



ENTREPRENEURIAL ECOSYSTEMS AND THEIR SERVICE OF WOMEN ENTREPRENEURS

Prepared for:
 The National Women's Business Council
 Solicitation Number SBAHQ-15-M-0166

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Executive Summary

Women-owned businesses are a significant and growing but underrepresented segment of the U.S. economy. In order for the United States, and its various regions, to reach full economic potential, policymakers need to be able to assess the mechanisms throughout their local economies that support women entrepreneurs and to effectively coordinate the variety of stakeholders that share the same goal.

One particularly effective approach to understanding the interactions between the actors and processes that support segments of entrepreneurs, such as women entrepreneurs, is the application of an "entrepreneurial ecosystem" framework. The entrepreneurial ecosystem approach emphasizes the importance of the overall environment within which an entrepreneur establishes and grows her business and the distinct characteristics of a particular region's ecosystem.

The National Women's Business Council (NWBC) contracted with Washington CORE to develop an entrepreneurial ecosystem model that can be adopted by local stakeholders to evaluate their regional economy, identify significant actors and activities, and provide opportunities to consider how to strengthen the system of support for women business owners.

Once the model was developed, the NWBC hosted a series of in-person town hall discussions, each of which brought together key stakeholders to evaluate how their regional economy supports women entrepreneurs. Town halls were held in six regional economies – Atlanta, GA, Boston, MA, Chicago, IL, Miami, FL, San Jose, CA, and St. Louis, MO. The town halls convened stakeholders from across each ecosystem, such as entrepreneurs and representatives from government, support organizations, finance, and large corporations. Participants referred to the model during the discussions to consider the strengths and weaknesses of distinct domains of their region's ecosystem and the interconnectivity between them.

The products of this study include, therefore, not only the ecosystem model and guidance to regional stakeholders for its application, but also recommendations to address challenges and build support within local economies. These concrete recommendations are addressed to the Federal Government and regional stakeholders.

The top recommendations for federal and regional stakeholders include:

- Develop a repository of resources for entrepreneurs
- Promote both traditional and alternate forms of capital access among women
- Encourage entrepreneurship within immigrant populations
- Create Federally-subsidized internship programs
- Raise awareness of the Small Business Innovative Research and Technology Transfer (SBIR/STTR) programs
- Encourage diverse management teams and investments

Stakeholders interested in applying the model to evaluate their own communities should:

- Consider each domain as part of a holistic assessment
- Recognize that interconnectivity is critical to assessments and future actions
- Adopt a variety of methods based on the assessment's objectives

1 Developing an Entrepreneurial Ecosystem Model

1.1 Understanding Entrepreneurial Ecosystems

There is widespread recognition of the economic value of entrepreneurship. However, there is a shift underway in understanding how best to support both emerging and established entrepreneurs; specifically, it is increasingly acknowledged that entrepreneurs are best supported not through independent, “one-off” initiatives or policies but, rather, through interactions across a community of actors, organizations, institutions and processes. This latter concept, known as an “entrepreneurial ecosystem” framework, is particularly helpful for understanding the barriers and successes faced by women entrepreneurs and, consequently, opportunities for future action to better support this important business population.

Traditionally, specific efforts to nurture startups, such as research and development grants, tax incentives, or proof of concept funds have been primarily “transactional”.¹ In other words, a startup receives support in the form of direct financial assistance rather than relationship building that will help the startup to seek the resources that it needs. In recent years, there has been debate about the suitability of “transactional” forms of support for fostering startups. Specifically, such efforts are seen as artificially lowering certain barriers without strengthening the competitiveness of the startup. For example, financing by itself may not enhance the recipient’s ability to contend with the competitive pressures of the market. Furthermore, these forms of support often operate in isolation from each other, thereby missing opportunities to strengthen both one another, as well as their collective impact.

The entrepreneurial ecosystem approach emphasizes the importance of the overall environment within which an entrepreneur establishes and grows her business and the distinct characteristics of a particular region’s ecosystem. An entrepreneurial ecosystem is defined as:

“A set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organizations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, government agencies, financial institutions) and entrepreneurial processes (e.g. the business birth rate, number and density of high growth entrepreneurs, levels of ‘blockbuster entrepreneurship’, number of serial entrepreneurs, degree of sellout mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment.”²

The interconnectedness among the elements identified in this definition is fundamental to the concept of an entrepreneurial ecosystem. According to the Kauffman Foundation, “A vibrant entrepreneurial ecosystem is not simply a collection of isolated elements – the connections between the elements matter just as much as the elements themselves.”³

¹ “Entrepreneurial Ecosystems and Growth-Oriented Entrepreneurship Workshop.” OECD. 2013.

<http://www.oecd.org/cfe/leed/entrepreneurialecosystemsandgrowth-orientedentrepreneurshipworkshop-netherlands.htm>

² “Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship,” p. 5; Washington CORE.

³ “Measuring An Entrepreneurial Ecosystem.” Kauffman Foundation. 2015.

http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2015/03/measuring_an_entrepreneurial_ecosystem.pdf

A comparison between traditional entrepreneurship policies and ecosystem-based policies is shown in the table below.

Table 1: Comparison of Entrepreneurship Policy Approaches⁴

Policy Characteristic	Traditional	Ecosystem-based
Target of policy	Main unit of focus is on specific actors, such as individuals, entrepreneurs, geographic clusters of firms.	Main unit of focus is on specific types of entrepreneurs, networks of entrepreneurs or 'temporary' clusters .
Policy objective	Policy objective is to generate more entrepreneurs and grow more new ventures.	Policy objective is to focus on the high potential or 'blockbuster entrepreneurs' with the largest economic potential .
Systemic approach	Policy actors are targeted by specific focused interventions aimed at parts of entrepreneurial systems (i.e. non-systemic).	Policy is targeted at connecting components within ecosystems to enable the system to better function (i.e. systemic).
Type of relationships	Main forms of assistance are 'transactional' forms of support such as grants, tax incentives, subsidies, etc.	Main forms of assistance are ' relational ' forms of support such as network building, developing connections between entrepreneurial actors, institutional alignment of priorities, fostering peer-based interactions.
Financing	Main push by policy makers is to generate and promote entrepreneurial sources of finance aimed at startups, particularly in the form of venture capital and business angel funding.	Recognition that different businesses have different funding requirements such as debt finance, peer to peer, crowdfunding etc. As businesses grow, different firms require access to escalating funding needs and different funding sources.
Innovation	Generation of new firm-based intellectual property and innovation is seen as vitally important. The focus is very much on R&D and the protection of intellectual property rights. Strong encouragement of technology and innovation within high tech sectors.	Focus on developing innovation systems and fostering connections with customers, end users, suppliers, universities etc. Increasing recognition of unprotected and 'open' sources of innovation. Innovation crosses over many sectors and industries – both new and traditional.
Source of policies	Level of policy making is mostly 'top down'. The implementation of policy is mostly undertaken at national level but some initiatives are devolved.	The bulk of systemic policies are enacted at the regional or local level . Multi-scalar policy frameworks are emerging.

Source: OECD

Additionally, the specific elements themselves and their interactions are unique to each region's economy and evolve over time.⁵ As a result, while certain actors may be common to many entrepreneurial ecosystems, such as universities, their relative importance and interactions with other elements of the ecosystem will vary from one region to another.

Note that entrepreneurial ecosystems give policymakers a guide to consider how institutions within their economy interact to support distinct types of entrepreneurs within their economy, such as women entrepreneurs. In particular, an ecosystem

⁴ "Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship," p. 4.

⁵ Forbes, "Introducing the Entrepreneurship Ecosystem: Four Defining Characteristics," May 25, 2011, URL: <http://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/#7774bcf738c4>

approach to understanding women's entrepreneurship draws attention not only to how women entrepreneurs leverage available resources to create and grow their business, but also to gaps within the economy that may hinder their growth.

1.2 Developing an Entrepreneurial Ecosystem Model

Entrepreneurial ecosystems are typically presented as models which organize and visually represent key components and their relationship with each other. These models guide policymakers by highlighting critical institutions and networks that should be considered when evaluating the ability of the regional economy to support entrepreneurs.

Entrepreneurial ecosystem models typically categorize the ecosystem elements into domains. The number and type of ecosystem domains vary from one model to another. There is a general consensus regarding the inclusion of some domains such as human capital, policy, and finance; other domains such as market access and quality of life are less common.⁶

The strength of institutions and processes within a domain is typically evaluated through a data collection exercise. In this respect, the model identifies the elements of the regional economy that should be measured. Data collection may involve some combination of gathering data from existing sources, surveys, town halls, and/or in-depth interviews with key players. More information on data collection can be found in Section 1.3.

In selecting a model to use for facilitating town hall discussions in service of developing action-oriented recommendations to key stakeholders, NWBC prioritized the following model characteristics:

- Suitable for regional-level analyses
- Does not include domains that can be challenging to measure such as culture or quality of life
- Can be specifically used to study regional support of women entrepreneurs
- Assessments can be conducted via a variety of techniques ranging from town hall discussions to formal data collection and surveys

NWBC evaluated the strengths and weaknesses of a variety of ecosystem models, including Babson College's Babson Entrepreneurship Ecosystem Project, the Council on Competitiveness' Asset Mapping Roadmap, George Mason University's Global Entrepreneurship and Development Index, Koltai and Co.'s Six + Six model, the OECD's Entrepreneurship Measurement Framework, and Canterbury Road Partners' Entrepreneurial Ecosystem Logic Model.⁷

⁶ Aspen Network for Development Entrepreneurs, "Entrepreneurial Ecosystem Diagnostic Kit," December 2013, URL: https://assets.aspeninstitute.org/content/uploads/files/content/docs/pubs/FINAL%20Ecosystem%20Toolkit%20Draft_print%20version.pdf (p. 3)

⁷ Babson College, "Babson Entrepreneurship Ecosystem Project," URL: <http://www.babson.edu/executive-education/custom-programs/entrepreneurship/Pages/entrepreneurship-ecosystem.aspx>; Council on Competitiveness, "Asset Mapping Roadmap: A Guide to Assessing Regional Development Resources," 2007, URL: <http://www.jedc.org/forms/Illuminate%20Guide%20to%20Asset%20Mapping.pdf>; Koltai & Co., "Six + Six Model," 2013, URL: <http://koltai.co/home/six-six>; OECD, "A Framework for Addressing and Measuring Entrepreneurship," 2007, URL: <http://search.oecd.org/std/business-stats/39629644.pdf>; Canterbury Road Partners, "Learning From Boston: Implications for Baltimore from Comparing the Entrepreneurial Ecosystems of Baltimore and Boston," 2014, URL: <http://www.abell.org/publications/learning-boston>

These existing models can be distinguished from one another by geographic focus and level of complexity.⁸ Some models, such as the Organization for Economic Cooperation and Development's (OECD) Entrepreneurship Measurement Framework were developed to be used for multi-national studies while others such as Canterbury Road Partners' Entrepreneurial Ecosystem Logic Model support studies at the municipal level.⁹ Regarding the complexity of a model, the Council on Competitiveness' Asset Mapping Roadmap has more than 150 measures across eight domains. By comparison, Koltai and Company's Six + Six model uses 12 measures for six domains.¹⁰

The Entrepreneurial Ecosystem Logic Model was developed for a study of the Boston and Baltimore ecosystems commissioned by the Abell Foundation, a nonprofit foundation. Abell used the results of the study to guide its support for entrepreneurship in Baltimore, which has included initiatives to provide startups with access to resources they need to encourage them to remain in the area, seed funding, and community building activities for entrepreneurs and key stakeholders.¹¹

Each of these models can support a high quality ecosystem analysis but, ultimately, were not suitable for the purposes of this study. Specifically, as the goal of this work was to evaluate regional support for women entrepreneurs, it was determined that the OECD and George Mason University models—developed to support studies at the national-level—were not suitable in this case. It may be possible to adapt these models to regional-level studies but they were not designed for this purpose.

Another significant consideration was the use of domains such as *culture* by each of these models with the exception of Koltai's Six + Six model. Culture is a significant aspect in shaping the environment in which entrepreneurs will build their businesses. Canterbury Road Partners, for example, defines it as an environmental factor along with regulations and the physical environment that influences all of the other elements of the ecosystem. However, it can be challenging for policymakers to measure and influence the cultural domain despite its contributions.

In light of these limitations, NWBC created an entirely new ecosystem model to evaluate regional support of women's entrepreneurship. The model is organized into 7 domains. The name of each domain is shown in the innermost ring. The middle ring shows actors within each domain and the outer ring shows activities. The convergence of the domains on women's entrepreneurship, centrally displayed, demonstrates that actors throughout the ecosystem work together to engage, advise and drive the growth of women entrepreneurs.

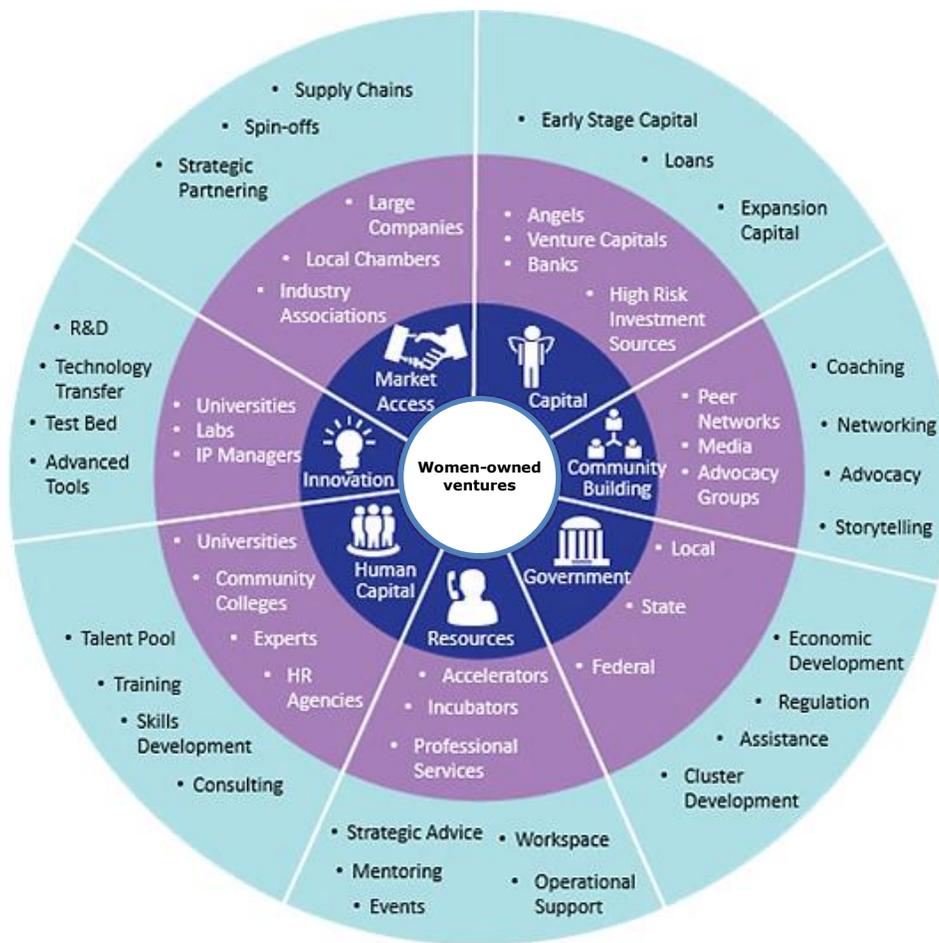
Figure 1: Entrepreneurial Ecosystem Model

⁸ Ibid.

⁹ OECD, "A Framework for Addressing and Measuring Entrepreneurship," 2007, URL: <http://search.oecd.org/std/business-stats/39629644.pdf>; Canterbury Road Partners, "Learning From Boston: Implications for Baltimore from Comparing the Entrepreneurial Ecosystems of Baltimore and Boston," 2014, URL: <http://www.abell.org/publications/learning-boston>

¹⁰ Council on Competitiveness, "Asset Mapping Roadmap: A Guide to Assessing Regional Development Resources," 2007, URL: <http://www.jedc.org/forms/Illuminate%20Guide%20to%20Asset%20Mapping.pdf>; Koltai & Co., "Six + Six Model," 2013, URL: <http://koltai.co/home/six-six>

¹¹ Abell Foundation, URL: <http://www.abell.org/>



1.3 Evaluating Regional Outputs Using an Ecosystem Model

Local government officials, entrepreneurial support organizations, and other stakeholders can adopt this ecosystem model as a guide to evaluate their regional economy’s ecosystem for women entrepreneurs. An assessment involves the collection of data to evaluate each domain of the ecosystem (inputs) and their impact on entrepreneurship and women-owned businesses (outputs). While the measurement of *inputs* is desirable, in that such analysis will most directly reveal strengths and weaknesses of domains and their interaction, the most readily-available metrics reflect ecosystem *outputs*.

There are numerous data sources that are available to support an assessment of an entrepreneurial ecosystem. Table 2 provides a sample of useful data, but is not exhaustive.

Table 2: Data Sources for Entrepreneurial Ecosystem Analysis

Metric	Domain	Recommended data collection method	Notes
Input	Resources	Local survey	Identify incubators, accelerators, co-working spaces, professional services, and events.
Input	Government	Local survey	Identify policies and small business assistance programs at Federal, State, and local levels.
Input	Community Building	Local survey	Identify professional networks, advocacy groups, and business media
Input	Capital	Crunchbase ¹²	Investments by city, sector, and investor
		StatsAmerica Innovation 2.0 ¹³	Venture capital by dollar and deal count, foreign direct investment, availability of capital
		Local survey	Identify sources of financing
Input	Market Access	StatsAmerica Innovation 2.0	Cluster diversity, strength, and growth
		Local survey	Identify local chambers of commerce, industry association, and business cluster initiatives.
Input	Innovation	StatsAmerica Innovation 2.0	Knowledge creation, STEM education and occupations, patent diversity and rate.
		Association of University Technology Managers' Licensing Activity Survey	Patent licensing, startup activity by universities
		U.S. Small Business Administration (SBA) Clusters Initiative ¹⁴	Regional innovation cluster
		U.S. Economic Development Administration (EDA) Regional Innovation Strategies ¹⁵	Regional innovation strategy
		Local survey	Identify university tech transfer and entrepreneurship programs
Input	Human Capital	StatsAmerica Innovation 2.0	Educational attainment, employment and productivity
		U.S. Census Bureau, American Community Survey	Educational attainment by gender
		Local survey	Identify colleges, universities, and workforce development initiatives
Output	Entrepreneurship	Kauffman Index of Startup Activity, Index of Main Street Entrepreneurship, Index of Growth Entrepreneurship ¹⁶	Rankings of new entrepreneurs, opportunity entrepreneurship, startup density, rate of startup growth, share of scaleups, and high growth company density
Output	Women-owned businesses	U.S. Census Bureau, Survey of Business Owners and Self-Employed Persons ¹⁷ , Annual Survey of Entrepreneurs ¹⁸	Number, revenue, employer firm status and payroll of businesses by gender of ownership

¹² Crunchbase, URL: <https://www.crunchbase.com/#/home/index>

¹³ StatsAmerica, Innovation 2.0, URL: <http://statsamerica.org/ii2/overview.aspx>

¹⁴ Small Business Administration – Regional Clusters Initiative, URL: <https://www.sba.gov/about-sba/sba-initiatives/clusters-initiative>

¹⁵ U.S. Economic Development Administration, URL: <https://www.eda.gov/oie/ris/>; U.S. Cluster Mapping, URL: <http://www.clustermapping.us/>

¹⁶ Kauffman Foundation, “Kauffman Index of Startup Activity: Metropolitan Area & City Trends,” August 2016, URL: http://www.kauffman.org/~media/kauffman_org/microsites/kauffman_index/startup_activity_2016/kauffman_index_startup_activity_metro_trends_2016.pdf; Kauffman Foundation, “Kauffman Index of Main Street Entrepreneurship,” November 2016, URL: http://www.kauffman.org/~media/kauffman_org/microsites/kauffman_index/main_street_2016/kauffman_index_main_street_metro_trends_2016.pdf; Kauffman Foundation, “Kauffman Index of Growth Entrepreneurship: Metropolitan Area & City Trends,” June 2016, URL: http://www.kauffman.org/~media/kauffman_org/microsites/kauffman_index/growth/kauffman_index_growth_entrepreneurship_metro_report_6_2016.pdf

¹⁷ U.S. Census Bureau – Survey of Business Owners, URL: <http://www.census.gov/programs-surveys/sbo.html>

¹⁸ U.S. Census Bureau – Annual Survey of Entrepreneurs, URL: <http://www.census.gov/programs-surveys/ase.html>

Metrics that measure the *output* of regional ecosystems include:

- **Startup activity rank:** An aggregate ranking of 40 MSAs by the Kauffman Foundation based on the percentage of adults who have begun entrepreneurial activity, the percentage of individuals who engage in entrepreneurial activity to pursue opportunity rather than necessity, and the density of new employer firms. This metric is important because it indicates the strength of the entrepreneurial ecosystem with respect to the creation of *new startups*.¹⁹
- **Growth entrepreneurship rank:** An aggregate ranking of 40 MSAs by the Kauffman Foundation based on the average growth of a cohort of new startups in their first five years, that started small and grew to at least 50 employees within their first ten years as a percentage of all businesses that are ten years old or younger, and the number of fast growing companies with at least \$2 million in revenue. This metric is important because it indicates the strength of the ecosystem to support the creation of *high growth firms*.²⁰
- **Women-owned businesses' share of firms:** This metric from the 2012 SBO shows the economic clout of women-owned businesses in a region.²¹
- **Women-owned businesses share of employer firms:** This metric from the 2012 SBO is a counterpart to the previous metric but focuses on the economic clout of women-owned employer firms.²²
- **Women-owned employer firms' share of employer firm revenue:** This metric from the 2012 SBO is a counterpart to the previous metric but focuses on the revenue generated by women-owned employer firms rather than their number.²³
- **Change in the women-owned employer firms' share of employer firm revenue:** This metric based on the 2007 and 2012 SBO shows how the economic clout of women-owned employer firms in terms of revenue changed over a five-year period. Conclusions based on this metric should be cautioned because it does not indicate by itself to what extent the changes are due to women-owned or men-owned firms' performance or number.²⁴
- **Gross Regional Product (Regional GDP):** This metric based on data from the U.S. Bureau of Economic Analysis is important because it indicates the current size of a region's economy, including local resources (market access, capital, workforce) that would be available to entrepreneurs.²⁵

¹⁹ Kauffman Foundation, "Kauffman Index of Startup Activity: Metropolitan Area & City Trends," August 2016, URL: http://www.kauffman.org/~media/kauffman_org/microsites/kauffman_index/startup_activity_2016/kauffman_index_startup_activity_metro_trends_2016.pdf

²⁰ Kauffman Foundation, "Kauffman Index of Growth Entrepreneurship: Metropolitan Area & City Trends," June 2016, URL: http://www.kauffman.org/~media/kauffman_org/microsites/kauffman_index/growth/kauffman_index_growth_entrepreneurship_metro_report_6_2016.pdf

²¹ U.S. Census Bureau – Survey of Business Owners, 2012, URL: <http://www.census.gov/programs-surveys/sbo.html>

²² Ibid.

²³ Ibid.

²⁴ Ibid.

²⁵ Bureau of Economic Analysis, URL: <http://www.bea.gov/regional/>

- **Change in Regional GDP:** This metric based on data from the U.S. Bureau of Economic Analysis is important because it indicates the changes in the size of a region's economy, which can identify regions that are experiencing a surge of economic growth.²⁶

2 Testing the NWBC entrepreneurial ecosystem model

Once developed, the NWBC entrepreneurial ecosystem model was used to frame conversations in six regions around the country. This application of the model in town hall settings not only facilitated the collection of key recommendations to support and promote women's entrepreneurship at the regional level, but also afforded NWBC the opportunity to assess the utility of the model in providing a framework for action-oriented discussion.

Six metropolitan statistical areas (MSA) were selected through quantitative and qualitative analysis to serve as the location for a study of the mode, as well as the region's entrepreneurial ecosystem and women entrepreneurs. After the selection of the sites, a series of in-person town hall discussions were held within each region to discuss the characteristics of its ecosystem and the experiences of women entrepreneurs. Each of the town halls culminated in identifying policy recommendations about how the ecosystem could be strengthened to provide better support for women entrepreneurs.

2.1 Town Hall Discussions

Selecting Regional Economies

As entrepreneurial ecosystems are built upon the contributions of actors that are located throughout a regional economy, metropolitan statistical areas or MSAs, as defined by the Office of Management and Budget (OMB) and the U.S. Census Bureau, were analyzed to select specific regions to include in the study and recruit members for subsequent town halls.²⁷

The study screened a broad list of 54 MSAs to identify 6 MSAs that would be included in the final study. The MSAs were screened over a series of four filters to ensure that the final set of 6 regions represent a diverse mix of regions with strong representation by women entrepreneurs and entrepreneurial ecosystems that have achieved varying degrees of advancement from emerging to developed ecosystems. This process resulted in the selection of 6 MSAs:

- **Atlanta-Sandy Springs-Marietta, GA**
Atlanta was selected because of its diverse population and because it has recently established itself as an emerging hub for entrepreneurship that has been supported through initiatives undertaken by local government.
- **Boston-Cambridge-Quincy, MA-NH**
Boston was selected because it has a mature entrepreneurial ecosystem and is regarded for offering opportunities to women entrepreneurs due to the contributions of its universities and initiatives launched by local government.

²⁶ Ibid.

²⁷ U.S. Census Bureau – Metropolitan and Micropolitan Statistical Areas, URL: <https://www.census.gov/population/metro/>

- **Chicago-Naperville-Joliet, IL-IN-WI**
Chicago was selected because it is one of the largest regional economies in the U.S. and has a strong corporate presence.
- **Miami-Fort Lauderdale-Pompano Beach, FL**
Miami was chosen because it has a diverse population, is becoming an emerging hub for entrepreneurship, and has a strong core of women-owned businesses.
- **San Jose-Sunnyvale-Santa Clara, CA**²⁸
San Jose was selected because it has a highly mature entrepreneurial ecosystem that also faces challenges with respect to the status of women entrepreneurs.²⁹
- **St. Louis, MO-IL**
St. Louis was selected because it represents a mid-sized economy, has a diverse population, and has benefited from an intentional strategy to develop an entrepreneurial ecosystem through the cooperation of multiple stakeholders.

Structure of Town Halls

Town halls were held in each region to gather the perspectives of participants about their region's entrepreneurial ecosystem and the status of women entrepreneurs. The town halls presented an opportunity to evaluate the utility of the NWBC ecosystem model in guiding action-oriented discussion and surfacing meaningful policy recommendations.

In planning the town hall discussions, a review of each region was conducted to identify and invite participants representing each domain identified in the ecosystem model as shown in Figure 1. Participants were identified through a combination of online research and consultation with local stakeholders. Certain individuals were asked to fulfill key roles at the town hall by serving as moderators, panelists, or roundtable discussion hosts based on their professional experience, knowledge of the regional ecosystem, and relationships with other stakeholders.

The following agenda was used to structure the town halls:

- 30 minutes: **Registration and networking**
- 20 minutes: **Introductions**
- 60 minutes: **Panel discussion and Q&A**
- 25 minutes: **Networking break**
- 60 minutes: **Roundtable discussions**
- 45 minutes: **Open discussion on opportunities for action**

Each town hall began with introduction and a brief overview of the NWBC/Washington CORE Ecosystem Model immediately followed by a panel that discussed key characteristics of the regional economy, challenges, and opportunities for enhancing the entrepreneurial ecosystem with respect to women entrepreneurs. The panel introduced

²⁸ The study considered both San Francisco and San Jose, CA as candidates for the study. Both of the regions boast vibrant entrepreneurial ecosystems, a strong presence by women entrepreneurs, and are collectively considered to be part of "Silicon Valley" while also being distinct regions with their own characteristics. The San Jose, CA MSA was ultimately selected for the study because the status of women-owned businesses lags its highly developed and interconnected entrepreneurial ecosystem, making the "heart of Silicon Valley" a compelling candidate for the study. Nonetheless, some actors within the entrepreneurial ecosystem overlap both regions and the town hall organized for San Jose, CA included a number of participants from the San Francisco region.

²⁹ Elephant in the Valley, URL: <https://www.elephantinthevalley.com/>

observations and discussion points about the outcomes of ecosystem supports that would be carried forward in subsequent portions of the town hall. The moderator was free to tailor the panel discussion based on knowledge of the local entrepreneurial ecosystem and to follow up on particular points raised by the panelists.

The panel topics included:

- Distinctive characteristics of this region's entrepreneurial ecosystem that foster entrepreneurship
- Experiences of women entrepreneurs in this region
- Challenges encountered by women entrepreneurs
- Resources available to women entrepreneurs
- Opportunities for action to best advance this region's entrepreneurial ecosystem for women entrepreneurs

All of the participants were then given the opportunity to reflect on the panel's comments and share their own perspectives through informal roundtable conversation. Finally, an open discussion was held to allow participants to share observations and make recommendations for policy makers and other key stakeholders in their region's entrepreneurial ecosystem. The findings from each town hall's panel, roundtables, and open discussion were captured in briefs to be shared among the participants; findings are also discussed in this report.

2.2 Evaluating the NWBC Ecosystem Model

The town halls demonstrated the usefulness of the model as a tool to identify key regional players, as the breakdown of the ecosystem into distinct segments supported the planning of each town hall. Specifically, participants were recruited from each domain to join the town hall discussion.

The model emphasized the importance of including important voices that might otherwise be overlooked, such as large corporations within the **Market Access** domain and universities from the **Innovation** domain. As noted in Table 5 in Section 2.4 below, these domains were not the most prominent topics during the discussions. Nonetheless, they are significant contributors to the entrepreneurial ecosystem and topics such as supplier diversity and certification as a woman-owned business emerged as recurring issues throughout the town hall series. Recruiting participants from multiple domains ensured that there would be a variety of perspectives on these and other topics.

Beyond its utility for recruitment purposes, the model's emphasis on the importance of interconnectivity and networks was useful for framing the otherwise open-ended discussions. The model was repeatedly praised by participants throughout the town halls specifically for drawing attention to this dynamic. This was seen in the town halls themselves; discussions about networking and coordination between multiple organizations were common, as demonstrated through the prominence of the **Resources** and **Community Building** domains.

Finally, the model prompted consideration of the strengths and weaknesses of individual domains and relationships that exist between them. There were recurring issues raised at each town hall, such as the need for greater coordination between entrepreneurial support organizations and resources to help entrepreneurs navigate them. However, there were also notable differences about how certain domains were evaluated by participants. For example, the **Government** domain was regarded favorably at the Atlanta, Boston, and Chicago town halls while participants in the San

Jose town hall noted that entrepreneurs in Silicon Valley tend to not think about the role of government within their ecosystem.

The town halls revealed some shortcomings in using the model in an open-ended discussion. Not all domains were referenced or addressed during the town halls, which may reflect on their relevance to the assembled stakeholders, and their relative (un)importance to the model. Alternatively, this critique may reflect the nature of the conversations, which were left intentionally unstructured and informal.

It is important to consider how the model will be applied to assess an ecosystem. While the open-ended discussions were beneficial in revealing common areas of interest, it did not allow for an in-depth exploration of each domain.

2.3 Measuring Ecosystem Outputs

As outlined in Section 1.3 “Evaluating regions using an ecosystem model,” quantitative data may be used to gain an understanding of entrepreneurial ecosystem outputs—that is, the apparent strengths of each ecosystem (in this case, for women) as measured by the numbers. Table 3 reveals the comparative measure of outputs for the six regions explored in this study.³⁰ The highest and lowest MSA for each metric are highlighted in green and red, respectively.

Table 3: Metrics for Entrepreneurial Ecosystems and Women entrepreneurs for Selected MSAs³¹

Region	Startup Activity Rank (2015)	Growth E'pen Rank (2015)	WOB share of firms (2012)	WOB share of emp. firms (2012)	WOB share of emp. firm revenue (2012)	WOB share of revenue, % change (2007-12)	Ed. attain diff by gender (2014)	GDP (2014) (in \$M)	% change in GDP (2010-14)
Atlanta, GA	15	15	41.83%	22.51%	13.46%	5.68%	13.85%	\$324,881	17.02%
Boston, MA	22	6	34.03%	19.33%	8.15%	-4.51%	9.56%	\$382,459	16.18%
Chicago, IL	29	30	38.37%	20.87%	10.39%	3.82%	7.91%	\$610,552	14.19%
Miami, FL	2	39	40.08%	22.21%	12.80%	25.75%	1.23%	\$299,161	19.28%
San Jose, CA	8	3	37.14%	20.20%	8.82%	-26.63%	-22.34%	\$213,819	30.02%
St. Louis, MO	36	29	37.35%	22.97%	9.81%	0.92%	5.53%	\$149,951	11.66%
United States	N/A	N/A	36.35%	20.16%	10.86%	7.21%	4.18%	\$17,348,000	15.93%

Sources: Kauffman Foundation, U.S. Census Bureau, U.S. Bureau of Economic Analysis

Based on the data analysis alongside observations from the town halls, the following key findings surfaced regarding the characteristics of entrepreneurial ecosystems and their relationship to women’s entrepreneurship:

- **Startups and high growth firms have distinct characteristics and an entrepreneurial ecosystem may be strong in its support of one but not the other.**

The data analysis reveals that the strength of an entrepreneurial ecosystem with respect to startups, or main street entrepreneurship, is not necessarily associated with its high growth entrepreneurship. Whereas the startup activity rank is based on

³⁰ Note that the description of these data sources may be found on p. X.

³¹ Entrepreneurship (E’pen). Gross domestic product (GDP).

measures of entrepreneurial activity and the density of employer firms, the growth entrepreneurship rank is based on measures of growth in terms of growth rate, employment creation, and revenue. Therefore, startup activity serves as an indicator of the overall creation of new businesses whereas growth entrepreneurship looks specifically at high growth firms.

While most regions receive similar rankings for both startup activity and growth entrepreneurship, this is not always the case. Miami is ranked as 2nd of 40 for startup activity but 39th for growth entrepreneurship. Conversely Boston is ranked 22nd for startup activity but 6th for growth entrepreneurship.

This distinction between the perceived strengths of start-ups and high-growth firms can also be seen in the metrics used by Kauffman’s Index of Startup Activity, which measures new business creation including why individuals create new businesses, to develop the rankings for main street and growth entrepreneurship. **Opportunity share of entrepreneurship** is a measure of the portion of entrepreneurs who start a business because it will have a high growth potential *rather than* out of necessity due to limited employment opportunities or to supplement existing income.³² Table 4 shows that the cities with the lowest shares of opportunity entrepreneurship have widely varying rankings of growth entrepreneurship – St. Louis (29th), Boston (6th), and Atlanta (15th), underscoring that the frequency with which entrepreneurs launch businesses—even businesses with growth potential—is not strongly correlated with the prevalence of successful high-growth businesses in a community.

Table 4: Comparison of Growth and Opportunity Entrepreneurship³³

Region	Growth Entrepreneurship Rank (2015)	Opportunity Share of Entrepreneurship (2015)
Atlanta, GA	15	70.36%
Boston, MA	6	74.45%
Chicago, IL	30	81.34%
Miami	39	78.08%
San Jose, CA	3	94.18%
St. Louis, MO	29	70.83%

Source: Kauffman Foundation

A regional economy’s entrepreneurial ecosystem should be assessed by policy makers and other stakeholders to determine if the distinct needs of main street and high growth entrepreneurship are being fulfilled. The model presented in this study is adaptable to investigations of each of these entrepreneurial segments.

- **The overall state of an entrepreneurial ecosystem does not necessarily**

³² Kauffman Foundation, “Kauffman Index of Startup Activity: National Trends,” 2016, URL: http://www.kauffman.org/~media/kauffman_org/microsites/kauffman_index/startup_activity_2016/kauffman_index_startup_activity_national_trends_2016.pdf (p. 20)

³³ Kauffman Foundation, “Kauffman Index of Startup Activity: Metropolitan Area & City Trends,” 2016, URL: http://www.kauffman.org/~media/kauffman_org/microsites/kauffman_index/startup_activity_2016/kauffman_index_startup_activity_metro_trends_2016.pdf; Kauffman Foundation, “Kauffman Index of Growth Entrepreneurship: Metropolitan Area & City Trends,” 2016, URL: http://www.kauffman.org/~media/kauffman_org/microsites/kauffman_index/growth/kauffman_index_growth_entrepreneurship_metro_report_6_2016.pdf

indicate the level of participation by women entrepreneurs within that ecosystem.

There are opportunities for growth across many regional economies—even those assessed to be strong, overall—through the expansion of women’s entrepreneurship. The possibility for disparity in overall entrepreneurial strength as compared to the strength of women’s entrepreneurship, explicitly, can be seen in San Jose, which places high in both startup and growth entrepreneurship rankings (8th 3rd, respectively), but where women-owned employer firms only account for 8.82% of the revenue generated by employer firms with ownership classifiable by gender. Similarly, Boston ranks 6th in growth entrepreneurship but women-owned employer firms only account for 8.15% of revenue.

By contrast, Atlanta ranks a modest 15th place for both ecosystem metrics but has the highest rankings for women-owned businesses share of firms with ownership that can be classified by gender (41.83%) and women-owned employer firms’ share of revenue (13.46%). This finding suggests the importance of considering both a region’s overall entrepreneurial ecosystem and the status of women entrepreneurs as interrelated but distinct aspects of a region’s economy.

2.4 Town Hall Findings

Overall Findings

A qualitative content analysis of each town hall’s discussion was conducted to identify the relevant domain(s) for each discussion point that was captured in the town hall memo produced at the conclusion of the event. The domains that were addressed in each town hall’s discussions and recommendations are shown in the table below as a color code to show the relative prominence of each domain within the town hall’s discussions.

Table 5: Discussion Topics & Recommendations by Ecosystem Domain

Region	Resources	Government	Community Building	Capital	Market Access	Innovation	Human Capital
Atlanta	Very High	Medium	High	Low	Medium	Low	Medium
Boston	Very High	High	Medium	Low	Low	Medium	Low
Chicago	High	Medium	High	High	Medium	Low	High
Miami	High	High	High	Medium	Low	Low	High
San Jose	High	Low	Very High	High	Low	Low	Medium
St. Louis	Very High	Low	High	Low	Medium	Low	Medium

Legend:

- Very high prominence topic:
- High prominence topic:
- Medium prominence topic:
- Low prominence topic:

Discussions regarding the **Resources** domain frequently concerned the need to help women entrepreneurs to identify and navigate the resources that are available to them. The need for repositories of information about resources that are available to women entrepreneurs, including services to match entrepreneurs’ needs to suitable resources, was frequently raised throughout the town halls. The **Community Building** domain was frequently raised in discussions with respect to improving collaboration among

actors within an ecosystem and building a supportive community to encourage the next generation of women entrepreneurs.

The **Government**, **Human Capital**, and **Capital** domains were also addressed, although not as frequently as the **Resources** and **Community Building** domains. The **Government** domain was raised at some town halls, especially in Boston, where participants cited the efforts of local governments to support women entrepreneurs within the entrepreneurial ecosystem. Local governments can play an important role in encouraging collaboration by creating networking opportunities and other programs that bring together actors within the entrepreneurial ecosystem. Additionally, the contributions of SBA offices and Federal procurement programs were also addressed on occasion. **Government** discussions also included the possibility of revising the Federal Government's definition of women's business ownership to reflect the challenges of maintaining a woman-owned status as a business grows.³⁴

Discussions of the **Human Capital** domain frequently addressed the need to combat cultural biases that discourage women's entrepreneurship and to support a new generation of women entrepreneurs through efforts within the education system to expose young women to entrepreneurial attitudes, business ownership, and internship opportunities.

With respect to the **Capital** domain, the challenges that women entrepreneurs face in raising capital were a recurrent theme across all town halls. It was argued that these barriers could be overcome by demonstrating that more diverse management teams of venture capital firms generate higher performance and lead to greater investment opportunities for women entrepreneurs, although existing research on this point is inconclusive. Additionally, participants suggested that mentoring and peer networking through the **Resource** and **Community Building** domains can play an invaluable role in providing women entrepreneurs with advice and support about communicating with investors.

Concerning the **Market Access** and **Innovation** domains, the contributions of large corporations and universities were cited as important foundations for an entrepreneurial ecosystem. Large corporations provide important markets to entrepreneurs through their supply chains and can also contribute to the vitality of the entrepreneurial ecosystem by engaging with entrepreneurs and support organizations. Additionally, the town hall groups praised their local universities as important sources of highly skilled graduates and research and development efforts. Nonetheless, **Market Access** and **Innovation** did not draw significant attention as presenting barriers or opportunities for action during the town hall discussions. Again, note that the relatively limited conversation regarding **Market Access** and **Innovation** may be an artifact of the conversations' intentionally informal design.

An analysis of the discussion topics and recommendations within each town hall did not reveal patterns with regard to the level of development of a region's entrepreneurial ecosystem. For example, **Resources** was a dominant topic of interest at town halls in

³⁴ One notable difference is that in Boston the WEBOS program (<http://we-bos.com>), launched in 2015 to provide resources and networking opportunities for women entrepreneurs and organizations within the entrepreneurial ecosystem, drew significant attention and contributed to the higher share of discussions about the Government domain than in other town halls. This is likely due both to strong interest in the program and its networking activities as well as the active participation of City government officials, SBA officials, and partners at the town hall.

regions with widely varying growth entrepreneurship rankings such as Boston, Atlanta, and St. Louis.

Regional-level observations

Atlanta Town Hall (August, 2016)

Atlanta, a city with a strong history of civil rights activism, was described by participants as having an equally strong, and related history of problem-solving and entrepreneurial efforts. Entrepreneurship is actively encouraged in Atlanta, not only by local university initiatives, but also by the city government, through efforts such as Women's Entrepreneurship Initiative (WEI), which explicitly supports women entrepreneurs. However, though many local corporations are perceived to be quite collaborative, participants did report difficulty with breaking into certain local corporate supply chains. Additionally, the investor community is risk averse and predominantly supports a few sectors, but this challenge is being addressed in part by the recent emergence of a number of women-focused investor groups.

In order to further develop the local culture of entrepreneurship, particularly among the strong population of university students, Atlanta should work to strengthen ties between local schools of higher education and entrepreneurial support organizations to encourage graduates to pursue entrepreneurial careers.

Boston Town Hall (July, 2016)

The strong university presence in Boston and its metro area contributes to a climate of research and innovation, particularly in the STEM fields. Many local women entrepreneurs are thriving and growing in the science and technology sectors. Town hall participants also reported that local government efforts—specifically, Women Entrepreneurs Boston (WE BOS)—to encourage women's entrepreneurship are gaining momentum. WE BOS has succeeded in part by promoting greater collaboration among existing resources and building awareness of them among women entrepreneurs. However, as in other communities, participants report challenges in accessing external capital, which is essential for firms in the STEM sector.

Boston should encourage the efforts of women business owners to commercialize basic research by highlighting opportunities to apply for Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs funding.

Chicago Town Hall (May, 2016)

The conversation in Chicago revealed the capital access difficulties faced by local entrepreneurs—particularly women. As the 12th most expensive US city behind cities such as San Jose (5th) and Boston (6th), the cost of living in Chicago makes it possible for local entrepreneurs to bootstrap their businesses but, like elsewhere, raising funds is considered a sign of success.³⁵ Many local businesses seek, but struggle to achieve, external investment. This is particularly challenging due to the strongly risk averse culture of Chicago's investment community, where it can be a challenge to secure Series B funding from local investors. Participants also indicated that it would benefit the Chicago community of women entrepreneurs to increase the number of "big exits" by local women business owners interested in reinvesting into local businesses.

One key recommendation was to expand local resources, particularly financing and top tier human capital, to keep entrepreneurs in Chicago as they grow their ventures.

³⁵ Expatistan, "Cost of Living Index in North America," URL: <https://www.expstatian.com/cost-of-living/index/north-america>

Miami Town Hall (March, 2016)

Miami has a rapidly-growing community of startups due in part to the culture that emerged from a population in which more than 50% of the residents were born outside of the city. Participants in this town hall noted that there are plenty of local organizations eager to support women entrepreneurs. However, it was discussed that while many such organizations are designed to provide resources to new businesses, there is a need to offer more specific support to encourage growth. Additionally, there has been a surge of new programs to support women entrepreneurs in recent years but a need to improve collaboration among them and tools to help women entrepreneurs to identify appropriate resources.

Miami should focus on expanding financing opportunities and educating women entrepreneurs about finding the best financing options, particularly those with high growth aspirations. Miami should also consider how to promote entrepreneurship among its population of immigrants and international students.

San Jose Town Hall (January, 2016)

Participants in this town hall commented on the culture of innovation, robust opportunities for networking and mentoring, and the relative availability of capital in the Bay Area, heralding these characteristics as strengths. However, these participants also noted that there is intense competition to recruit and retain talent. Although the ecosystem is very good for “unicorns” (startups with very high valuations), the area can be challenging for small or medium-sized businesses or businesses with more gradual growth. The role of societal and cultural expectations in discouraging girls from considering entrepreneurship was also discussed as well as the impact of family responsibilities in increasing burdens for female entrepreneurs with families.

In addition to resolving these challenges, local governmental entities, media and community programs should actively promote success stories as a form of role modeling for fellow women entrepreneurs.

St. Louis Town Hall (June, 2016)

St. Louis has no shortage of opportunities for networking or business-education events. The region is host to many co-working spaces, business incubators, and other support organizations that collaborate closely with one another. Participants in the St. Louis town hall counted the presence of such entrepreneurial support organizations as a strength of the city. There is interest in an integrated, up-to-date calendar so that entrepreneurs can more easily navigate the events offered by multiple support organizations.

Participants also discussed a need for initiatives to increase funding opportunities and build a highly skilled workforce so that entrepreneurs can remain in the region as they grow their business and offer support to other entrepreneurs.

3 Policy Recommendations from Town Halls

Beyond their use in deploying and testing the NWBC entrepreneurial ecosystem model, the town halls produced several recommendations that concern the impact of existing policies and programs as well as opportunities for future action that could be led by the Federal Government or regional stakeholders.

3.1 Recommendations for Federal Government

- **Encourage entrepreneurship within immigrant populations:** Regions such as Miami boast diverse populations, including many immigrants. Changes to Federal policies could contribute to entrepreneurship within this population. Laws and regulations could be revised to help international students to remain in the U.S. to seek employment or launch their own businesses after they complete their studies. Additionally, programs to promote entrepreneurship should be tailored to target the immigrant population.
- **Create Federally-subsidized internship programs:** Internship programs exposing young women to entrepreneurship as a career can combat biases that discourage women from pursuing careers as business owners. However, unpaid internships may discourage participation by lower income students, so communities should consider fully or partially funding internship programs should be fully or partially subsidized to address this barrier to participation.
- **Raise awareness of the Small Business Innovative Research (SBIR) program:** The SBIR program provides non-equity funding for small businesses to develop and commercialize their research. While awareness of the SBIR program is very high in the Washington, DC region, it is lower even among regions with a strong foundation for innovation such as Boston. Events and other targeted outreach should promote the SBIR program in regions throughout the U.S.
- **Encourage diverse management teams and investments:** Studies have shown that diverse management teams can lead to better decision making by investors and improve access to capital for women entrepreneurs.³⁶ The Federal Government could explore requirements or incentives for investors that receive public funding to meet requirements for diversity within their management team and investment portfolio.
- **Consider expanding support for business ownership to reflect realities of women entrepreneurs:** A woman-owned business is currently defined as a business in which women own at least 51% of the business. However, many women entrepreneurs may own less than 51% percent of their business; this is particularly prevalent among high growth firms that may offer equity to investors to continue to scale their business. Programs that support women entrepreneurs should not be limited to the current definition of a woman-owned business.

3.2 Recommendations for Regional Stakeholders

The study revealed that an analysis of a region's entrepreneurial ecosystem can reveal opportunities to enhance support for women entrepreneurs. Ecosystem models can serve as a valuable tool to guide this assessment. Regional stakeholders should consider the following recommendations when seeking to assess their own entrepreneurial ecosystems.

³⁶ "Women Entrepreneurs 2014: Bridging the Gender Gap in Venture Capital Financing."

- **Consider each domain as part of a holistic assessment:** The model was beneficial in directing an assessment of an entrepreneurial ecosystem to consider the strengths, weaknesses, and opportunities that exist within each domain. Some domains may be overlooked but discussions about them can reveal significant barriers and opportunities such as buyer-supplier relations within the Market Access domain.
- **Recognize that interconnectivity is critical to assessments and future actions:** The model highlights the importance of collaboration between actors throughout the ecosystem. This aspect of the model was cited throughout discussions and encouraged participants to consider the benefits of greater communication and coordination.
- **Adopt a variety of analysis methods based on the assessment’s objectives:** Ecosystem assessments have utilized methods that can include town hall discussions, surveys, and data collection. This particular study used town hall discussions which had its own advantages and limitations. An in-depth assessment of a specific regional economy may also use surveys and data collection to obtain additional information about the resources, linkages, opportunities, barriers, and performance of the entrepreneurial ecosystem.

The town halls produced recommendations for regional stakeholders. These regional stakeholders include actors throughout the entrepreneurial ecosystem such as local government officials, entrepreneurial support organization, education, finance, and corporations. See Appendix 2 for a complete list of recommendations to regional stakeholders, organized by domain. Recommendations that reflect the conversations across all regions include:

- **Create a repository of resources for entrepreneurs:** Many entrepreneurs are unaware of suitable resources that are available to them. It is vital to improve awareness of existing resources and match entrepreneurs to resources that will meet their needs in addition to creating new resources. To meet this need, entrepreneurs should be able to access a repository of resources that are available to them. The repository should include national, regional and local resources, have multiple points of entry, and allow a user to match their requirements to appropriate resources. The repository will require a responsible party to curate and maintain the resources. While resource repositories are being developed at the national level, such as the Grow Her Business site launched by the NWBC in June 2016, there is strong interest in similar efforts at the regional level.³⁷
- **Promote alternate forms of capital access:** The challenges that women entrepreneurs face in raising capital—particularly through angel and venture sources—were raised at multiple town halls. Investment sources such as crowdfunding do not experience the same levels of gender disparity that can be seen in venture capital. Crowdfunding gives women entrepreneurs an opportunity to raise capital from a more diverse community of investors and relies on communication styles that may be more suitable to some entrepreneurs than pitching to a venture capital firm. Crowdfunding should be promoted as a supplement to traditional sources of investment that continue to present barriers to women entrepreneurs.

³⁷ Grow Her Business, URL: <https://womenbizinfo.sites.usa.gov/>

Appendix 1: Additional Recommendations for Regional Stakeholders

Resource Domain

- **Provide resources to help entrepreneurs manage a business and a family:** Women entrepreneurs are frequently expected to raise both a business and a family, especially because many entrepreneurs launch their businesses during the age range at which many women also start a family. Entrepreneurial support organizations should be able to direct entrepreneurs to resources such as child care. Additionally, programming and events should consider family-friendly options such as virtual participation in events.
- **Increase collaboration among entrepreneurial support organizations:** Regions provide many resources to high growth entrepreneurs. However, there is a need for greater coordination among these organizations so they can plan their own programming with consideration of existing resources and refer entrepreneurs to other organizations that can meet their needs. Referrals can meet needs such as mentoring or support for an entrepreneur that is not accepted into a business incubator or accelerator program.

Community Building Domain

- **Work with the media on coverage of women entrepreneurs:** Media coverage of women entrepreneurs can be insufficient and superficial. Participants within the entrepreneurial ecosystem should work with the business media on how to cover women entrepreneurs more regularly and in greater detail.
- **Use open data to promote greater accountability and highlight successes:** Open data and resources that track and measure the performance of women entrepreneurs and other components of the entrepreneurial ecosystem can change perceptions about women entrepreneurs and draw attention to discriminatory practices. For example, the Board List tracks the composition of corporate boards and their performance and finds that more diverse boards perform better than less diverse boards.³⁸
- **Develop women-focused and gender-aware support organizations:** There is value in both women-focused and inclusive, gender-aware support organizations for entrepreneurs. Women-focused organizations are important contributors to an entrepreneurial ecosystem along with organizations for male and women entrepreneurs.
- **Celebrate successful exits:** An entrepreneurial ecosystem grows through serial entrepreneurs who reinvest their resources and knowledge into the community through new businesses, investment, and mentoring. While organizations celebrate successful entrepreneurs, they should also celebrate a region's successful exits and serial entrepreneurs.

³⁸ Board List, URL: <http://www.boardlist.com/>

Capital Domain

- **Provide entrepreneurs with rapid and comprehensible financing decisions:** Entrepreneurs should have access to educational materials about how to understand a term sheet and identify important measures that may be missing from their term sheet.

Market Access Domain

- **Encourage corporate partnerships and supply chain diversity:** Large corporations need to be included as key stakeholders in an entrepreneurial ecosystem. Corporations should be encouraged to partner and purchase supplies from women and minority-owned businesses.

Human Capital Domain

- **Develop programs that expose girls to entrepreneurial attitudes:** Cultural biases that discourage entrepreneurship by women may be countered through programs that promote competitiveness, teamwork, and problem solving among girls.
- **Develop and retain local workforce:** High growth firms may relocate as they grow due to difficulties in hiring the personnel that they require. Initiatives to support women entrepreneurs must consider cultivating a region's workforce as well as entrepreneurs themselves. Workforce development initiatives should consider vocational schools in addition to college education to meet the needs of high growth firms that require a workforce with technical skills.

Appendix 2: Descriptions of Data Sources

A description of useful data sources identified in Table 2 is provided below.

➤ **U.S. Census Bureau’s Survey of Business Owners**

The U.S. Census Bureau’s Survey of Business Owners provides detailed data on the number, revenue, and payroll of businesses that are classifiable by gender of the ownership that can be measured at multiple levels of geographic detail, including MSAs. This resource is invaluable for evaluating the status of women-owned businesses within an MSA. The most recent version of the Survey of Business Owners provides data collected in 2012.

➤ **StatsAmerica Innovation 2.0**

StatsAmerica Innovation 2.0 is a statistics portal supported by the U.S. Department of Commerce’s Economic Development Administration.³⁹ The site is a free service that allows users to quickly obtain economic data for a particular MSA or county. The service can also be used by local government officials to compare the economy of their region to neighboring economies and peers. The economic data available from StatsAmerica is relevant to the Capital, Market Access, Innovation, and Human Capital domains.

➤ **Crunchbase**

Crunchbase is a portal that contains information about startup companies and investment activities. The resource can be used to study investments by city, sector, region, and gender of owners and investors. The site offers free access as well as subscriptions to research tools for a fee.

➤ **Association of University Technology Managers’ Licensing Activity Survey**

The Association of University Technology Managers (AUTM) is a professional association for university technology transfer activities. While only gathering data on innovation by universities, AUTM provides detailed data on patenting, licensing activities and spinoffs by universities via its Licensing Activity Survey, a for-fee service.

➤ **Small Business Administration’s Clusters Initiative**

The Small Business Administration has recognized 62 regional clusters of innovation in the U.S. since 2010 and provides funding to facilitate networking and partnerships between large corporations and small businesses within these clusters. While clusters are sector-specific, the presence of these clusters indicates intensive efforts that are relevant to the Innovation and Market Access domains of an ecosystem.

➤ **U.S. Economic Development Administration’s Regional Innovation Strategies Program**

The Department of Commerce’s Economic Development Administration has provided grant funding to support the development of more than 50 regional innovation strategies since 2014. The program builds upon the capacity of existing organizations and networks in the region and provides a variety of mapping and data resources to assess a region’s innovative capacity via the U.S. Cluster Mapping site.

➤ **U.S. Census Bureau’s American Community Survey**

The U.S. Census Bureau’s American Community Survey (ACS) provides detailed data about a region’s population and workforce at multiple levels of detail. Data available in

³⁹ StatsAmerica – Innovation 2.0, URL: <http://statsamerica.org/ii2/overview.aspx>

the ACS includes educational attainment by gender that is useful for evaluating the Human Capital domain of an ecosystem.

➤ **Local Survey**

Another mechanism for assessing an entrepreneurial ecosystem is to conduct an ecosystem mapping exercise. Some domains of the entrepreneurial ecosystem, particularly Resources and Community Building, would rely on ecosystem mapping exercises undertaken at the regional level to identify key actors and activities that may not be tracked in national datasets. This ecosystem mapping exercise would require collaboration between multiple parties and could serve as a preliminary step for ongoing efforts to evaluate and enhance a region's entrepreneurial ecosystem.