ Similarly, Nashville's food culture evidences its openness to new ideas and people. Kim Stewart of M Street Partners, an innovative restaurant company with five different food concept restaurants along Nashville's M Street, says Nashville welcomes visitors and new restaurants with open arms.⁸ She began at M Street in marketing, but has since been given license to try several new concepts. Kim weaves fine art, performance art, and food together to create exclusive, one-time dining experiences for a select group of attendees. If her new dining concept is successful, Kim and M Street build on that idea in the next event. Kim notes that the culture of openness within M Street Partners and Nashville, along with the creative vibe of the surrounding creative corridor known as The Gulch, enables her to iterate and test new dining experiences without fearing failure.

Similarly, Peter Rousos from the Vanderbilt University, Center for Technology Transfer and Commercialization, a long-time veteran of and participant in the Nashville entrepreneurial ecosystem, described Nashville as a town in which there is a pervasive “mindset for creativity and risk taking with a very collaborative ethos” that undergirds all of the efforts within the entrepreneurial ecosystem.⁹ Janet Miller, formerly with the Nashville Chamber of Commerce, echoed this sentiment pointing to the creation of the Nashville Entrepreneurial Center (NEC) as an example. The critical front door for the Nashville startup community, the NEC was created after the Chamber convened a large group of Nashville’s entrepreneurs and thought leaders and asked them what they could do to help. Once they identified the need for a space to convene entrepreneurs, startups and resources, the City and the Chamber spearheaded the creation of the NEC, gave them rent-free space, committed public funds to the build out, and promised to seed the operating budget with \$200,000 annually. These initiatives were crucial to the development of the ecosystem, but the participants interviewed underscored the collaborative ethos as the key to their success.¹⁰

⁷ Kurtz, Nathan, (Kansas City, MO), September 5, 2017.

⁸ Stewart, Kim, (Nashville, TN), September 11, 2017.

⁹ Rousos, Peter, (Nashville, TN), September 11, 2017.

¹⁰ Klein, Adam, (Durham, NC), September 22, 2017; Miller, Kim and Rousos, Peter, (Nashville, TN), September 11, 2017.

Durham's startup culture is perhaps the most powerful example of how a strong, inclusive, entrepreneur-focused ethos can accelerate the growth of an entrepreneurial ecosystem. The story of the American Underground's (AU) humble beginnings is well known and often quoted.¹¹ Chris Heivly and Dave Neal set up shop in the basement of an old tobacco building in 2009, and began convening entrepreneurs.¹² Likening themselves to Wal-Mart Greeters, Heivly said whenever someone walked into the AU we jumped up from our desk and said, "how can we help."¹³ That attitude was what Heivly credits as the spark and the foundation of the success of Durham's ecosystem. Certainly Heivly and Neal went on to partner with Adam Klein at the Durham Chamber of Commerce and a small group of experienced founders and local thought leaders to build things – expanded the AU to 100,000 sq. ft. of co-working space, programs, and resources to support startups and early stage companies – and to create resources – The Startup Factory (accelerator), MOOGFEST (marquee event uniting music, art and tech) – but the entrepreneurs we met in Durham said these activities were only successful because of the collaborative ethos and culture in Durham.¹⁴

In contrast, communities without an entrepreneur-centric culture that accepts new ideas and fosters civic responsibility, find it difficult to cultivate a thriving ecosystem. The current Richmond ecosystem has significant entrepreneurial activity and has supported the growth of successful startups,¹⁵ but interviewees expressed frustration at the slow pace of change. NRV commissioned William & Mary to produce a thorough and well supported analysis of the Richmond ecosystem in 2013.¹⁶ Several of the recommendations cited have been initiated, but some say they have been slow to bear fruit, at least partially because of the lack of collaboration among some of the ecosystem actors.¹⁷ Causes identified were a persistent hierarchical structure, failure to include entrepreneurs in decision-making, and a focus on quick wins and return on investment, rather than the long game and measuring success by return on involvement.¹⁸ Richmond seems to be committed to combating these sources of friction and the slow pace of progress, however. They recently engaged Techstars to bring in Chris Heivly, an experienced outside voice, to bring together key constituencies to help accelerate the development of their emerging ecosystem.

¹¹ Madrigal, Alexis C. "Durham's Innovation Ecosystem." *The Atlantic*, October 24, 2011: pp 1-6.

¹² Heivly, Chris, (Durham, NC), September 22, 2017.

¹³ *Ibid.*

¹⁴ Mitch, Jessica, Klein, Adam and Speight, Dave, (Durham, NC), September 22, 2017. Durham's Chamber was and remains a critical partner in building the resources critical to Durham's success. It took the foresight of Adam Klein and his boss Casey Steinbacher to make it happen. Steinbacher gave Klein three months to go out and talk to as many entrepreneurs as he could and ask how the Chamber could help. The result was the creation of a wide network of regional entrepreneurs, a sense of what they needed, and an inventory of who was committed to the long game of creating a vibrant entrepreneurial ecosystem in Durham. This ethos continues today. As Chief Strategist at the American Underground (AU), Klein notes that the whole AU staff meets once a week with an AU startup and then updates the AU staff at weekly meetings about what each resident startup needs to grow. The staff solicits solutions or offers connections that are taken back to the startup to implement.

¹⁵ *Impact Report 2016*, Lighthouse Labs, Richmond, VA, (<http://www.lighthouselabsrva.com/impact-report.html>).

¹⁶ *Developing a Startup Ecosystem in Richmond*, NRV, pgs. 6-7, April 19, 2013.

¹⁷ Bostick, Brian and Cummings, Brad, (Richmond, VA), August 31, 2017.

¹⁸ Bostick, Brian, Cummings, Brad and Nuckols, Todd, (Richmond, VA), August 31, 2017.

Winston-Salem's ecosystem is less developed than what we observed in Richmond. Despite building two significant innovation spaces in different locations,¹⁹ and developing an active angel network,²⁰ the ecosystem still seems divided. Interviews and research suggest that a hierarchical structure, leadership lacking entrepreneur representation, and tepid commitment to the long game are likely causes.²¹

C. DENSITY

Density, defined as the number of entrepreneurs and level of entrepreneurial activity within a region, is a common element in every ecosystem we visited.²² While certain kinds of density are easily measurable, there is also a subjective element represented by the feeling of a concentration of startup activity, founders, mentors, coders, makers, and startup resources within a region. This kind of density and the related sense of momentum is a critical component of every emerging and mature ecosystem.²³ Communities studied generated density by:

- Creating a physical hub where founders and startups connect (physically and virtually) to vital resources and information;
- Building and curating a network of mentors, resources, and events focused on meeting entrepreneur's needs; and
- Promoting successes and increasing awareness of regional entrepreneurship within and outside the area;

1. Space

Kansas City cites the arrival of Google Fiber to the city as a triggering moment for their startup community development. Even though the high-speed network only went to one Kansas City neighborhood initially – what is today called the Kansas City Startup Village – having this space provided a focal point for the creation of density and provided a place where entrepreneurs could go to connect and collaborate on projects.²⁴ Similarly, Nashville's NEC served as a critical front door to start creating density within that startup community. While it is evolving today, interviewees in Nashville said the NEC was the catalyst that propelled the maturation of their ecosystem because it provided one central space in the region where entrepreneurs, support providers, and capital could convene, connect, and share assets and resources.²⁵

¹⁹ Woodward, Colin, *How Tech Helped Winston-Salem Quit Tobacco*, Politico, October 20, 2016; Craver, Richard, *Winston-Salem names veteran executive Lineberger to oversee GMAC building redevelopment*, Triad Business Journal, May 29, 2017.

²⁰ Seaman, Jessica, *Angel Network springs up in the Triad*, Triad Business Journal, August 11, 2017.

²¹ Flywheel staff, (Winston-Salem, NC), August 24, 2017.

²² *Measuring an Entrepreneurial Ecosystem*, D. Stangler and J. Bell-Masterson, Kauffman Foundation Research Series on City, Metro, and Regional Entrepreneurship, pgs. 2-3, March 2015.

²³ *Ibid.* at pg.3 (Citing to Brad Feld's observation that density is "the statistical corollary of the number of entrepreneurs you'll run into walking across the street." Brad Feld, "Entrepreneurial Density," *Feld Thoughts*, August 23, 2010 and Brad Feld, "Entrepreneurial Density Revisited," *Feld Thoughts*, October 3, 2011.)

²⁴ Kurtz, Nathan, (Kansas City, MO), September 5, 2017.

²⁵ Miller, Janet, (Nashville, TN), September 11, 2017. Today, when density is no longer a problem, Nashville can sustain two innovation centers that run simultaneously but are linked virtually and share common programming. Meador, Deanna, (Nashville, TN), September 11, 2017.

The American Underground in Durham had a similar catalytic effect by providing an authentic space where ecosystem participants could go to connect to key resources, programs, capital, and people who could move them forward. Curating the spaces is critical, however. The successful spaces we saw were myopically focused on serving the needs of the areas entrepreneurs, offered rent free, had cheap parking available, and prioritized creating connections and collisions that spur the growth of the founders and their companies. For example, based on entrepreneur feedback, the American Underground just recently created an annex space adjacent to the AU to house companies that provide services to their startup neighbors.²⁶ Including these vital partners and keep them as an AU resource was important, but equally so was honoring the entrepreneurs' need to maintain some distance.

In contrast, the presence of multiple disconnected spaces in Richmond and Winston-Salem will likely hinder efforts to create density. Our research suggests that Richmond will soon have four entrepreneur-focused spaces or areas vying for the attention of the region's entrepreneurs, potentially impeding the creation of density in any one location. Similarly, there are two locations in Winston-Salem established to connect entrepreneurs to each other and the larger ecosystem. They do not collaborate to share mentor networks or programming, and the impressive Flywheel space is located far from the vibrant downtown area innovation spaces.²⁷

2. Mentors

Successful startup communities also have prioritized building and curating networks of quality mentors and resources. Many interviewed said that the single most important resource, more than space, accelerators, and capital, was access to the right mentor at the right time.²⁸ NEC polled its prior accelerator alumni to determine what resources were the most impactful and the resounding response was the mentoring.²⁹ While they started small, Durham and Nashville's mentor networks are each over 200 strong today. What has evolved through trial and error is a process of vetting mentors by first verifying the presence of the right entrepreneur-centric mindset, and second, by amassing a roster with a wide range of skill sets. They then make sure to deploy the mentors judiciously, using a high-touch manual match-making process to ensure there is a fit and commensurate time commitment.³⁰

3. Programming

Robust entrepreneur focused programming also contributes to creating density in both successful and emerging ecosystems. More mature ecosystems with greater density have thriving, complimentary programs at all stages of startup development. Kansas City offers idea stage companies the chance at \$25,000 grants, mentoring and pitch assistance through the Digital Sandbox.³¹ More established Kansas

²⁶ Klein, Adam, (Durham, NC), September 22, 2017.

²⁷ Interview with Flywheel Staff, Winston-Salem.

²⁸ Nuckols, Todd, (Durham, NC), August 31, 2017; Raley, Jeremy, (Nashville, TN), September 11, 2017.

²⁹ Raley, Jeremy, (Nashville, TN), (September 11, 2017).

³⁰ Raley, Jeremy, (Nashville, TN), September 11, 2017. The NEC has recently replaced its industry-specific accelerators with a dedicated mentor resource called Case Management. Staffed by 2 FTEs, Case Management sources and curates mentors for Nashville area startups and accelerator alumni.

³¹ Shackleford, Jeff, (Kansas City, MO), October 4, 2017.

City startups can apply to Techstars Kansas City and, if accepted, exchange equity for access to one of the most successful industry-agnostic accelerator programs and networks in the country.³²

More emerging ecosystems have fewer startup programs, but these resources remain important contributors to creating density. The quality of the Lighthouse Labs accelerator program has done a lot to create density and stimulate the growth of Richmond's emerging ecosystem. Without a centralized innovation space in Richmond to help foster connections and collisions, Lighthouse Labs has become the most robust convener of all things entrepreneurial in Richmond. "We really are a lighthouse for Richmond's entrepreneurs," says Todd Nuckols, Managing Director of Lighthouse Labs, in that entrepreneurs look to Lighthouse, its staff, and alumni as mentors and key connections to help them access regional resources.³³ Lighthouse Labs has made a name for itself in the accelerator space in short course by keeping the needs of entrepreneurs at the center of the program, heavily curating the mentor experience, and focusing on helping its alumni raise capital.³⁴

4. Media

To create density, ecosystems must not only connect and support what they already have, they must attract new entrepreneurs, startups, and other supporting actors to the region. Mature startup communities deploy a collaborative media strategy, as well as host marquee events such as art and technology conferences or well-publicized, high-quality challenge prizes as attraction vehicles.

Media dedicated to telling the startup story in Kansas City was cited as one of the three triggering events that put Kansas City on the entrepreneurial map.³⁵ Silicon Prairie News was obsessively reporting on entrepreneurial success in Omaha, Nebraska, said Nathan Kurtz of the Kauffman Foundation, and that was generating real buzz. While density of and successes within the startup community in Kansas City exceeded that of Omaha on many measures, they could not generate the media attention needed to attract new startups. After engaging in a collaborative media strategy, Silicon Prairie News turned its attention to Kansas City and with it came an influx of people seeking to join the emerging ecosystem.³⁶

Successful ecosystems also attract entrepreneurs, talent, and startups by using media to publicize their community story, to tell people why they should live there. Durham was struggling to tell its story to executive recruits and startups looking to relocate. To combat this, they convened a wide spectrum of ecosystem participants virtually through a listserv to discuss how to define the quintessential Durham experience and how to deliver the message.³⁷ They then created a Google drive where all participants uploaded any recent posts or media stories detailing various aspects of the Durham experience. A listserv participant with virtual reality expertise then mined the Google drive data and generated a virtual reality experience shared with recruits using a set of virtual reality goggles.³⁸

5. Challenge Prizes

³² Mitchell, Lesa, (Kansas City, MO), September 5, 2017.

³³ Nuckols, Todd, (Richmond, VA), August 31, 2017.

³⁴ Nuckols, Todd, (Richmond, VA), August 31, 2017.

³⁵ Kurtz, Nathan, (Kansas City, MO), September 5, 2017.

³⁶ *Ibid.*

³⁷ Klein, Adam, (Durham, NC), September 22, 2017.

³⁸ Klein, Adam, (Durham, NC), September 22, 2017.

Hosting challenge prizes and marquee events can also help create density both within the startup community and the larger region. Developing challenge prizes within the region is an effective way to attract attention both to an area and a specific expertise. Lesa Mitchell of Techstars, formerly of the Kauffman Foundation, echoed what recent research has shown - challenge prizes serve to spur innovation, drive density, and attract attention to certain areas of discovery and the places dedicated to their study.³⁹ MIT and other prestigious universities have leveraged their brand and network to create high-profile challenge prizes that highlight certain problems facing specific localities.⁴⁰ MIT's annual SOLVS Conference brings together industry celebrity judges who choose the SOLVS challenge prize winners while also attracting attention to region supporting discovery in the chosen target areas.⁴¹

Marquee events are usually a combination of art, music, sports, and wine/beer festivals or those with a technology or industry focus. The Kauffman Foundation holds three large events annually in Kansas City to support the ecosystem and to offer locals and outside entrepreneurs the chance to come together.⁴² TechWeek-KC is one such event that convenes technology leaders, corporations and other participants in the Kansas City ecosystem to highlight the region's most successful startups and to encourage their replication through spinoffs.⁴³ The quality of the speakers and the connections at this marquee event serve as a significant draw for interested parties from outside the area. While they have a different mission, Nashville's Unconference and Durham's MOOGFEST, serve the same function by creating significant publicity and attracting tech talent types to these ecosystems.

With greater density comes an important increase in the opportunity to collide and connect with like-minded, skilled founders, entrepreneurs, funders, and supporting actors. When you combine the right ethos with activities designed to create density the critical connections needed to create a thriving ecosystem are higher quality, formed more quickly, and are more easily replicated. Density is critical to building a healthy startup ecosystem, and when it is built on top of the right cultural foundation, a flywheel effect can occur.⁴⁴

D. CAPITAL

Our research indicates that access to diverse sources of capital is critical to the success of any entrepreneurial ecosystem. We define capital broadly to include the presence of traditional investment vehicles like individual private investors, angel groups, venture capital funds, private equity investors, as well as crowdfunding and public and private grant programs. Beyond investment vehicles utilized, it is important to analyze the various size and stages of these investments, overall investor risk tolerance, and whether successful startup founders are reinvesting back into the ecosystem.

At a minimum, ecosystems need investors willing to invest in startup and early-stage companies. More specifically, early-stage investment is essential to ensure the survival of the most promising companies

³⁹ Mitchell, Lesa, (Kansas City, MO), September 5, 2017; Nesta, Center for Challenge Prizes, *Challenge Prizes Landscape Review*, pg. 3, April 2012 (See <https://www.nesta.org.uk/publications/challenge-prizes-landscape-review>)

⁴⁰ See <https://solve.mit.edu/> for more information on MIT SOLVE challenge prizes and events.

⁴¹ *Ibid.*

⁴² Kurtz, Nathan, (Kansas City, MO), September 5, 2017.

⁴³ See <http://techweek.com/kansas-city> for more information on Tech Week in Kansas City.

⁴⁴ Heivly, Chris, (Durham, NC), September 22, 2017.

through what is commonly called the entrepreneurial valley of death. In both Nashville and Richmond, angel and venture capital investors were the first movers in the ecosystem. While these angel investors were able to validate the existence of startup activity and deploy a meaningful amount of capital, they found that without diversifying their investment options with a seed fund and maintaining an active community engagement effort, the growth of their ecosystem stagnated.⁴⁵ Stated another way, without creating reliable sources of early-stage seed capital and supporting broader ecosystem activities, investors found they could not sustain a sufficient deal pipeline. These ecosystem leaders concluded that if the investment community did not collaborate with other ecosystem participants to invest in making sure there was a continuous pathway of resources and capital to support startup growth, the entrepreneurs moved away or the companies failed before they became investment-worthy.⁴⁶

Ecosystem maturity is also evidenced by the presence of successful startups investing in the ecosystem and its companies⁴⁷ and increased investor density in specific industry verticals.⁴⁸ Once Nashville's ecosystem was mature enough that density was no longer an issue, several investment funds and angel networks leveraged their emerging health-care industry to launch several health care specific investment vehicles. This level of industry specificity was only successful when there was sufficient density of startups and resources to support diversity across the entire ecosystem.⁴⁹

The existence of financing alternatives also indicates a more mature ecosystem. Kansas City and Nashville both have financing alternatives focused on stimulating and growing companies at the earlier, idea stage by which they hand out non-dilutive grants to qualified startups. Digital Sandbox in Kansas City has been very successful at widening the top of the deal funnel by engaging in a quarterly selection process by which they evaluate about 25 idea-stage companies and award \$25,000 to the 2-5 companies with the best ideas. The companies selected work with Digital Sandbox to address their most pressing business obstacle and articulate a plan to overcome it.⁵⁰ Similarly, a Vanderbilt alumnus worked with the business school donated money to create an idea-stage grant program for current and former Vanderbilt students. Founders with a Vanderbilt connection selected for the program, pitch to the donor and a small selection committee and the founders with the most promising ideas receive a \$25,000 grant.⁵¹

⁴⁵ Cummings, Brad, (Richmond, VA), August 31, 2017; Miller, Janet, (Nashville, TN), September 11, 2017.

⁴⁶ Cummings, Brad, (Richmond, VA), August 31, 2017.

⁴⁷ *Developing a Startup Ecosystem in Richmond*, New Richmond Ventures, pg. ___, April 19, 2013.

⁴⁸ Rousos, Peter, (Nashville, TN), September 11, 2017.

⁴⁹ Miller, Janet, (Nashville, TN), September 11, 2017; Mitchell, Lesa, (Kansas City, MO), September 5, 2017.

⁵⁰ Shackleford, Jeff, (via telephone from Kansas City, MO), October 4, 2017. The company then selects a vendor to help them achieve this goal, usually a tech vendor who helps them develop an MVP (minimally viable product) that they can take to the next stage. Digital Sandbox then pays the vendor directly and helps the company be ready to raise angel capital once the MVP is developed.

⁵¹ Böer, Germain, (Nashville, TN), September 11, 2017.

Policy makers in successful ecosystems also play a role in encouraging startup investment by fostering and financially supporting local startup grant programs to support regional startups and attract new early stage companies⁵² and creating tax incentives for investors to deploy more capital.⁵³

E. TALENT

An ecosystem cannot survive without a density of high-growth startups and early stage companies. These companies cannot scale without sufficient skilled talent to fuel them at each stage. According to the 2017 CBRE Report “Scoring Tech Talent”, there are 4.9M technology workers in the US that will continue to fuel the development and advancement of the tech.⁵⁴ This group makes up only 3.5% of the total workers in the US but they have a significantly outsized impact on their regional economy. The number of tech talent workers has increased 27% over the last 5 years, adding more than 1 million new jobs to the US economy – a rate nearly three times the national average. These tech talent workers comprise 20 different occupations ranging from software developers who enable the systems and software on which we rely to systems and data managers who ensure that the technology ecosystems function. These occupations fall into the following categories: software developers and programmers; computer support, database and systems; technology and engineering related; and computer and information system managers.

The Milliken Institute’s 2016 State Technology and Science Index (STSI), it is clear that the success of a region’s innovation economy increasingly determines its long-term economic success.⁵⁵ The STSI relies on five factors to measure a state’s innovation pipeline, two of which quantify a state’s talent pool, including both tech talent and general human capital. Today, workforce talent determines economic prosperity, displacing physical capital and land as the most important factors. Human capital depth and diversity are considered crucial ingredients in a region’s economic performance. As tech workers sharing certain skillsets migrate to a geographic cluster or remain in a cluster after graduating from local institutions, they reinforce the region’s initial advantages, stimulating further localized growth. In this way, a cluster gains the most fundamental source of its competitive advantage: highly mobile, geographically discriminating labor assets. Tech workers in the broad fields of computer and information science, life and physical science, and engineering are considered the foundations of a high-tech economy.

The more mature ecosystems visited invested in building and retaining a densely populated talent pool with diverse skill sets, and enough job options that they could move from one startup to another.⁵⁶

⁵² See <https://www.norfolkdevelopment.com/files/NorfolkFirstFunds-8pg-brochure-website-1016.pdf> for more information on Norfolk’s seed fund to support startups located in Norfolk, VA.

⁵³ Kurtz, Nathan, (Kansas City, MO), September 5, 2017. Mr. Kurtz of the Kauffman Foundation noted that the Kansas City investment tax credit offering investors a credit equal to 50% of their startup investment up to \$100,000 encourages private investment in local startup and early stage companies.

⁵⁴ CBRE Research, *2017 Scoring Tech Talent: Influencing Innovation, Economic and Real Estate Growth in 50 U.S. and Canadian Cities*, pg.6, 2017.

⁵⁵ DeVol, Ross, Joe Lee, and Minoli Ratnatunga, *2016 State Technology and Science Index: Sustaining America’s Innovation Economy*, Milliken Institute, Center for Jobs and Human Capital, pg.1, 2017.

⁵⁶ *Developing a Startup Ecosystem in Richmond*, New Richmond Ventures, pg. 9, April 19, 2013; Mitch, Jessica, (Durham, NC), September 22, 2017.

These communities looked to technical colleges, universities, coding schools, and large corporations with a strong presence in the region to supply and fund the development of their talent pool needs.

Successful startup ecosystems developed their talent pool by:

- Connecting local universities and colleges with large corporations to retain skilled graduates within the region;
- Fostered collaboration between companies and industries needing talent and certification programs and coding schools to ensure that training and certification programs are aligned with hiring needs; and
- Economic development organizations, businesses, and government collaborated to develop materials and channels to promote and publicize successful startup companies and to develop a unified message about their region to market the culture and lifestyle in their city.

As noted, Richmond is still an emerging ecosystem and evidenced the same talent issues that plague most similarly situated startup communities. Health Warrior, a successful Richmond startup in the natural foods market, said hiring locally was challenging, but that they remained dedicated to doing it whenever possible. Health Warrior found the career services offices at VCU and the University of Richmond to be good partners for sourcing local talent both among graduates and alumni. They noted that this process probably made hiring take longer and cost more at the outset because they had to establish the relationship with the university career services offices. In the end, however, Health Warrior believed the quality of the eventual hires was better and that, perhaps more importantly, it created company evangelists within the career services offices on both campuses.

Durham's mature ecosystem has an abundance of talent at all levels to support startup growth. With several top level liberal arts and research universities within 30 miles of Durham, there are tens of thousands of trained graduates annually with a wide range of skill sets. Each of the main universities actively work to diversify and engage their tech talent by offering entrepreneurship programs, certificates, and numerous opportunities for students to engage directly with the resources available at the American Underground.

Even with the plethora of universities to provide trained graduates, Durham's technology startups still found what other mature communities observed; current educational curriculums had not kept up with their rapidly changing software development and coding needs. The coding school Iron Yard expanded to Durham and has been very effective in meeting Durham's local tech talent needs by offering a three-month intensive program where graduates are production ready for specific junior level tech positions within local companies. Interviewees noted that the Durham office of the Iron Yard was so successful because of the tight collaboration and hyper-local connection between the Iron Yard staff and the local startups regarding curriculum development. The Iron Yard Durham Advisory Board was composed almost entirely of startup founders or their Human Resources staff that worked to develop current and applicable skill sets. Further, the Durham startups engaged with Iron Yard students during their training by hosting field trips and submitting projects to students for credit as part of their training. In addition, Jessica Mitch, the Executive Director at Durham's Iron Yard, actively engaged large regional corporations to ensure that the Iron Yard curriculum was meeting their needs and to secure job placements for her junior tech students upon graduation.

F. INSTITUTIONAL SUPPORT

Having the support of the cornerstone industries and institutions in the larger community is critical to the health and development of the ecosystem. Governments, universities, research organizations, large corporations, and economic development organizations play a key facilitator role in helping start, fund, and sustain the resources and programs needed to support entrepreneurs.

GOVERNMENT

Governments can play several roles, including supporting innovation initiatives, providing free space for entrepreneurial activities and resources, and ensuring that startups can operate in a predictable and pro-business regulatory environment. It is also important to the growth of the ecosystem that governments continue to invest in the growth and diversification of the larger community through support of cultural events, ensuring that the transportation infrastructure can facilitate the many connections essential to building and sustaining the community network central to the ecosystem.

City government in Nashville played an integral role in seeding key initiatives essential the growth of their entrepreneurial ecosystem. Nashville has the benefit of being established as a metropolitan government, which promotes a more collaborative and streamlined environment. The fact that the City's economic development department fell under the Chamber of Commerce umbrella was noted as a key factor in aligning missions and goals within City government.⁵⁷ The Nashville Chamber gathered a large group of regional stakeholders and engaged in a study much like this one to determine the current state of the Nashville startup community. They determined that opening a front door to the entrepreneurial ecosystem was the most emergent first step and from that effort, the Nashville Entrepreneurial Center (NEC) was born. The creation of the NEC is regularly cited as the most important first step in coalescing the various elements of the Nashville ecosystem.⁵⁸

This initial seed funding from the City of Nashville was critical to the NEC's success. They donated the space and agreed to seed the project with an annual allocation of \$200,000. The NEC started in a small 5,000 square feet space, but quickly moved to the much larger former trolley barn building. The City donated its old trolley barn building and committed \$2MM towards tenant improvements. With City support and seed funding, the NEC was then able to raise the remaining \$4MM needed from outside sources to finish the renovation. With the City as the first money in and a promise for annual funding at the \$200,000 level, the NEC is able to raise the remaining funds each year to cover its \$2MM annual operating budget from private individuals and corporations who have joined the City in making a long-term commitment to the sustainability of Nashville's startup community.

Kansas City government played a different, but no less important, role in developing its ecosystem. In conjunction with Think Big Partners, the City government committed to becoming a national leader in developing smart city technology. The City opened its data systems and operations to serve as a laboratory for entrepreneurs and founders to test their products.⁵⁹ If the products and services were successful, the City served as the startup's first customer. This type of collaboration accelerated the

⁵⁷ Miller, Janet, (Nashville, TN), September 11, 2017.

⁵⁸ *Ibid.*

⁵⁹ See <http://kclivinglab.org/program-overview/> for more information on the KC Living Lab – a public-private partnership between Kansas City and Cisco to develop a Smart City network within Downtown Kansas City.

growth of the smart cities industry vertical and put Kansas City on the map as one of the thought leaders in this industry vertical.

UNIVERSITIES AND RESEARCH ORGANIZATIONS

Beyond being a source of talent, universities and federal labs contribute to building the ecosystem by injecting research and technology. The commercialization of that technology can provide an important pipeline of creative ideas needed to seed startups and drive density. Universities and labs can also provide research and engineering design spaces, spaces to host community events, opportunities to collaborate with other community actors to host competitions and challenges, incentives for faculty and other subject matter experts to serve as mentors, and resources and support for faculty and staff who want to commercialize their discoveries.

Vanderbilt plays an important supporting role in the Nashville ecosystem. The Wondry, Vanderbilt's on campus innovation center, is a three-story, 13,000 square foot facility that attracts students, faculty and alumni interested in innovation and entrepreneurship. The Wondry offers makerspaces, mentor office hours, idea stage challenges, and common core programming linked virtually from the Nashville Entrepreneur Center in downtown Nashville. They also engage with corporate partners to offer Vanderbilt students internship opportunities. For example, they teamed up with Accenture to run a yearlong program for a select group of Vanderbilt students who worked with C-Suite executives to solve some of Accenture's most significant problems. At the end of the year, each of the students found a position with the company and Accenture had solutions to its most emergent problems.

Duke University is also an important contributor to the Durham startup community. Duke faithfully rents space in all new entrepreneurial spaces in the area to subsidize free space for entrepreneurs.⁶⁰ They are also actively engaged in the ecosystem by hosting events and serving as a source of capital, mentors, and industry expertise to the local startups and accelerators.⁶¹

CORPORATIONS

Large corporations are important facilitators within the ecosystem as a source of talent and industry specific knowledge and skill sets that can be leveraged by the surrounding startup community. More mature ecosystems have a diverse industry base that provides an important variety of skills, interests, and thought leadership to the actors within the entrepreneurial community.

Corporations also connect with the ecosystem by opening their doors and allowing startups to test and validate their products and services within the corporation. Kansas City's role as a leader in the smart cities industry detailed above is a great example of this kind of collaboration. Similarly, Capital One has been a significant partner in the Richmond ecosystem. On numerous occasions, Capital One has agreed to be a beta tester for software platforms and products created by new regional startups. They have vetted technologies not only in the financial segment, but also in unrelated areas such as human resources and payroll.

⁶⁰ Heivly, Chris, September 22, 2017.

⁶¹ See <https://entrepreneurship.duke.edu/news-item/duke-today-downtown-sparks-ideas/> for more information on Duke's role in the innovation and entrepreneurship economy in its hometown of Durham, NC.

Finally, large corporations are a key financial partner in the ecosystem. The most mature and successful ecosystems boast numerous examples of public-private partnerships in which corporate sponsors collaborated with city governments and other non-profits to support the creation of significant spaces and programs to support entrepreneurs. Capital One, for example, has purchased and refurbished an old building in the Shockoe Bottom area of Richmond and is partnering with Startup Virginia to offer an innovation center. The top two floors will house Capital One's Innovation Team and the bottom three floors will serve Richmond's entrepreneurs with co-working space, offices, and space to house the critical entrepreneurial resources.⁶²

Similarly, Kansas City's Sprint and Hallmark are core partners to the Digital Sandbox entrepreneurship programs, offering participants connections to industry experts, mentors, potential customers, and funding to support companies and sprograms. A significant portion of the \$6MM construction budget for the NEC in Nashville was contributed by many of that City's largest corporations, including Ingram Publishing and HCA, among others. The NEC continues to rely on its corporate sponsors for sustainment, as well as sources of industry expertise and mentors.⁶³

GAP ANALYSIS: HAMPTON ROADS ENTREPRENEURIAL ECOSYSTEM

To assess the current state of the Hampton Roads entrepreneurial ecosystem, we performed a 360° regional inventory consisting of a quantitative survey and qualitative interviews. This section will detail the research methodology and the findings of that research.

A. RESEARCH METHODOLOGY

We sent a link to an online survey to 300 people working in relevant fields. Of the 300 possible respondents, 89 people (or 30%) completed the survey. Based on current data, this was a high response rate and indicative of the high level of regional interest in entrepreneurial development.⁶⁴

The survey tapped all relevant demographics across age, location, and position within the ecosystem,⁶⁵ as noted in the charts below.

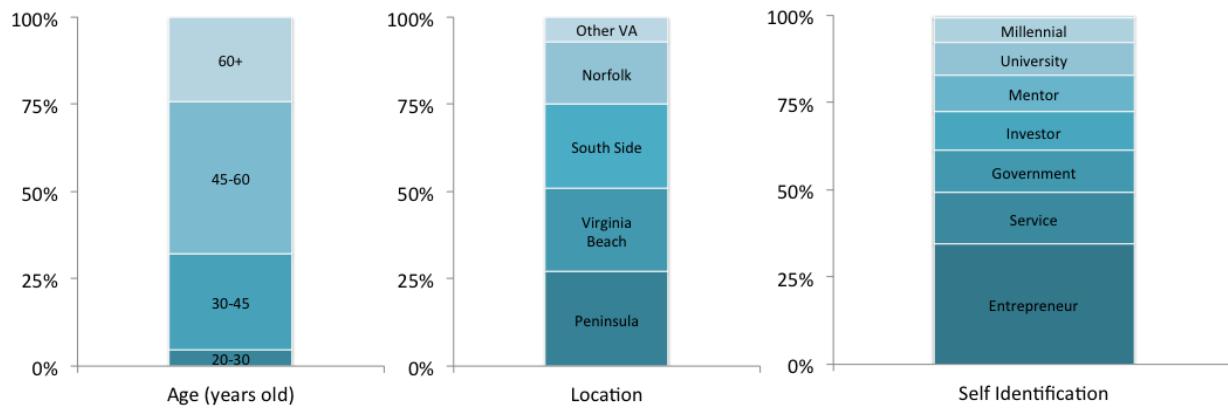
Entrepreneurial Ecosystem Survey: Respondent Demographic Breakdown

⁶² Bostick, Brian and Cummings, Brad, (Richmond, VA), August 31, 2017.

⁶³ Raley, Jeremy, (Nashville, TN), September 11, 2017.

⁶⁴ According, to SurveyGizmo, a typical survey response rate for external surveys is 10-15%. (See <https://www.surveygizmo.com/survey-blog/survey-response-rates/>)

⁶⁵ Location: Peninsula respondents include people from Hampton, Newport News, Yorktown, Williamsburg, and Poquoson; South Side respondents include people from Chesapeake, Suffolk, Portsmouth, Smithfield, and Franklin; Other respondents include people from Vienna, Culpeper, Richmond, Gainesville, Toano, and Wintergreen. Self Identification: University = University Representative, Government = Government Representative, Service = Service Provider to Entrepreneurs/Startups.



The interviews consisted of 11 face-to-face meetings with entrepreneurs, investors, industry, talent acquisition, government, and university professionals. The objective of these meetings was to identify regional strengths and gaps across the five key elements present in successful entrepreneurial ecosystems (culture, density, capital, talent, and institutional support).

We supplemented our findings with documentary research to provide context and to access broader data sets of regional information.

B. RESEARCH FINDINGS

The good news is that the research indicates a **strong desire for a successful entrepreneurial ecosystem** in Hampton Roads. When asked what top three things would make growing a business in this area easier, one survey respondent noted the presence of “an established & well-publicized entrepreneurial ecosystem.” Indeed, having a startup community was cited as one of the top criteria critical to growing a business here. Interviewees echoed this sentiment, citing a need for “connections”, “collaboration”, “entrepreneurial mindset,” and a “system of mentors.”⁶⁶

There is **momentum and activity to build this ecosystem**; 86% of respondents say that they have mentored other startups and 67% say that they have taken a leadership role in the entrepreneurial ecosystem. Interviewees are also leaning in to create an entrepreneur-friendly environment. One public/private initiative of note is the launch of the new Selden Arcade spearheaded by Vibrant Spaces and Drew Ungvarsky.

The survey also found that **entrepreneurs are happy to be here, but are concerned about the regional economy**. According to the survey, 90% of respondents say that they are happy running their businesses in Hampton Roads and 82% say that they would recommend this area to another entrepreneur. Despite general contentment with working in this region, 86% of respondents say that they are concerned about the local economy.

According to the research, **Hampton Roads has some significant gaps to fill to build a successful entrepreneurial ecosystem**. The gaps are most prominent in 3 element areas: culture, density, and talent. Institutional support received more positive but still tepid reviews, while capital got the highest scores and thus falls in last place among the gaps identified.

⁶⁶ Perkins, Hamilton, (Norfolk, VA), August 30, 2017; Robinson, Paul, (Norfolk, VA), October 13, 2017.

1) Culture

The lack of an entrepreneur-friendly culture poses some of the most significant challenges for Hampton Roads. According to the research, these issues include:

- a) **Absence of a Culture of Innovation:** Ranked on a scale of 1-10, respondents rated Hampton Roads as a 2 for a culture of innovation.
- b) **Fragmented and Siloed:** 68% of survey respondents say that the word that best describes the regional entrepreneurial ecosystem is fragmented or siloed.
- c) **Unfriendly:** “Friendliness” towards entrepreneurs ranked a 3 on the 10-point scale, indicating that we lack an entrepreneur-focused mentality. Interviewees cite an “old boy network” that is not inclusive; examples given included veterans and newcomers who feel excluded and unwelcome.⁶⁷
- d) **Lack of Collaborative Mindset:** Interviewees say that this region does not have a culture for “collaboration”, “connecting”, “accepting failure”, or “risk-taking.”⁶⁸ Furthermore, interviewees say that a deficiency in these attributes leads to “missed opportunities.”⁶⁹
- e) **Hierarchical:** Interviewees suggest that the culture still feels hierarchical noting that the people with the new ideas that are doing and building things in the ecosystem, are not the same as those with access to the resources.⁷⁰

2) Density

The survey and the interviews highlight density as another key gap in Hampton Roads.

- a) **Not Enough:** A common theme in the interviews and the survey is the need for “more;” citing the dearth of resources, mentors, connections, entrepreneurs, and startups.
- b) **Mentors:** Having enough mentors is important to survey respondents; 91% of survey respondents say that they relied on mentors to advise them as they grew their business. However, it was clear that respondents feel like there are not enough or that the right ones are not easy to find. 76% of those that are mentoring said they did not maintain regular office hours, and 55% said they did not meet with their mentees on a regular schedule. Two interviewees noted that mentors are a key missing resource and noted a lack of mentors with related industry experience or with enough depth or recent experience as a gap.⁷¹ Previous efforts at centralized mentoring were described as disorganized and not sufficiently curated to be impactful.⁷² On a positive note, survey respondents who mentor others noted an impressive cross-section of expertise that could be impactful if brought to bear in an organized and meaningful way.
- c) **Not Connected Enough:** Survey respondents and interviewees agree that we need to be “more connected.” Interviewees and survey respondents expressed a clear a need for more resources

⁶⁷ Sagester, Cherylynn, (via telephone, Norfolk, VA), October 2, 2017.

⁶⁸ Robinson, Paul, (Norfolk, VA), October 13, 2017; Arias, David, (Norfolk, VA), September 13, 2017; Curry, Kevin, (Virginia Beach, VA), September 27, 2017; Lee, Tim, (Norfolk, VA), September 8, 2017.

⁶⁹ Arias, David, (Norfolk, VA), September 13, 2017.

⁷⁰ Ungvarsky, Drew, (Norfolk, VA), September 18, 2017; Curry, Kevin, (Virginia Beach, VA), September 27, 2017.

⁷¹ Curry, Kevin, (Virginia Beach, VA), September 27, 2017; Robinson, Paul, (Norfolk, VA), October 13, 2017.

⁷² Ungvarsky, Drew, (Norfolk, VA), September 18, 2017.

dedicated to convening like-minded people throughout the ecosystem, as well as from specific industry-based groups.⁷³

- d) **Space:** 63% of survey respondents and several interviewees feel that co-locating is important because of the opportunity to share assets, be proximate to resources, and connect.⁷⁴ Others said that innovation spaces should offer virtual connections via events like hack-a-thons or by streaming events live across the region which would go a long way towards creating a feeling of density.⁷⁵ One interviewee said co-locating with other entrepreneurs was critical to their business, noting that even though they recently purchased their building and remodeled their current office space, they would be willing to relocate to an innovation center with other like-minded entrepreneurs.⁷⁶
- e) **Locate an Innovation Center in an Area with Some Density of Entrepreneurial Activity (e.g., Granby Street):** One interviewee noted that we should invest in already vibrant, dense places, and that having an anchor is critical, because establishing a front door will convene critical resources and create density. When asked where an innovation center should be located, interviewees and survey respondents leaned towards Norfolk, specifically the Granby Street area. 74% of survey respondents said that they felt it should be on Granby regardless of whether they lived or worked in Norfolk. Interviewees echoed this sentiment, stating that Granby/NEON and VIBE were the only places in Hampton Roads that currently have some density and the right feel to attract entrepreneurial activity.⁷⁷
- f) **Not Enough Messaging:** Interviewees say that Hampton Roads is “failing to tell our story.” We cannot articulate “a shared set of cultural experiences” and we are “not celebrating our successful entrepreneurs”.⁷⁸ Another interviewee noted “we need more marquee events like challenge prizes or competitions in a very small group of industries to get on the map as a center of innovation.”⁷⁹ Failure to celebrate the successes of key constituencies was noted as source of talent flight, especially among veterans.⁸⁰
- g) **Affordable:** On a positive note, this region is viewed as affordable. According to the survey, respondents’ decision-making on locating or growing a business is driven first by affordability.⁸¹ Furthermore, 92% of respondents say that they could find affordable rent for their businesses in the region. However, affordable rent does not bring with it shared workspace, proximity to resources, and shared assets so coveted by regional entrepreneurs.⁸²

⁷³ Perkins, Hamilton, (Norfolk, VA), August 30, 2017; Robinson, Paul, (Norfolk, VA), October 13, 2017; Lee, Tim, (Norfolk, VA), September 8, 2017.

⁷⁴ Perkins, Hamilton, (Norfolk, VA), August 30, 2017; Curry, Kevin, (Virginia Beach, VA), September 27, 2017.

⁷⁵ Curry, Kevin, (Virginia Beach, VA), September 27, 2017.

⁷⁶ Lee, Tim, (Norfolk, VA), September 8, 2017.

⁷⁷ Jain, Akhil, (Virginia Beach, VA), October 2, 2017; Curry, Kevin, (Virginia Beach, VA), September 27, 2017.

⁷⁸ Ungvarsky, Drew, (Norfolk, VA), September 18, 2017; Kingston, Florence, (Newport News, VA), August 28, 2017; Lee, Tim, (Norfolk, VA), September 8, 2017

⁷⁹ Robinson, Paul, (Norfolk, VA), October 13, 2017.

⁸⁰ Sagester, Cherylynn, (via telephone Virginia Beach, VA), October 2, 2017.

⁸¹ Affordability includes cost of living, business rent, and tax credits. Lifestyle refers to culture. Innovation refers to a community of like-minded thinkers and resources. Capital refers to availability of capital. Mentorship refers to proximity to mentors. Transportation refers to light rail, air, and car travel.

⁸² Lee, Tim, (Norfolk, VA), September 8, 2017.

3) Capital

Capital is a mixed, but generally positive story in Hampton Roads. Research indicates that the majority of entrepreneurs believe that there is sufficient capital regionally, however most survey respondents and interviewees noted that they were self-funded. A minority - but significant percentage - of respondents and an interviewee called out the need for a seed fund.

- a) **Sufficient Capital for Bootstrapping Entrepreneurs:** According to the survey, there is capital available in Hampton Roads with 87% responding that they were able to raise sufficient capital for their business. Of note, of the respondents who found sufficient capital, 83% used self-funding or funded via family and friends, with only 17% using angel investment. According to most interviewees, "money is not the critical missing resource in Hampton Roads."⁸³ Others noted their own ability to self-fund or use available resources.
- b) **Available Funds are Valuable:** 757 Angels was called out as "one of our best resources" with "critical first mover ability and high quality."⁸⁴
- c) **Need for a Seed Fund:** Survey respondents highlighted startup and early stage companies as those most in need of funding. Respondents rated the sufficiency of capital for this group at a 2.7 on a 5-point scale. An interviewee noted that a seed fund is "the critical missing link" and that there is "nothing after friends and family."⁸⁵ When asked about investing in a seed fund, 45% of survey respondents expressed interest. A seed fund would provide portfolio diversity to the majority of survey respondents who have only made between 1 and 5 investments. Similarly, a seed fund would offer additional diligence to the 43% of respondents who said they did not engage in sufficient due diligence before investing.

4) Talent

Our research found that Hampton Roads lacks the technical talent needed to grow a successful entrepreneurial ecosystem.

- a) **Lack of Technical Talent:** We ranked 44th out of the 50 largest tech talent markets in the US and Canada in 2017.⁸⁶ The survey response was a little less clear on this point however. While 60% of survey respondents claim that they can fill open positions locally, 68% say that the local technical talent pool is insufficient to meet their hiring needs.
- b) **Brain Drain:** From 2011-2015, Hampton Roads added 6,828 tech degrees, but only 3,990 jobs. The overall result was a brain drain of 2,838 tech talent workers within Hampton Roads.⁸⁷
- c) **Tech Wages Higher:** Fewer workers with technical skills creates some wage pressure on existing tech talent jobs. As a result, the 2016 average annual wage for tech talent workers in Hampton Roads was \$84,514 (as compared to \$49,997 for non-tech talent workers), up 10.8% percent from 2011-2016.
- d) **Critical Missing Resource:** According to some interviewees, there may be talent available if the number of positions is limited (<20), and if the risk level is low or the job requirements

⁸³ Robinson, Paul, (Norfolk, VA), October 13, 2017.

⁸⁴ Ungvarsky, Drew, (Norfolk, VA), September 18, 2017; Lee, Tim, (Norfolk, VA), September 8, 2017; Arias, David, (Virginia Beach, VA), September 13, 2017.

⁸⁵ Jain, Akhil, (Virginia Beach, VA), October 2, 2017; Curry, Kevin, (Virginia Beach, VA), September 27, 2017.

⁸⁶ CBRE Research, *2017 Scoring Tech Talent: Influencing Innovation, Economic and Real Estate Growth in 50 U.S. and Canadian Cities*, pg. 11, 2017.

⁸⁷ *Ibid.* at pg. 18.

unspecialized.⁸⁸ The majority of interviewees cited talent as the “critical missing resource” and “something that “all entrepreneurs are struggling with in Hampton Roads.”⁸⁹

- e) **Improve Talent Through Universities:** ODU and other universities are cited as adding value within the region, but could improve talent prospects even more by collaborating with other universities. The defense industry is also identified as a potential source of mainstream technical talent with transferrable skills that should be nurtured by regional universities and startups.⁹⁰ Interviewees cite the need to fill this gap with more density within the talent pool and more fluid connections between talent and regional opportunities.⁹¹ One interviewee suggested that regional universities should collaborate more broadly to provide complimentary, rather than overlapping training and skill sets.⁹²

5) Institutional Support

According to survey respondents, regional universities, large corporations, and the local government could all play a stronger role the entrepreneurial ecosystem.

- a) **Fragmented:** 89% of survey respondents feel that the city governments of Hampton Roads do not coordinate with one another sufficiently to get things done. Interviewees also thought universities should be playing a bigger role in bringing people together within the innovation sector. Some interviews noted that ODU should be more like VCU by driving innovation and being an anchor tenant anywhere there is entrepreneurial activity in Hampton Roads. There was also a call for universities to collaborate to “lace together their assets, rather than duplicate and compete for specialties.”⁹³
- b) **Insufficient Incentives:** Although roughly 50% of respondents feel that the state and local governments are supportive of entrepreneurs, 76% of them do not believe that the government provides sufficient incentives to promote private investment. Interviewees noted the lack of financial hiring incentives locally as a deterrent, adding that there was no enticement to require employees relocate to the region rather than work remotely.⁹⁴
- c) **Limited Corporate Engagement:** Survey respondents ranked large regional corporations a 2, on scale of 1-5, for their contribution to the entrepreneurial ecosystem. Some interviewees noted that this region has “no history of corporations sponsoring innovation initiatives or events.”⁹⁵ Likewise, survey respondents called for the need for “sustained engagement from corporations,” identifying only Dominion Enterprises and Towne Bank as supportive of entrepreneurial activity. One interviewee noted a recent intrapreneur challenge event held within Huntington Ingalls (HII) in which HII asked its employees to bring forward innovative

⁸⁸ Curry, Kevin, (Virginia Beach, VA), September 27, 2017; Perkins, Hamilton, (Norfolk, VA), August 30, 2017.

⁸⁹ Robinson, Paul, (Norfolk, VA), October 13, 2017; Ungvarsky, Drew, (Norfolk, VA), September 18, 2017.

⁹⁰ Ungvarsky, Drew, (Norfolk, VA), September 18, 2017.

⁹¹ Lee, Tim, (Norfolk, VA), September 8, 2017; Tanner, Jeff, (Norfolk, VA), September 8, 2017; Avery, Shawn, (Norfolk, VA), September 6, 2017.

⁹² Kingston, Florence, (Newport News, VA), August 28, 2017.

⁹³ Ungvarsky, Drew, (Norfolk, VA), September 18, 2017; Kingston, Florence, (Newport News, VA), August 28, 2017.

⁹⁴ Lee, Tim, (Norfolk, VA), September 8, 2017. Mr. Lee expressed frustration at the lack of consistency among regional cities in terms of offering hiring incentives. He noted that in the high-tech space people could easily work remotely and, without hiring incentives, they were not inclined to force new hires to relocate to Norfolk.

⁹⁵ Arias, David, (Virginia Beach, VA), September 13, 2017.

solutions to the company's thorniest problems.⁹⁶ A panel of internal and external judges chose the winners and the innovators received cash prizes and recognition to pursue their idea.⁹⁷

- d) **Need for Tech Transfer:** An interviewee identified the need to drive and support spinning out technology from corporations such as Huntington Ingalls, Ferguson, and Cannon.⁹⁸ Some see these innovative companies as potential contributors to the ecosystem if they supported initiatives such as allowing certain employees to spend 10-20% of their paid time on innovation.⁹⁹
- e) **Untapped Veterans:** One interviewee pointed to the untapped resource in 10,000 vets transitioning out of the military annually in Virginia. Another interviewee suggested retaining Virginia's military talent by enacting veteran's preference legislation by which veteran-owned companies from Virginia would have preference in the hunt for state procurement contracts.¹⁰⁰ Other states with significant veteran populations (CA, NY, FL) use similar programs to attract and retain talented veterans, including those interested in entrepreneurship. Another suggested option was to allocate state stipends or grants to transitioning vets to obtain relevant IT certifications and high-need skill sets.¹⁰¹

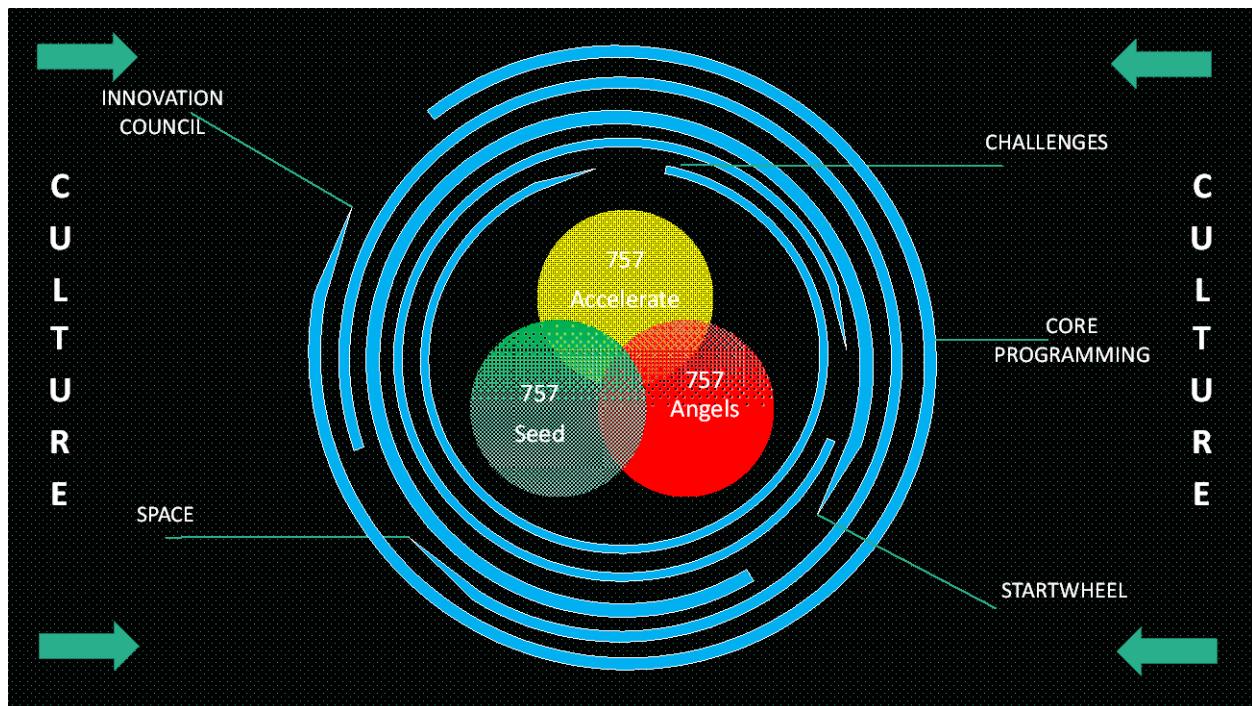


Figure 5: The goal of a thriving ecosystem is to create entrepreneurial density by wrapping entrepreneurs in human and financial capital supported by a healthy innovation culture.

⁹⁶ Tanner, Jeff, (Norfolk, VA), September 8, 2017.

⁹⁷ *Ibid.*

⁹⁸ *Ibid.*

⁹⁹ *Ibid.*

¹⁰⁰ Sagester, Cherylynn, (via telephone Virginia Beach, VA), October 2, 2017.

¹⁰¹ Kingston, Florence, (Newport News, VA), August 28, 2017.

CONCLUSIONS AND RECOMMENDATIONS: ACTIONS TO ACCELERATE THE GROWTH OF THE HAMPTON ROADS ENTREPRENEURIAL ECOSYSTEM

Successful ecosystems have shared ethos and values that is pervasive in everything they do. This ethos governs their social norms and activities. It is only natural, however, that communities coalesce around activities and metrics. Without nurturing the right community building values throughout the design, planning and execution of those activities, however, our research indicates these activities will not be successful. As concluded above, to grow the Hampton Roads entrepreneurial ecosystem, we are going to have to start with setting the right tone – entrepreneur-centered, give before you get, prioritize connections, long-term commitment – which will then infuse and guide our initiatives moving forward.

Once we are operating with a shared set of values, we can more easily unite around activities aimed at connecting entrepreneurs to critical resources. Chris Heivly noted that Steve Jobs said, “startups die from indigestion, not starvation.”¹⁰² This applies equally to startup ecosystems. There are so many things we need to do to make an impact, but if we try to do too at once, we risk doing them all poorly. We will need to be intentional and deliberate as we move forward, keep entrepreneurs at the heart of our decision-making, and sequence activities and asks to avoid fatigue and depletion. Finally, we need to change our metric to measure success on return on involvement, rather than return on investment.

With the understanding that the entrepreneurial ethos must be omni-present in all of our ecosystem activities, we recommend prioritizing the activities listed below to close the gaps identified within the innovation community. The order in which they are listed reflects an intentional sequencing aimed at making the greatest impact in the shortest period of time.

A. CULTURE

Begin with culture and the rest will follow. Many interviewees noted that you cannot force the development of an ecosystem, but you can create the climate for it to flourish and grow.¹⁰³ At this stage, when we lack a consistent, entrepreneur-friendly culture and a density of startup activity, the first time and money should be spent on cementing the right ethos and connecting people with each other and the right resources at the right time.

1. **Connections/Network:** We already have some entrepreneur networks established, but they need to be more tightly and widely linked and supported.
 - a. StartWheel: This democratized calendar and connection platform is built and starting to gain traction. The current funding model offers high potential for sustainability through the startup and validation period. Its sole goal is to connect – entrepreneurs to resources and the broader entrepreneurial community to related events.
 - b. We need to build on this resource by ensuring it is properly funded, staffed, and marketed in the regional media to generate significant traffic and buzz within the

¹⁰² Heivly, Chris, (Durham, NC), September 22, 2017.

¹⁰³ Böer, Germain, (Nashville, TN), September 11, 2017.

- ecosystem. Partner with the SBA's Source Link to either merge content or link to avoid duplication.
2. **Innovation Council:** Empanel an innovation council, fifty percent of which should be entrepreneurs, to foster collaboration and connection between the various stakeholders and set the right tone and expresses its commitment to the long game. The Council will engage and interact with all of the other ecosystem actors. While networks do not need formal leaders to be effective, our research shows that without a way to centralize resources, activities, and information fragmentation flourishes and stakeholders are distracted with the many requests for funding and support.
 3. **Public-Private Support:** Need to engage public and private resources that share a common purpose to commit funding and time for the common good, are committed to taking the long view, and are willing to measure near term progress in return on involvement, rather than solely return on investment.
 - a. Need to focus early activities on creating a replicable model of public-private partnerships for the design and funding for the various recommended initiatives below. Establish a public-private partnership to provide a flagship innovation space to convene entrepreneurs is a likely first step.
 4. **Outside Voice:** Survey and interview respondents made clear that the entrepreneurial culture in Hampton Roads was inhospitable for entrepreneurs and non-natives. They also noted the presence of a hierarchical structure as a deterrent to establish the fluid networks present in other vibrant ecosystems. A seasoned third party, employed early in the process, can effectively cut through silos and help break down hierarchical structures more quickly. We would recommend giving serious consideration to engaging the experienced outside voice of Techstars to help accelerate the growth of our ecosystem. Techstars' Community Model is based on significant expertise in measuring ecosystems worldwide and will help guide our initiatives and activities as we work to build a strong foundation for the Hampton Roads ecosystem.

B. ACCELERATOR

Leverage the recent i6 Challenge Grant award to build a significant resource that is poised to do more than just deliver a three-month accelerator program. Like Lighthouse Labs does in Richmond, the accelerator presents an opportunity to set the right cultural tone, drive density, and increase connections throughout the region. We need to make sure that we properly staff and resource the accelerator project in the near term, until other resources are developed and can share the load.

1. **Convener:** Until there is an innovation space and other resources come online, the accelerator must act as a convener of connections to mentors, capital, and events (both physical and virtual linking programming in different regional locations). These functions could be shared with or move to innovation center staff when that resource comes online. Beyond marketing and running the three-month program, Accelerator staff will need to participate in community facing activities, such as speaking at educational events and

educating corporations on how and where they can best engage. This type of community engagement will need to be both regional and statewide to ensure that the Hampton Roads entrepreneurial ecosystem remains part of the larger conversation.

2. **Challenges:** Our research shows that one of our key gaps is lack of density; we lack density of startups, connections, talent, and entrepreneurial activity. Other communities and institutions have effectively used challenge prizes to spur innovation in specific areas of discovery and to attract entrepreneurs, startups, and established companies. Lesa Mitchell of the Kauffman Foundation and Techstars counsels that to build a healthy ecosystem we need to stay keenly focused on creating density. Mitchell maintains that the greatest returns will come from leveraging our best regional assets (NASA, Navy, Jefferson Labs, Resilience Grant) to conduct meaningful challenge prizes. At least two of these challenges should end in a marquee event, at which industry celebrity judges will select winners and present significant monetary prizes to attract the top innovators. These events will allow us to showcase the region and convene like-minded people from inside and outside the area. The following are some term activities that would further this effort:
 - a. RISE - Leverage the resources and knowledge base of the Rockefeller 100 resilient cities to validate the challenge prize model and connect with industry experts.
 - b. Utilize recent connections made with the MIT SOLVS team to capitalize on the fact that resilience will be one of the themes of the next SOLVS conference. Hold events related to the SOLVS initiative in Hampton Roads to attract thought leaders to the area and showcase our emerging resilience and sea-level rise expertise.
3. **Community Engagement:** Connect and network with current innovation programs at the federal labs (i.e., NASA i-Tech), Navy, and regional corporations like Huntington Ingalls to build on existing momentum and generate additional interest in the activities within the ecosystem. This kind of corporate engagement will help create valuable partnerships and maximize the overall effect and impact of the accelerator and the challenge prizes.

C. SEEED FUND

Although capital is a bright spot within the ecosystem, it is a critical element for creating density and buzz among entrepreneurs and startups. The lack of early-stage seed funding was noted as a key ecosystem gap. Regional investors said they were interested in investing in seed fund and startups interviewed said they needed more early-stage capital. We believe establishing a small \$1.2-1.5M seed fund is a priority.

1. **Timing:** The timing is right to pursue this. Research indicated real interest among Hampton Roads investors in another vehicle to deploy more capital. Clearly, the i6 coalition strongly supported creating a seed fund on grounds that it would attract companies and aid in developing a continuous pathway for startups in the region. 757 Angels investments are moving to later stage and both access to capital research and recent interviews indicated that earlier stage capital is missing in Hampton Roads.

2. **Builds on what we have at 757 Angels:** Interviews indicated that current investors are not investing as much as they could at 757 Angels because they lack the time to do the extra diligence and research that could be streamlined with a seed fund. Further, the seed fund will sit beside 757 Angels to leverage the positive reputation, diligence process, and expertise already in place.
3. **Call to Action:** Presents an opportunity to connect interested parties through a common investment vehicle and offers the chance to share in a successful liquidity event. It is also a place to demonstrate the long term commitment needed to help get promising early stage companies through the entrepreneurial valley of death.
4. **Model:** Explore different fund models to determine the right structure for the region's investors. While there is significant interest in a traditional seed fund, we should learn more about the pros and cons of a (1) collaborative university alumni fund in which several universities collaborate to offer their alumni the opportunity to leverage the power of their capital by aggregating their alumni funds; and (2) an evergreen charitable fund in which investors seed the fund through donations and receive a corresponding tax deduction. Any returns received are reinvested in the fund to be deployed to new companies.¹⁰⁴
5. **Link to the State:** The seed fund presents an opportunity to build bridges with other state-wide angel groups and funds by establishing the kind of investor treaty mentioned during our Kauffman Foundation interviews. A recent Halo Report suggests that angel groups are only completing 10% of an average seed stage investment round,¹⁰⁵ leaving startups with far less capital than they need to scale. To combat this, the seed fund would work with 757 Angels and other state-wide groups to establish an investor treaty, setting the company characteristics that would qualify certain investments to be nominated to the larger group for syndication. The qualified companies would then engage the state-wide group of investors in a pitch event. The investor group could speed up the evaluation process by sharing company diligence before determining whether to make an investment.¹⁰⁶ This kind of effort would allow investors to be opportunistic, while likely deploying more capital, and potentially driving density.

D. SPACE

Our site visits and research underscore the fact that there are numerous pockets of entrepreneurial activity within Hampton Roads that remain isolated. It was clear that regional entrepreneurs crave more connections – to mentors, to resources and to each other. We need to create a single flagship space, a front door to the entrepreneurial community to give entrepreneurs a place to connect with each other and the larger ecosystem.

¹⁰⁴ See www.jumpstartinc.org/funder/jumpstart-evergreen-fund for more information on the JumpStart Evergreen Fund in Cleveland, Ohio.

¹⁰⁵ "2016 Halo Report on Angel Investments." Angel Resource Institute, April 27, 2017 (<https://angelresourceinstitute.org/media/upload/full-report-2016haloreport.pdf>).

¹⁰⁶ See syndication funding model for Central Texas Angel Network, www.centraltexasangelnetwork.com.

1. **Front Door:** The innovation center will need to serve as the front door for the region's entrepreneurial activity and resources and all programs and people will need to reflect the startup culture and ethos that will be critical to its success. Similar to the American Underground, innovation center staff will need to be keenly focused on keeping entrepreneurs first and prioritizing helping founders get connected to the right resources. They will also need to consistently validate the model by seeking frequent feedback on activities, services, and satisfaction. The space needs to be offered to entrepreneurs rent-free until they are profitable and subsidized by cities and corporations who will do so in exchange for sponsorship and marketing opportunities.
2. **Programming:** Entrepreneurs will need access to the space to connect in a meaningful way with mentors, funding, and service providers through effective and consistent programs. Mentor relationships will need to curated and both mentors and service providers will need to offer regular office hours. Entrepreneurs will also need to have access to shared assets and knowledge, as well as opportunities for the kinds collisions that are critical to advancing their business or finding needed talent. The innovation center will need to host numerous startup and broader community events that are also offered virtually. To foster regional connections, the innovation center will need to offer collaborative, standardized programming, using virtual connections to bridge the geographic distances.
3. **Composition:** Composition of the innovation space is critical. Successful innovation centers are keenly focused on serving the needs of area entrepreneurs and offer space either exclusively to startups and early-stage businesses or ensure that these companies represent the majority of tenants. Service provider interactions are monitored and offered in a way that meets entrepreneurs' expressed needs.
4. **Timing:** Some key regional corporate stakeholders have expressed an interest in collaborating to bring this asset to fruition, so the timing maybe right to move forward with this initiative earlier than originally anticipated.
5. **Broadband:** We will need to make sure that an innovation center can access and dovetail with the Morea broadband cable coming to Virginia Beach. This offers a key opportunity to differentiate the innovation center as a high-tech space, rather than a village for data centers.
6. **Location:** Our research points to Norfolk's Granby Street/NEON district as the most popular location to establish a flagship innovation space, with the VIBE district in Virginia Beach mentioned as the next in line. The availability of well-located space in Norfolk is a positive, but access to free parking could present a problem just as it did in Richmond. We will need to explore parking solutions, including securing dedicated parking in underutilized garages such as the James Apartments, to attract entrepreneurs and startups.
7. **Universities:** Regional universities will need to be key partners in the innovation center by serving as an anchor tenant, subsidizing rent for entrepreneurs, supporting and hosting

events, providing mentors, and sharing the cost of equipment to provide collaborative virtual programming throughout the region.

E. MEDIA

To glean the maximum impact of the initiatives listed here, we need to collaborate to develop a comprehensive media strategy, focused on increasing awareness and attracting attention to our ecosystem both locally and outside the region.

1. **Within the Region:** Like the approach Kansas City took with the Silicon Prairie News, we need to develop and implement a media offensive that generates continuous media coverage for Hampton Roads entrepreneurs, startups, and supporting actors in both traditional and social media channels. There need to be enough searchable stories that actors within and outside the ecosystem frequently hear about Hampton Road's people, events, and successes within the ecosystem. This will have a significant impact on strengthening the network effect, breaking down silos and driving density. It will also increase and magnify the momentum felt by survey respondents and interviewees in the entrepreneurial space.
2. **Outside the Region:** Part of the media strategy needs to be increasing distribution of Hampton Roads related stories throughout Virginia and the Mid- Atlantic. These stories would highlight successes and our regional assets, as well as featuring our emerging strong industry areas – healthcare, unmanned systems, resilience and veteran-related achievements. Hampton Roads thought leaders in the entrepreneurship and innovation space need to appear on panel discussions at key capital and startup conferences.
3. **Events:** Building on the challenge prize theme mentioned above, an intentional media strategy is a critical aspect of the success of these marquee events. Kansas City TechWeek and Durham's MOOGFEST started small, but once they validated the concept and the community interest, they hired dedicated staff and partnered with an experienced PR firm to broaden awareness of the events. Significant media coverage would also serve to entice regional corporations and key partners to sponsor events directed at their key constituencies and customers.
4. **Talent:** The lack of tech talent will continue to hamstring the development of our regional innovation economy. To retain these talented technology workers and attract new ones to Hampton Roads, we will need to increase the number of startups and early stage companies ready to scale in the region, as well as recruit new talented workers to the area who can fuel the growth of these new companies. A successful media strategy will help current and future companies tell a more attractive story about our region, the value proposition of relocating to the area, and the regional job and cultural opportunities for whole families.

F. CAPITAL

1. **Community Engagement:** Organized capital sources must stay committed to a high level of community engagement. Stories from Nashville and Richmond point to the fact that, while deploying capital to startup and early stage companies is a critical aspect of an ecosystem, if investors do not build and maintain fluid and numerous connections to entrepreneurs and startups through mentoring, and education, the ecosystem will not thrive.
2. **Aggregate Regional Capital Invested:** It is essential to explore how to aggregate all of the private capital invested in startup and early stage companies in the region. Interviews at the Kauffman Foundation made clear that posting big numbers for deployed capital is a powerful tool to drive density and media attention. In short, it can put an entrepreneurial ecosystem on the map. We need to explore how to meaningfully collect data and report on the total amount of private capital invested in startup and early stage companies in Hampton Roads, while respecting the privacy of individual investors.
3. **Alternatives:** While seed fund is a critical starting place, we need a more diverse option set of financing alternatives. The \$20,000 participation support awards offered as part of the accelerator program will move the needle for promising high-growth startups. Startup grant programs like Norfolk First Funds are a good first start. If several cities in the region combined their resources to offer regional startup grants, however, the impact would be significant, especially since few of the early idea-stage programs offer financial support.

- G. **EARLY STAGE PROGRAMMING:** After validating and launching the resources listed above, we should explore the need and support for committing resources to earlier, idea-stage companies to ensure that we are always filling the top of the funnel. Given our diverse geography and industries, we would recommend investigating whether a Digital Sandbox-type resource would help create density and stimulate innovation. Digital Sandbox engages in a quarterly application and selection process in which idea-stage companies pitch a concept in need of \$25,000 worth of direct support to achieve a measurable milestone for the startup. Of the 25 companies that compete, between two and five are selected. Once chosen, they work with Digital Sandbox to source the necessary vendor and then prepare to raise the next round of capital once they reach the articulated milestone.¹⁰⁷ This kind of organized early stage support would help provide a continuous pathway for founders and allow some early transparency into emerging industry verticals.

H. UNIVERSITIES:

1. **Technology transfer:** Regional universities need to dedicate real resources to learning and employing best practices in technology transfer. EVMS offers particularly fertile ground in the near term. Committing current resources (Bob Armstrong at EVMS, Jeff Tanner at ODU, and Graham Henshaw and William and Mary) and connecting them with an experienced tech transfer office such as Vanderbilt to observe lessons learned will provide a launchpad

¹⁰⁷ Shackleford, Jeff, (via telephone Kansas City, MO), October 4, 2017. Digital Sandbox is the only two-time winner of the i6 Challenge grant. They deploy the federal funds to pay for the program and to pay the vendors directly rather than give cash grants to the founders.

- from which these universities could collaborate to begin to source and commercialize university research.
2. **Talent:** Regional universities will need to follow the example set by six universities in Winston-Salem that agreed to collaborate to offer complimentary startup support funding and activities. They met and laced together their current assets to propose a series of initiatives that would address different gaps in startup funding and resources while avoiding duplication.

CONCLUSION

Hampton Roads is unique. We are a collection of different localities with unique assets and challenges. It could be tempting to see our region for the evident differences and the divisions driven by geography. However, we could choose to see our region as one where we are all connected through the networked connections we have begun to build together. Over time, we will be able to see ourselves as a highly-connected, fluid network with a steady flow of connections, communication, and collaboration. The evolution of an entrepreneurial culture from individual fiefdoms, to connected fiefdoms, to a network of actors and activities working and traveling alongside one another through a fluid and uninterrupted system of links will have tangible results – an increase in new business creation, the addition of new jobs, and an uptick in economic vibrancy. Let's build on the current momentum by developing and cementing the connections and collaborations needed to help grow our entrepreneurial ecosystem together.