

ENTREPRENEURIAL ECOSYSTEM
MOMENTUM AND MATURITY
The Important Role of Entrepreneur
Development Organizations and Their Activities

Ken Harrington
April 2017

Ewing Marion
KAUFFMAN
Foundation

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ENTREPRENEURIAL ECOSYSTEM MOMENTUM AND MATURITY

The Important Role of Entrepreneur Development Organizations and Their Activities

OVERVIEW

Entrepreneurial ecosystems are becoming recognized as a way to stimulate economic growth, innovation, and social change.¹ Their implementation is gaining momentum across the United States and other parts of the world as their benefits are recognized. Nations, cities, regions, universities, and others are collaborating to put in place entrepreneurial ecosystems as a critical component of their innovation strategies seeking to improve economies, societies, and institutions. Innovation Districts,² Smart City Infrastructures,³ research parks,⁴ coworking spaces, and regional economic clusters⁵ are examples of economic development investments that are being made by many, yet it is well recognized that much of the value comes from the personal collisions and relationships that are possible because of the physical proximity, information exchange, and density they create. This paper provides insights into how regions can accelerate momentum and increase their return on these investments. It recommends using the described framework and measurements to accomplish this.

This paper uses a framework that was first explained in *Is Your Ecosystem Scaling? An Approach to Inventorying and Measuring a Region's Ecosystem Momentum*.⁶ This framework resulted from my life reflections as a serial entrepreneur, my role in the St. Louis ecosystem's formation and evolution from 2001 to today, and other experiences.

This research only focuses on the Entrepreneur Development area of that framework. Entrepreneur Development is a highly important part of any entrepreneurial ecosystem and needs to be recognized. This paper delves into Entrepreneur Development to better understand the organizations, activities, and people involved.

Goal

Defining, recognizing, and measuring Entrepreneur Development will lead to more vibrant, faster-maturing, high-momentum entrepreneurial ecosystems. This paper will use real-world information about Entrepreneur Development and put it into an inventory framework, apply a set of measurements, and offer actionable insights for people who are involved with entrepreneurial ecosystems. This will lead to a deeper understanding about Entrepreneur Development and show why it underpins an entrepreneurial ecosystem's momentum and vibrancy. It will answer questions leaders and practitioners frequently ponder.

For economic development professionals, civic leaders, and policy influencers, the questions are: 1) What do you mean by Entrepreneur Development? 2) How do I understand Entrepreneur Development and what is actually happening? 3) How is our region's entrepreneurial ecosystem doing and who is leading or coordinating it? 4) What should my role be in supporting Entrepreneur Development? 5) How do I respond to requests for ecosystem funding? 6) How should we measure success? 7) Should I use my leadership position to actively support Entrepreneur Development?

For ecosystem practitioners, the questions are: 1) What is my role in the overall ecosystem? 2) How do I measure success and momentum? 3) How do I get funding and resources to support and expand what I do? 4) How do I communicate the importance of my efforts to civic and community leaders? 5) With what other ecosystem organizations should I collaborate and why? 6) What other activities need to be delivered to increase the vibrancy of the ecosystem? 7) What things can I do to be more effective?

Purpose

- To provide insights by applying a framework and measurement and offering actionable insights that help leaders and practitioners better understand Entrepreneur Development and its importance to economic outcomes
- To stimulate top-down and grass-root collaborations that lead to higher-momentum entrepreneurial ecosystems
- To influence funders, economic development professionals, policymakers, and civic leaders to support Entrepreneur Development
- To create economic value and high-impact social change

SUMMARY OF KANSAS CITY AND ST. LOUIS ENTREPRENEURIAL ECOSYSTEMS

Two Midwestern cities (Kansas City and St. Louis) were chosen for the research. These were selected because of my proximity and familiarity with their evolution. Additionally, the Ewing Marion Kauffman Foundation offered introductions and resources that supported the effort in Kansas City. This section provides an overview of the two selected ecosystems.

Kansas City Metropolitan Area

The Kansas City metropolitan area is a fourteen-county metropolitan area anchored by Kansas City, Missouri. It straddles the border between Missouri and Kansas. With a population of about 2,340,000, it ranks as the second-largest metropolitan Missouri MSA after the greater St. Louis area.⁷

Kansas City's entrepreneurial ecosystem began around 2000, although it was not characterized as an ecosystem at that time. The Kansas City ecosystem has steadily gained momentum since its founding.

In 2011, Google Fiber chose Kansas City as its first gigabit city. Mayors Sly James (Missouri) and Joe Reardon (Kansas) appointed the Mayors' Bi-state Innovation Team and charged it with developing a playbook of creative ways the community could use Google Fiber to spark economic development, advance opportunities, and improve daily life in Kansas City.⁸ In 2014, Kansas City's civic leaders, economic development organizations, and ecosystem players upped the ante with a bold vision: *To make Kansas City America's most entrepreneurial city.*⁹ The Ewing Marion Kauffman Foundation, headquartered in Kansas City, is a major source of leadership, resources, research, and thinking that support entrepreneurial activity in the region and worldwide.¹⁰

The University of Missouri-Kansas City (UMKC) Innovation Center is a key player in the ecosystem.¹¹ The Innovation Center is much more than a university organization and serves the region and beyond. Given all it does, it could be characterized as the region's ecosystem developer. It is the home of KCSOURCELINK, as well as a number of Entrepreneur Development organizations that deliver an array of activities.¹² KCSOURCELINK, which was created in 2003 with support from the Kauffman Foundation, is a major source of information that informs prospective entrepreneurs, enhances collaboration across the ecosystem, and improves strategic perspective. The KCSOURCELINK website lists more than 200 nonprofit, economic development, and entrepreneur-related support groups that underpin the region's ecosystem. These are creating innovation momentum across a broad front, including technology, art, food, education, women, animal science, bioscience, nonprofits, and others. KCSOURCELINK is being replicated outside Kansas City in more than twenty states and cities.

Kansas City is home to sixteen post-secondary educational institutions. The largest is UMKC.¹³ The Kansas City Art Institute¹⁴ is involved in the ecosystem supporting artists as entrepreneurs. Community colleges have some ecosystem activities, while the other higher educational institutions have little involvement in the ecosystem.

Saint Louis Metropolitan Area

Greater St. Louis is the metropolitan area that surrounds and includes St. Louis City, which has a population of 315,000.¹⁵ The MSA spans Missouri and Illinois, divided by the Mississippi River, and has a population of 2,811,588. The St. Louis ecosystem has steadily gained momentum since it began in the late 1990s. It has benefited from both top-down and grass-roots efforts and progressed through three states of evolution, including: 1) the early years 2) the period when the ecosystem gained momentum, and 3) when the ecosystem began to scale. These are described in my paper *Is Your Ecosystem Scaling?*¹⁶

St. Louis has a rich mix of Entrepreneur Development, Venture Development, and Economic Development activities. There are more than twenty coworking spaces with the three largest, CIC@4240, CIC@CET, and T-REX, containing nearly 400 companies.^{17, 18} The CIC coworking spaces are subsidiaries of the Cambridge Innovation Center (CIC) and are located in CORTEX, a fast-growing innovation district that was started in 2002 and is now being recognized globally.^{19, 20}

Like Kansas City, St. Louis has put in place an impressive number of ecosystem elements across a diverse mix of interest areas. The Accelerate St. Louis website lists sixty-four entrepreneur support organizations.²¹ Life and Plant Sciences is one interest area that has solid momentum. It has received large investments and support and is an ecosystem in its own right. Around 2008, a grass-roots effort began in the technology entrepreneurship area. This has now grown to become a second, high-momentum sub-ecosystem within the ecosystem. Other evolving ecosystem areas include game development, women entrepreneurs, manufacturing, youth entrepreneurship, social innovation, and others.

St. Louis is home to twenty post-secondary educational institutions. Washington University in St. Louis and St. Louis University are deeply involved with and strong

influencers of the entrepreneurial ecosystem.^{22, 23} Seven others—Lindenwood University, the University of Missouri-St. Louis, Webster University, Harris-Stowe State University, Maryville University, and the two community college systems—are active in the ecosystem, while the other higher educational institutions have little involvement.^{24, 25, 26, 27, 28, 29}

WHAT IS ENTREPRENEUR DEVELOPMENT AND WHY IS IT IMPORTANT?

Figure 1 shows the ecosystem inventory framework that is used for this research. It has twelve intersecting sectors that are based on the phase of evolution (from left to right across the top of the matrix) and the type of development (from top to bottom). The phases of evolution include 1) discovery, 2) idea, 3) startup, and 4) growth, while the types of development represent the various undertakings related to 1) entrepreneur, 2) venture, and 3) economic development. Figure 1 highlights in blue where Entrepreneur Development fits within an entrepreneurial ecosystem and indicates that Venture Development and Economic Development will not be topics of this research.

Figure 1

Ecosystem Inventory Framework

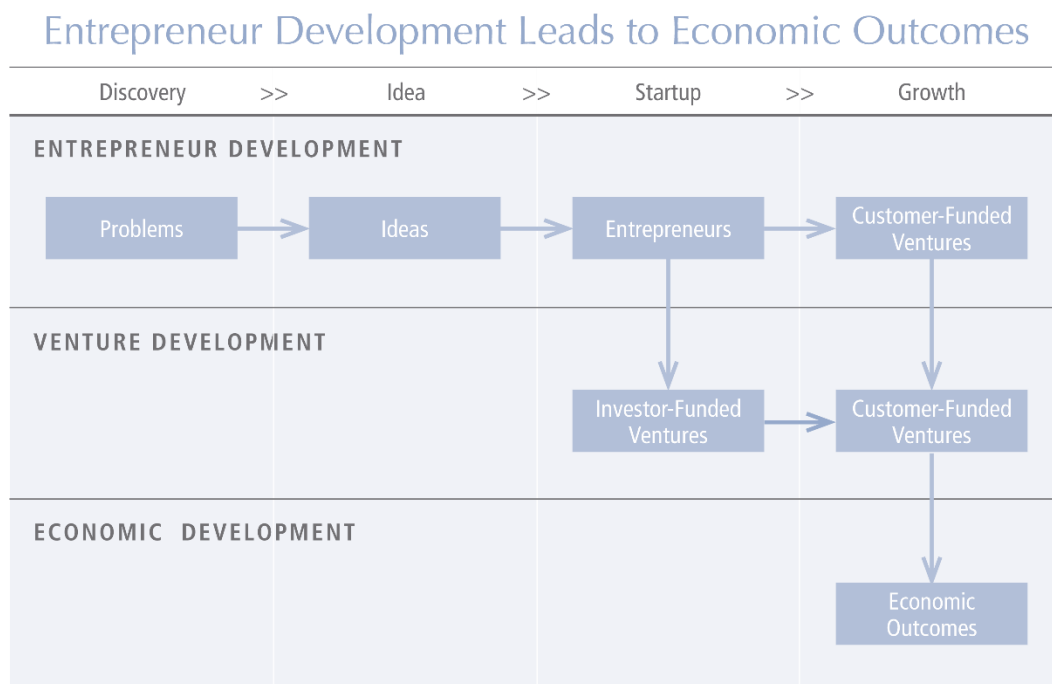
	Discovery	>>	Idea	>>	Startup	>>	Growth
ENTREPRENEUR DEVELOPMENT							
VENTURE DEVELOPMENT							
ECONOMIC DEVELOPMENT							

Venture Development and Economic Development are defined ecosystem areas that are well recognized. They have measurements that are understood, usually in the form of economic outcomes (ventures started, funding obtained, revenue developed, accelerators active, venture funds in place, coworking spaces built, infrastructure created, workforce enhanced, jobs created). Entrepreneur Development deserves the same recognition and strategic commitment as Venture and Economic Development. This paper argues that Entrepreneur Development is the heart of any ecosystem's entrepreneurial culture and momentum. It recommends that resources be dedicated to Entrepreneur Development. It also contends that Entrepreneur Development requires

new measurements. A large number of community (mostly nonprofits) and university organizations deliver an array of Entrepreneur Development services. They need better and more coordinated support that improves connectivity and collaboration.

Figure 2 illustrates how Entrepreneur Development organizations feed and strengthen Venture and Economic Development to achieve economic outcomes. Entrepreneur Development is the first step in any ecosystem’s startup pipeline. It shows that the process begins with research, inventions, and ideas that entrepreneurs then turn into ventures. Without Entrepreneur Development, scientific discoveries and inventions may languish since there are fewer entrepreneurs who choose to act. Additionally, without Entrepreneur Development a higher percentage of entrepreneurs will fail.

Figure 2



Entrepreneur Development is where inventions and ideas start and where they either blossom or die. It is also where entrepreneurs are created and improved so they can move forward to create viable ventures. Entrepreneur Development is where those often-talked-about serendipitous collisions occur. This part of the ecosystem is where connections, relationships, and entrepreneurial learning occur. It underpins a region’s entrepreneurial culture and entrepreneurial IQ.

Entrepreneur Development organizations and activities determine the number, quality, and success of entrepreneurs. Creating more and better entrepreneurs influences the amount and type of investment capital that comes into a region. This feeds the startup pipeline and eventually leads to multiple customer-funded, market-sustained companies. Eventually these successful, customer-funded ventures add to ecosystem momentum and economic sustainability by becoming “starburst” exits that spin off talent and capital into a region. This success cycle eventually perpetuates itself and that, in turn, leads to a vibrant regional economy and healthier society.

Definition of Entrepreneur, Venture, and Economic Development

Entrepreneur Development organizations focus on the individual. As mentioned above, their primary motivation is to create more and better entrepreneurs. These organizations provide services that are offered free or for a minimal charge. No equity or compensation is exchanged. Entrepreneur Development organizations are mostly nonprofits, but also include educational institutions and public-sector-delivered programs. Activities include education programs, speaker/panelist events, meetups, mentoring services, free Entrepreneur-in-Residence (EIR) support, grant funding, competitions (funding given but no equity taken), internships, startup weekends, hackathons, idea exchange sessions, social events, and other activities.

Entrepreneur Development, as defined here, excludes university curricular for academic credit courses unless they support community (not just student) entrepreneurs.

Venture Development's primary role is to select and fund companies so they produce wealth and economic outcomes and contribute to society. Angel investors, accelerators, public co-investment funds, venture capitalists, private equity groups, and banks are examples of Venture Development players. Investors want winners; thus, the selection process is competitive, the goal being to pick not just good deals but the best deals. Entrepreneurs and investors share wealth in the form of equity and debt that offer returns appropriate to the level of risk.

Service providers fall into the Venture Development area. Their primary motivation is cash or equity compensation. Law firms, accounting firms, PR/marketing companies, insurance brokers, and many others are examples.

Venture Development investors and service providers support Entrepreneur Development by volunteering or participating in Entrepreneur Development activities and events. However, their primary goal is wealth creation, reliable interest payments, or billability.

Economic Development is the third type of entrepreneurial ecosystem development. The primary focus here is to put in place the incentives, assets, and infrastructure needed to cultivate, support, and mature companies. Economic development agencies usually lead these efforts. Their motivations are to create strong regional or local economies and their activities span many areas. This includes connecting the public and private sectors, influencing public policy, offering tax incentives, attracting companies, developing infrastructure, conceiving regional economic strategies, communicating the image of the region, and many other things.

Entrepreneurial ecosystems are only one part, sometimes a small portion, of Economic Development activities. Ecosystem areas they most often help with include:

- Developing strategies that identify preferred industry or technology sectors, often called clusters.
- Creating infrastructure such as facilities, scientific research initiatives, and digital networks.

- Supporting capital formation, workforce development, and similar areas.
- In some instances, directly delivering Entrepreneur Development activities or funding outside Entrepreneur Development organizations.

Definitions for the Phases of Evolution

The phases of evolution show where an entrepreneur or venture is in its progression. There are four phases of evolution: 1) discovery, 2) idea, 3) startup, and 4) growth.

The **Discover Phase** is where people recognize a problem but haven't come up with a possible solution. It includes basic scientific research, hackathons, problem days, startup weekends, and other activities. People move into the idea phase when they come up with ideas that might fix the problem.

The **Idea Phase** is when a prospective entrepreneur starts to act on his or her idea. People in the Idea Phase are trying to figure out if their ideas have potential. Idea Phase activities include idea pitch sessions, entrepreneur meetup events, resource fairs, education classes, mentoring, office hours, social events, and just asking about. The Idea Phase also includes searching entrepreneurial websites and event calendars to sort out where to start or find resources.

The **Startup Phase** is the next phase in an entrepreneurial ecosystem. At this stage, prospective entrepreneurs commit to founding a venture, allocate time and resources to pursuing it, and work on refining their ideas and then founding a company. Activities in the Startup Phase include selecting a legal entity and structure, forming a team, developing a proof of concept, prototyping, refining the business model, crystalizing a value proposition and customer pitch, testing for customer demand, implementing intellectual property strategies, fundraising, and myriad other activities. Investors are interested in the best ventures that come out of the Startup Phase.

The **Growth Phase** is when customers validate a company. First customer revenue (not grant revenue) determines when a venture moves into this phase. The Growth Phase includes activities such as raising additional funding, market launch, growing the customer base, strategic partnering, increasing revenue, adding employees (jobs), reaching positive cash flow, competing, scaling, and exit.

Measurements

In 2015, Stangler and Bell-Masterson defined a set of ecosystem measurements.³⁰ I have selected these for use in this research because they are good yardsticks for the social and people dynamics that happen with Entrepreneur Development. These measurements can help us understand and gauge the dynamics of personal motivations, relationships, and learning that occur because of Entrepreneur Development.

I use their language to explain Connectivity, Fluidity, Density and Diversity. I have placed their measurements in this sequence because I feel this is how they relate to each other with respect to Entrepreneur Development. In my opinion, Connectivity leads

to greater Fluidity; Fluidity impacts Diversity; and all three increase Density. The Stangler and Bell-Masterson definitions are summarized below.

1. **Connectivity** examines program connectivity, spinoff rates, and dealmaker networks. In a vibrant (high-momentum) ecosystem, the connections between the elements matter as much as the elements themselves.
2. **Fluidity** measures the fluctuation in population and labor market reallocation that is flowing into and out of a region as well as within a region. It also measures the number of high-growth firms, e.g., those that add the most jobs.
3. **Diversity** looks at economic diversification, immigration, and income mobility.
4. **Density** tracks the number of new and young firms and the percentage of total employment in new and young firms, especially in any sectors identified as preferred or strategic for a given region.

I have expanded upon and tailored the Stangler and Bell-Masterson measures to be specific to Entrepreneur Development and the inventory framework. Those definitions appear below.

Connectivity can be measured in three ways. I believe connectivity is the most important factor that contributes to ecosystem momentum. It is also the hardest to measure, because connectivity is happening in so many places and between so many organizations, individuals, and stakeholders.

This research captured information about one of the three connectivity measures. This first connectivity measure is the relationship between the entrepreneurs and the Entrepreneur Development organizations. The research counted the number of organizations, their activities, and number of entrepreneurs that participated. This will be discussed more fully in the Research Approach section beginning on page 16.

A second measure is the level of collaboration between the Entrepreneur Development organizations. The framework shows how this can occur, but the research did not determine the level of connectivity between organizations. This needs to be done.

The third potential measure is connectivity between the entrepreneurs. It is the peer-to-peer mentoring, business relationships, referrals, and introductions, especially to experienced entrepreneurs, subject matter experts, mentors, service providers, investors, customers, and the like. Understanding the speed and ease of forming these new relationships is important to track and understand.

As stated above, I believe connectivity may be the most difficult measure to quantify even though it is the most important to consider for Entrepreneur Development. The reason is that it is hard to track relationships that are being formed, including weighting how meaningful they are. Ironically, as connectivity becomes more dynamic it becomes more elusive and tougher to measure because more is happening on more fronts.

One answer to this conundrum is to think about connectivity as a goal rather than a hard measure. This goal should be a major objective for the overall ecosystem. To accomplish this, the Ecosystem Development organizations and leaders need to

intentionally and regularly discuss how to design connectivity into their activities. Entrepreneur Development organizations also need to work together to develop best practices that increase collaboration and connectivity between their entrepreneurs, organizations, and programs.

Fluidity can be measured in two ways. The first is quantifying the number of entrepreneurs that are entering and leaving an ecosystem or sub-ecosystem. The research only quantified the number of entrepreneurs participating in activities during the Discovery, Idea, Startup, and Growth practices. It is only a baseline. This is a good starting point for measuring fluidity, but the measurement also should identify, count, and follow entrepreneurs over different periods. It needs to determine if they continue to participate, including if they are leaving, why they left, and where they went.

The second fluidity measurement is to track entrepreneurs and ventures as they progress through the phases of evolution. This fluidity is important because it measures the velocity and density of the startup pipeline for a region. It tracks the speed of progress through the phases of evolution. As fluidity and connectivity increases, a region's entrepreneurial IQ grows.

Measuring fluidity requires that Entrepreneur Development organizations collaborate. This will be discussed later in the Research Approach section beginning on page 16. This collaboration is a major opportunity.

Diversity can be measured by counting the number of new sub-ecosystems. Sub-ecosystems will be covered more fully later in this section. An increase in the number and maturity of sub-ecosystems within the ecosystem shows an increase in diversity. Regions should work to identify new sub-ecosystem opportunities. These are often high potential areas that are dormant until recognized, supported, and activated.

Density tracks the number of entrepreneurs and ventures. The research identified and then quantified the number of Entrepreneur Development organizations, their activities, and the participants they had. More organizations and activities result in more and better entrepreneurs. This, in turn, causes more ventures. However, like diversity and fluidity, collaboration between Entrepreneur Development organizations is needed to track the number of active entrepreneurs. Once again, I will talk more about this in the Research Approach section.

Momentum and Maturity

Momentum and maturity determine the vibrancy and financial sustainability of any entrepreneurial ecosystem. This section describes the reasoning behind this statement by defining maturity and momentum, relating the two terms to the framework and measurements discussed previously, and proposing actionable insights. However, this research only establishes a baseline (the current state) for one part (Entrepreneur Development) of two regions' (Kansas City and St. Louis) ecosystems. Measuring momentum and maturity will require tracking progress for future time periods.

The majority of this paper counts organizations, activities, and participation. This yields insights into the makeup of ecosystems, which is just a first step for using the framework and measurements. Fully measuring momentum and maturity will require capturing additional Entrepreneur Development factors (number of entrepreneurs and ventures) and information about the other parts of the ecosystems (Venture Development and Economic Development).

Momentum is the increase in connectivity, fluidity, diversity, density, and economic outcomes (Venture Development and Economic Development measures) that happens from one period to the next. It is the progress relative to a previous period’s baseline. To become “mature,” an ecosystem must have many years of high momentum that accumulates. It has taken Silicon Valley nearly seventy years to get to its current maturity. This was only possible by continued progress over a long period of time.

As stated previously, I believe the amount and quality of connectivity is what drives momentum. Connectivity leads to increases in fluidity, diversity, and density and these, in turn, lead to a healthy startup pipeline and economic outcomes. Table I is a first step in implying momentum, but it only counts the increase in the number of Entrepreneur Development organizations over four time periods.

As an observation, Table 1 also implies that it can take a number of years to create an ecosystem. Culture and entrepreneurial IQ are based on people and relationships, and this process can take several years.

Table 1
Kansas City and St. Louis Ecosystem Entrepreneur Development Activities Over Four Time Periods

	Kansas City	St. Louis
Before 2006	16	15
2006–2010	18	13
2011–2015	51	67
2016	13	14
Total	98	109

Another point to consider is that younger ecosystems have little density and small baselines. When the baseline is small, relative momentum can be high, but accomplishment seems tiny. During the early maturity period, there are many naysayers, and patience and persistence are needed. Communicating early progress can be a challenge, especially if longer-term economic outcomes (jobs, investment, company growth, etc.) are the measurement. Once again, this is why a framework and new measures are needed so regions can better understand and track Entrepreneur Development contributions to the startup pipeline.

Maturity is dictated by momentum. Maturity is not based on how many years a region has been working on its ecosystem, but the scale and substance it has achieved. The research creates the first step for establishing baselines for the Kansas City and

St. Louis Entrepreneur Development areas of the ecosystem. Baselines for Venture Development and Economic Development also need to be created to give a full ecosystem view. This allows a region to understand and track the momentum (quantity and speed) for entrepreneurs and ventures as they progress through the startup pipeline.

Measuring maturity is somewhat like measuring connectivity. That is to say, it is something you feel or observe rather than quantify with hard measures. In my experiences, I have observed tipping points or signals for maturity. Actionable insights that are described next in this section will share a few of those tipping point signals that I have observed.

Scaling becomes apparent when the maturity baseline (density) and momentum (connectivity) get large enough that progress is recognizable, especially for people outside the ecosystem. In St. Louis, we experienced inflection points in 2009 and 2012 when the larger community began to comment that things were noticeably different.

Actionable Insights and Observations

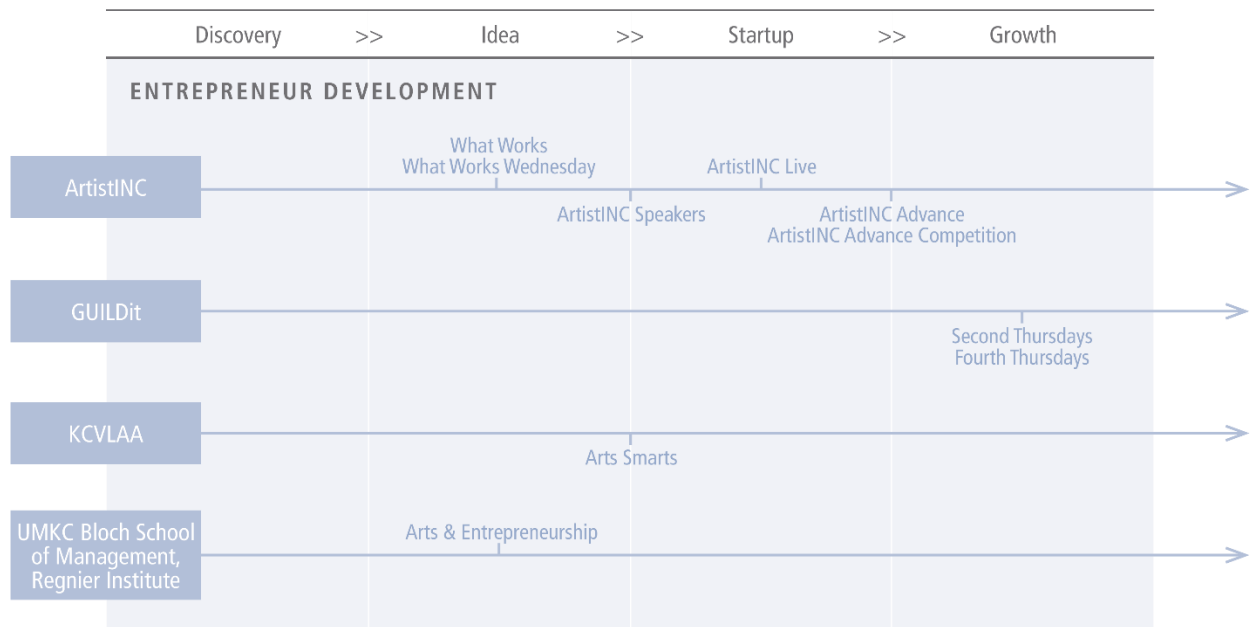
Ecosystem leaders and practitioners should watch for and celebrate inflection points when they occur. As stated in the summary, I believe Kansas City and St. Louis are at a healthy, middle stage of maturity. The increase in the number of Entrepreneur Development organizations is one indicator. Both regions have achieved a critical mass of activity and are advancing their entrepreneurial cultures, but more comprehensive measurement is needed.

Another important maturity indicator is that both cities' ecosystems have created multiple sub-ecosystems. Sub-ecosystems are ecosystems within the ecosystem that are tailored to specific industries, technologies, or interest areas. Kansas City has five (art, university commercialization, growth businesses, education, and women) and St. Louis has four (bio and plant science, information technology, women, and gaming). These sub-ecosystems have four or more Entrepreneur Development activities that serve and connect entrepreneurs across the phases of evolution. Activities are tailored to entrepreneurs in that specific area. Some have multiple organizations. I will take a few pages to show how the framework can be used to map a sub-ecosystem. I will also describe why sub-ecosystems are so important to ecosystem momentum and maturity.

The first example is the Kansas City artist sub-ecosystem shown in Figure 3. The inventory framework catalogs the Entrepreneur Development activities of ArtistINC; GUILDi; the Kansas City Volunteer Lawyers and Accountants for the Arts; and the University of Missouri-Kansas City Arts and Entrepreneurship program. These four organizations offer more than forty activities attracting 1,000-plus artists and creatives every year.

Figure 3

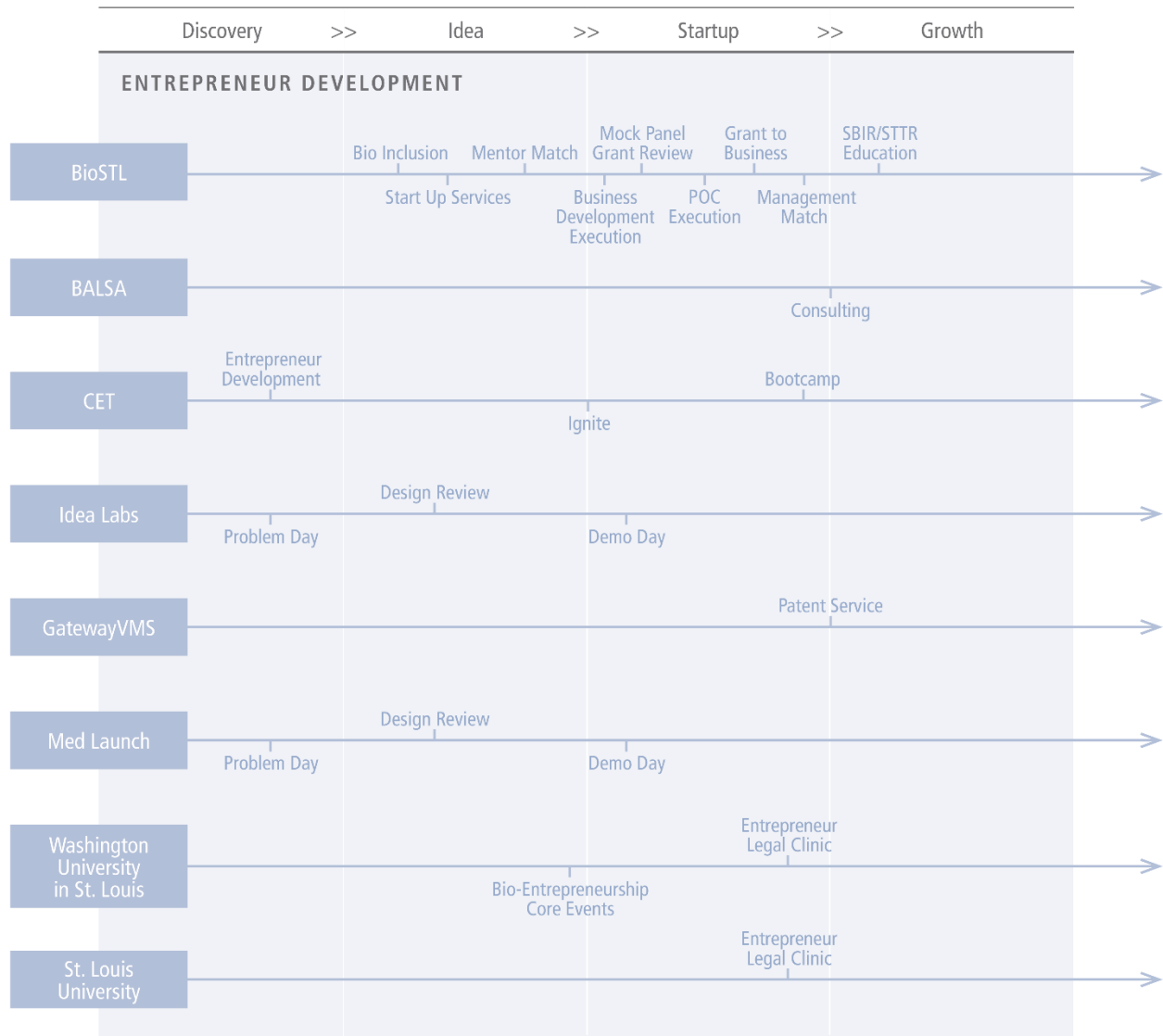
Kansas City Artist Sub-Ecosystem



The second example is the bio and plant science sub-ecosystem in St. Louis that appears in Figure 4. Once again, the inventory framework is used to position the six community and three university organizations that are involved in Entrepreneur Development. These eight organizations delivered more than twenty-three activities with 1,845 participants over a one-year period.

Figure 4

St. Louis Bio and Plant Science Sub-Ecosystem



Sub-ecosystems are important because they show diversity and scaling. Sub-ecosystems make it possible for an ecosystem to concurrently advance on several fronts. This accelerates momentum and scale. Managing resources to support multiple sub-ecosystems is a challenge, but possible. I feel that the bottom-up entrepreneurial approach should be used to test viability of a new sub-ecosystem. Step one is to see if there is a large number of unconnected entrepreneurs that have similar interests. Step two is to gauge the energy of that group to determine the potential for a sub-ecosystem. Step three is to develop a strategy and funding plan supporting a sub-ecosystem startup period with subsidized support. Step four is to expand on the startup plan so it leads to financial sustainability.

I also believe that sub-ecosystems are important because the quality of connectivity is higher at the sub-ecosystem level. This is because the knowledge exchange, experience sharing, networks, and relationships are more relevant to the participating sub-ecosystem

entrepreneurs. As a result, entrepreneurial IQ increases and the startup pipeline speed accelerates.

The ultimate goal of any ecosystem is to evolve from being subsidized until it becomes market funded and financially self-sustaining. Silicon Valley is at this maturity level. Other regions are envious of the momentum that can be observed by simply reflecting upon the connectivity, fluidity, diversity, density, and startup pipeline pace. Entrepreneur, Venture, and Economic Development have evolved to be the economy's foundation. Success comes in the form of continuous "starburst exits" that shower talent and investment capital back into the regional economy.

However, this is in the future for most regions. I have observed that achieving sustainability has many steps that are signaled by tipping or inflection points.

RESEARCH APPROACH, FINDINGS, AND ACTIONABLE INSIGHTS

Research Approach

As described above, this research data came from two regions whose ecosystems are at a mid-stage of maturity. Other regions may be at different stages of maturity and have more or less momentum than Kansas City and St. Louis do. They also may have more robust or parsimonious resource models. Having recognized these differences, I believe the framework, measurements, findings, and actionable insights will be useful for all regions. The reasons I say this will be expanded upon in this section, especially in the "actionable insights" parts.

The first step in the research process was to identify all organizations that might fit the Entrepreneur Development definition. Once this list of organizations was complete, information on the organizations was gathered using public sources, mostly the internet and organization websites. In Kansas City, KCSOURCELINK³¹ was a major contributor to the process.

The public information was organized and put into a standard research format suitable for sharing with the Entrepreneur Development organization's leaders. Those leaders were then contacted asking for their agreement to support the research. Over 90 percent agreed to participate. The public information was then emailed to the leaders along with a written definition of Entrepreneur Development and the Four Phases of Evolution. Leaders were asked to review the information and agree to a face-to-face or telephone interviews. During the interviews, they were invited to ask questions, particularly clarifying their understanding of terms and the research approach. They also were asked to change any information that was incorrect. Their revised information was then recompiled and emailed back to the leaders who were asked to make one last check to ensure the information was correct.

Information that was gathered included:

- Organization information
 - ✓ Affiliation of the organization
 - ✓ Background of the founder
- Activity information
 - ✓ Founding year for the activities
 - ✓ Number of activities delivered
 - ✓ Number of participants for the activities
 - ✓ Origin of the idea for starting the activity
 - ✓ Purpose of the activities
 - ✓ Method and approach used for delivering the activities
- The phase of evolution for the activities
 - ✓ Activities
 - ✓ Participants
- Founder information
 - ✓ Background of the founder
 - ✓ Current role of the founder
- Funding sources

Number and Types of Entrepreneur Development Organizations and Activities

Table 2 counts the number of Entrepreneur Development organizations that are operating in the Kansas City and St. Louis regions, including the number of activities they deliver. Activity count is for a twelve-month period. An organization might deliver the same program a number of times over the year.

Organizations were grouped based upon their affiliations. The three affiliation categories are community-led, economic development-led, and university-led.

Community-Led

Community-led organizations are not part of an economic development entity or university. They make up about two-thirds of the Entrepreneur Development organizations. Most community-led organizations are nonprofits. Some are funded or may have been inspired by economic development or universities but are now operating autonomously outside of the economic development organization or university.

Economic Development-Led

A small number (a little more than 10 percent) of Entrepreneur Development organizations and activities are directly delivered by economic development organizations. For St. Louis, this included Entrepreneur Development activities offered by the St. Louis Economic Development Partnership, the St. Louis Regional Chamber, and the East St. Louis Small Business Development Center.^{32, 33, 34} In Kansas City, it included the Economic Development Corporation of Kansas City and the Enterprise Center in Johnson County.^{35, 36}

Table 2
Entrepreneur Development Organizations and Activities

Kansas City and St. Louis	Organization	%	Activity	%
Community-Led	42	65%	125	60%
Economic Development-Led	7	11%	22	11%
University-Led	16	25%	60	29%
Total	65	100%	207	100%

University-Led

Universities are responsible for about 25 percent of the two regions' Entrepreneur Development activities, indicating the importance of engaging them as part of an ecosystem. For Kansas City and St. Louis, nearly all of the university-led Entrepreneur Development activities are delivered by three universities—one public and two private.

The university numbers include only the Entrepreneur Development activities that are open to the community. For example, Washington University in St. Louis had four organizations, including the campus-wide Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship, the law school entrepreneurship legal clinic, the engineering school, and the BioEntrepreneurship Core student organization. Those four organizations had eight activities that invited community involvement.^{37, 38, 39, 40} Curricula for academic credit courses were excluded unless they directly worked with or supported community entrepreneurs.

The UMKC Innovation Center activities deserve special note. They are classified as university-led, but the Innovation Center delivers a large number of Entrepreneur Development activities to the community.⁴¹ It houses five organizations that deliver twenty-one activities. Examples of organizations in the Innovation Center are KCSOURCELINK, ArtistINC, Whiteboard 2 Boardroom, Ice House Entrepreneurship, and the Missouri Small Business and Technology Development Center.^{42, 43, 44, 45, 46}

Actionable Insights

Connectivity and collaboration between Entrepreneur Development community, universities, and economic development organizations has a major impact on ecosystem momentum. Community organizations deliver the bulk of activities, and these organizations operate autonomously and with loose coordination. Entrepreneur Development activities are a minor portion of university and economic development activities, because they have many other priorities.

The framework and measurements are particularly useful for convening organization leaders, promoting collaboration, and increasing alignment across the ecosystem. This would pay large dividends, especially in connectivity and measuring outcomes.

Universities are important ecosystem players and need to be active in this collaboration. They are crucial to a region's ecosystem. Their participation in Entrepreneur Development strategies and programs ensures the connection of student programs and research commercialization activities to community-led Entrepreneur Development organizations. Having said this, universities, even well-endowed ones,

have little surplus resources for community Entrepreneur Development that can be seen as activities that are outside their core mission. Universities can be influenced by Entrepreneur Development-focused grants that would incent them to collaborate in areas that go beyond their current activities.

Universities may be the de facto ecosystem leaders in some communities, making their Entrepreneur Development role even more important. This is especially true in places where the university is a linchpin for the local economy (university or college towns). Once again, collaboration that leads to vibrant connectivity between the community, economic development, and university is needed. The framework and measurements will help.

The potential for university and community collaboration to increase connectivity and fluidity is large. One example that shows how connectivity and fluidity can be impacted is the subsidized summer entrepreneurial internship program at Washington University in St. Louis.⁴⁷ Connectivity and fluidity were intentional goals for this program, which is described in more detail below.

The intern matching process is a pitch event where fifty-plus commercial and social venture founders have one minute to describe their companies and the talent they need. They do this to an audience of more than 100 undergraduate students from all schools (engineering, business, arts & sciences, art & architecture) who want to stay in St. Louis to work with an early-stage startup for ten weeks over the summer. After the entrepreneur pitches, the students get fifteen seconds to stand up at their seat and introduce themselves and state their majors and what they are interested in doing. This exchange of backgrounds and motivations takes about ninety minutes and has important connectivity implications. The reason is that it helps students and entrepreneurs to identify who has interests that align with their goals.

The entrepreneurs and students then leave the room to a reception with food and beverages where they connect with each other and make arrangements to meet again to discuss if they are a good match for the summer. Once these self-directed matches are completed, the entrepreneur makes an offer to the student and the student works with the Skandalaris Center to confirm funding for their internship.

The number of new relationships formed at this meeting and during the match process is huge. Not only do students and entrepreneurs connect, but many of the entrepreneurs meet each other for the first time and form new relationships (connectivity). I also have observed that student entrepreneurial interns often choose to stay in St. Louis after graduation, and many start ventures (fluidity and density). One notable internship alumni startup is Answers.com, which recently had a \$750 million exit.⁴⁸

Fluidity benefits both the university and the community. Universities attract more and better students. Regions retain more of those students by engaging them in the ecosystem. Stories about entrepreneurial students are compelling testimonials that increase university applications, especially from prospective students who are entrepreneurial (fluidity).

Economic development organizations and community leaders have the potential to influence Entrepreneur Development organization collaboration. They could do this by allocating resources and dedicating personnel to Entrepreneur Development. Entrepreneur Development-specific grant programs would influence but not control the many community-led organizations by increasing collaboration and alignment. Economic development entities could be the conductor that orchestrates, but does not control, the environment.

Individual- and Organization-Initiated Ideas for New Activities

Nearly 60 percent of community ideas come from individuals. These are most often grass-roots, bottom-up initiated. Conversely, nearly 80 percent of economic development and university ideas are organization initiated and are more planned and top down. Individual versus organization-initiated ideas have different approaches for starting and implementing their ideas. Individuals are entrepreneurial in style. Organizations are more structured and deliberate. Table 3 shows that both types of ideas occur in ecosystems.

Community-led, individual-initiated activities seem to develop using an entrepreneurial approach. A champion, usually with an entrepreneurial background, conceives of an idea and then tests it as a small proof of concept. This often requires that the champion recruit others to help for no or minimal compensation. Sometimes the champion/founder uses personal funds. Some ideas fail or are changed. Ideas survive if value is proven. The champions then continue to fund raise and scale the activities.

One example of a champion-founded Entrepreneur Development organization is Idea Labs, a nonprofit that started in Washington University and then became an autonomous, community-led organization. Idea Labs' champion/co-founders were MD and PhD graduate students at Washington University. In 2013, they received a \$10,000 startup grant from the Skandalaris Center. By 2015, they had become a free-standing nonprofit run by students. The St. Louis organization has worked on more than 200 ideas provided by clinicians and engaged 233 graduate and undergraduate students on thirty-nine teams. Seventy-nine percent of the teams completed proof-of-concept prototypes, of which fifteen (48 percent) protected their intellectual property; seventeen (54 percent) are commercializing their technology; and sixteen (52 percent) won awards or funding of more than \$2 million. They have worked with more than sixty physicians, fifteen engineering advisors, and fifteen mentors from the community. Idea Labs is now being rebranded as Sling Health and the Idea Labs model is being replicated at St. Louis University and five other cities.

Another student-led autonomous, champion-founded organization was the Balsa Group.⁴⁹ Like Idea Labs, it was created by Washington University students and then became a nonprofit. It was started in 2011 with a small seed grant from the Skandalaris Center. It is now financially self-sustaining. Balsa offers low-cost consulting services to bio tech and other startups. It also does projects for larger corporations and a variety of clients. It has trained more than 200 consultants who have completed more than 100 projects for ninety-plus companies.

Idea Labs and the BALSAs Group have substantially increased fluidity (student attraction) for Washington University. Additionally, several Idea Labs and BALSAs Group alumni are starting companies and staying in St. Louis (density). Both organizations are good examples of the power of using an entrepreneurial approach that starts quickly, uses little resources, and scales to become self-sustainable.

As mentioned earlier, most economic development and university activities ideas are more top-down, organization-initiated. Only 20 percent of their ideas came from individuals. Organization-initiated ideas often were spurred by grant or funding opportunities. At other times, ideas evolve from a strategic planning process or gap analysis of the ecosystem. The top-down founding process requires deliberation and consensus and moves at a slower pace than champion-initiated founders.

Table 3
Individuals and Organizations as the Source of Activity Ideas

Kansas City and St. Louis	Individual-Initiated	Organization-Initiated	Total
Community-Led	71	54	125
Economic Development-Led	4	18	22
University-Led	10	50	60
Total	85	122	207
	41%	59%	100%

Actionable Insights

A mixture of top-down and bottom-up Entrepreneur Development approaches are recommended in an ecosystem. Regions need to support ideas coming from both individuals and organizations. The approach for implementing and funding ideas is quite different, and funders and policymakers should consider this when designing Entrepreneur Development grant incentives. The champion-led entrepreneurial approach used offers a low-cost, quick-to-act model that has high connectivity. This approach may be particularly useful to under-resourced young ecosystems or new sub-ecosystems. Organization-initiated ideas follow a more deliberate planning and strategy development process that requires larger resource commitments over a longer time frame. Meshing entrepreneurial, bottom-up doing with structured top-down planning is a major opportunity for increasing ecosystem momentum and velocity.

Phase of Evolution for Activities

Table 4 shows the phases of evolution for the various Entrepreneur Development activities. The research showed that over 60 percent of Entrepreneur Development activities occur in the Idea and Startup phases. Entrepreneur Development during these phases is critical because it draws new entrepreneurs into the ecosystem (fluidity). Without entry points that are attractive to prospective entrepreneurs, individuals may

stay on the sidelines pondering their ideas and not acting. Early-phase activities, especially Discovery and Idea Phases, provide an inviting entry point.

Having connected activities across the phases helps an ecosystem attract and create more and better entrepreneurs. This happens because a continuous attraction process shows there is a support path that entrepreneurs can follow.

The research also showed that one-third of Entrepreneur Development organizations support revenue-producing companies in the Growth Phase. These activities are supporting entrepreneurs who are running companies that produce measurable economic outcomes, including jobs. Entrepreneur Development in the Growth Phase increases the probability of venture success and growth. It is also a source of knowledge that, with good connectivity, is shared with earlier stage Idea and Startup Phase entrepreneurs. This increases the speed of movement between phases (fluidity) and venture success (economic outcomes).

Table 4
Phase of Evolution for Activities

Kansas City and St. Louis	Discovery	Idea	Startup	Growth	Total
Activities					
Community-Led	9	33	47	36	125
Economic Development-Led	1	1	4	16	22
University-Led	4	17	23	16	60
Total	14	51	74	68	207
	7%	25%	36%	33%	100%

Actionable Insights

Increasing collaboration (connectivity) between Entrepreneur Development organizations and their activities is critical to ecosystem momentum. Collaboration between organizations leads to collective strategies that align Entrepreneur Development activities. Fluidity increases when the early-phase activities attract prospective entrepreneurs who decide to pursue their ideas because the ecosystem “shows them a way.” Fluidity also can be measured by tracking the movement of entrepreneurs and ventures between the phases of evolution and types of development. For example, fluidity is favorable if the number of entrepreneurs and ventures moving from startup to growth and startup to Venture Development increases from one period to the next.

Peer-to-peer entrepreneur exchanges accelerate momentum by increasing knowledge and experience sharing. This is especially true for first timers who can get quick answers and invaluable inputs on important issues and what they will encounter. Things like how the ecosystem can help, who they can meet, what they should expect, valuation, wealth sharing, next-step priorities, team formation, and many others. These connections quickly advance the individual entrepreneurial IQ and keep entrepreneurs from making costly mistakes that come from acting on their own or with input from only a few people.

Additionally, during my ecosystem tenure, I frequently heard comments like, “I understand what you are talking about. Have you met such and such? They have done something very similar and a coffee with them will give you tons of ideas.” Or, “Have you talked to XYZ corporation? They are doing things in that area and they might be a possible customer.” These valuable, serendipitous interactions are often haphazard and won’t happen unless connectivity is high. Measuring Entrepreneur Development activities increases the intentionality of this connectivity and makes it less serendipitous or chance-based.

Participation

Table 5 summarizes participation in Entrepreneur Development activities. More than 80 percent of the Entrepreneur Development participation happened during activities that were delivered by community-led organizations. The research shows that entrepreneurs in Kansas City and St. Louis participated nearly 75,000 times in Entrepreneur Development activities over the last year.

More than 55 percent of participation occurred in the Idea and Startup phases of community-led activities. This is an important finding because it shows that community-led Entrepreneur Development is an ecosystem’s hotbed for connectivity. It is where learning, energy, and a large number of new relationships happen.

**Table 5
Participation at Activities**

Kansas City and St. Louis	Discovery	Idea	Startup	Growth	Total
Community-Led	2,000	13,432	28,243	18,092	61,766
Economic Development-Led	40	83	888	4,482	5,493
University-Led	256	1,386	3,411	1,962	7,014
Total	2,295	14,901	32,542	24,536	74,273
	3%	20%	44%	33%	100%

Actionable Insights

Resources need to be dedicated to support community-led Entrepreneur Development organizations. Connectivity increases with more participation, and the community-led organizations account for the majority of participation. Momentum increases when participation grows from one year to the next. Participation leads to introductions, new thinking, information, learning, or other things. Participation implies that the ecosystem is creating more and better entrepreneurs. It is a strong contributor to the ecosystem’s entrepreneurial IQ.

Participation can be increased by raising awareness about the ecosystem activities, especially alerting new, prospective entrepreneurs that might enter. Organizations that share lists of entrepreneurs and then communicate ecosystem activities attract people to the ecosystem (fluidity). This may be especially true at the sub-ecosystem level where interests and motivations are more aligned. Helping entrepreneurs understand where they “best fit” increases participation.

Original and Replicated Activity Ideas

Ideas were classified as original or replicated. Original ideas are created in the region. The successful ones are replicated elsewhere, which is outbound replication. Inbound replicated ideas are developed elsewhere and then copied in the region. Inbound replicated ideas were often national programs that are spreading across country. Table 6 shows that nearly 70 percent of Entrepreneur Development activity ideas in Kansas City and St. Louis are original.

Activities that are created in a region and then replicated elsewhere are an indicator of a region's maturity and momentum. One example of a replicated Entrepreneur Development activity is the Kauffman 1 Million Cups program. It is replicated in more than 100 cities,⁵⁰ making it an original idea in Kansas City that was replicated in St. Louis and other places. Other examples of inbound replicated ideas that came to Kansas City and St. Louis are StartUp Weekend, SCORE, SBA-funded Women's Business Centers, Veterans Business Resource Centers, Venture Café, Master Mind, and Ice House Entrepreneurship.^{51, 52, 53, 54, 55, 56, 57}

Interestingly, Kansas City and St. Louis have created nine replicated Entrepreneur Development programs. In Kansas City, the Ewing Marion Kauffman Foundation funded pilots that, once proven, were replicated elsewhere. Replicated programs in St. Louis were funded by Washington University in St. Louis or civic leadership.

Kansas City replicated programs include:

1. 1 Million Cups⁵⁸
2. KCSourceLink⁵⁹
3. Global Entrepreneurship Week (GEW)⁶⁰
4. FastTrac⁶¹
5. Pipeline⁶²
6. ArtistINC⁶³

St. Louis replicated programs are:

1. Idea Labs⁶⁴
2. The BALSAs Group⁶⁵
3. Arch Grants⁶⁶

Inbound replicated activities in Venture Development and Economic Development (as opposed to Entrepreneur Development) also have happened in Kansas City and St. Louis. These are strong indicators of maturity and momentum and can be important for scaling an ecosystem. Over the past five years, St. Louis and Kansas City have benefited from three inbound replicated Venture Development and Economic Development activities. In St. Louis, the Cambridge Innovation Center and Tech Shop have begun operating in the region.^{67, 68} In Kansas City, Techstars chose to offer its accelerator program.⁶⁹ All of these activities had multiple regional replication choices, but their parent organizations chose St. Louis and Kansas City. When this happened, it added tipping-point momentum and scale to the regional ecosystems. The replicating organizations received incentive funding, but I feel they also were attracted by the number of entrepreneurs that were potential customers or participants and they felt there was good potential for financial returns and growth. I predict that they will be revenue funded and

market supported or, in the case of Techstars, wealth creating, after a startup period. This type of inbound replication is an important indicator that an ecosystem is scaling and becoming part of a region’s overall economy. It signals that the ecosystem business model is transitioning from subsidized to being market funded.

Table 6
Types of Ideas

Kansas City and St. Louis	Original	Replicated	Total
Community-Led	83	42	125
Economic Development-Led	13	9	22
University-Led	47	13	60
Total	143	64	207
	69%	31%	100%

Actionable Insights

A mixture of replicated and original ideas happen in ecosystems. Both are needed. Not all ideas will succeed, but many need to be tried. The framework gives guidance on where new and existing ideas fit and their relationship to existing activities. This can help funders understand if a new activity is needed and why. It also helps bottom-up champions understand where they contribute (or not) to the overall ecosystem. New and existing participants can use the framework to discuss how their activities increase connectivity, fluidity, diversity, and density.

Outbound replication is an indicator of maturity. When other regions choose to copy, and often pay for replication, it proves that value is being created. The earned revenue from outbound replication contributes to the financial sustainability of Entrepreneur Development organizations. It also enhances a region’s national entrepreneurial reputation.

Founder Backgrounds

LinkedIn was used to determine the background of the founders for the Entrepreneur Development organizations. Founder backgrounds were then discussed and confirmed during interviews. Six categories were created based upon the founder backgrounds that appeared most frequently. These are:

1. *Entrepreneur*—an individual who had at some time been a founder or team member for an early-stage venture
2. *Ecosystem Person*—a professional who held paid positions in the ecosystem but who had not been an entrepreneur
3. *Educator*—a professor, administrator, or person who had been employed by a university but had not been an entrepreneur
4. *Student*—an individual that was enrolled in a university but had not been an entrepreneur
5. *Economic Development Person*—a professional who had held paid positions with an economic development organization but who had not been an entrepreneur
6. *Other*

Table 7 shows that the most frequent founder type, Entrepreneur, made up nearly half of the founders. Ecosystem Person and Educator made up about one-third. Student and Economic Development Person were the remainder.

This indicates that individuals who have entrepreneurial backgrounds are more likely to become engaged in Entrepreneur Development. As I did interviews, I made these five observations:

- Some entrepreneur founders were finishing ventures and wanted to make the ecosystem better for others.
- Some were active entrepreneurs who were starting companies but chose to allocate time to start new Entrepreneur Development activities.
- Other entrepreneur founders were retired and wanted to continue to be engaged with startups and entrepreneurs but did not want to start another venture.
- Entrepreneur founders had a high level of passion and were motivated by a desire to improve the ecosystem or cause change.
- Some level of compensation was needed, but money was often not the driving factor. Having impact and causing change was a key motivation for many founders.

**Table 7
Founder Backgrounds**

Kansas City and St. Louis	Entrepreneur	Ecosystem Person	Educator	Student	Economic Development Person	Other	Total
Community-Led	55	34	7	16	4	9	125
Economic Development-Led	15	1	0	0	5	1	22
University-Led	21	5	21	2	10	1	60
Total	91	40	28	18	19	11	207
	44%	19%	14%	9%	9%	5%	100%

Actionable Insights

In my opinion, entrepreneur founders are important and may underpin ecosystem momentum. Entrepreneurs are more likely to start organizations, undertake activities, and form new sub-ecosystems. They also contribute connections, entrepreneurial perspectives, insights, empathy, and experiences that are valued by less-experienced entrepreneurs.

Collaboration between community-led founders (mostly entrepreneurs) and university-led founders (mostly educators) offers an interesting space for collaboration. Intersecting the different perspectives of entrepreneurs with educators can create value for both. It also impacts connectivity, fluidity, and density. Participants from both groups (including community entrepreneurs, commercializing faculty, students, and others) form relationships that advance entrepreneurial IQ.

The implication of entrepreneurs as founders is also important for younger ecosystems or newly forming sub-ecosystems. The reason is that their entrepreneurial approach is fast and requires less resources. Entrepreneurs are strong champions who are already in the game, have relationships, and can find hidden pockets of help.

Purpose and Method

Purpose is defined as the reason for an activity. To determine purpose, Entrepreneur Development organization leaders were asked, “What does your Entrepreneur Development organization hope to accomplish with the activity?” People were asked to cite up to three purposes for that they did. The six most frequently cited purposes were:

- **Connect**—designed primarily to connect entrepreneurs with each other or customers or investors
- **Educate**—structured classes where the goal was to develop skills or understanding of a specific topic or entrepreneurial process
- **Do**—testing ideas, including engaging in startup activity
- **Inform**—communicating aspects about the ecosystem or Entrepreneur Development activity to entrepreneurs or people outside the ecosystem
- **Fund**—activities that offered an opportunity for entrepreneurs to be awarded cash or services that would support their discover, idea, or startup activity
- **Other**—things like convening, celebrating, or influencing

Table 8 shows the purposes that were most often mentioned during the interviews. Connect accounted for one-third. Educate was nearly as frequent and was followed closely by Do.

Table 8
Purpose of Entrepreneur Development Activities

Kansas City and St. Louis	Connect	Educate	Do	Inform	Fund	Other	Total
Community-Led	68	42	42	20	11	18	201
Economic-Development Led	12	14	1	6	2	3	38
University-Led	31	44	20	2	10	5	112
	111	100	63	28	23	26	351
	32%	28%	18%	8%	7%	7%	100%

Actionable Insights

Different purposes show that Entrepreneur Development happens in many different ways. Some purposes are relationship and peer-to-peer-based (Connect, Do, Fund). Others are more structured and instructor to entrepreneur in format (Educate, Inform). Entrepreneur Development organizations that understand each other’s purposes are more likely to deliver a set of activities that align. Better alignment increases momentum by having a collective view of how the ecosystem is interacting to develop entrepreneurs.

Purpose, as might be expected, varies across community, economic development, and university-led organizations. Community-led organizations are more inclined to Connect and Do, while economic development and university organizations are more likely to Educate. This further cements the point that collaboration between the community, economic development, and university organizations is valuable because they have different approaches. Intentional and frequent collaboration allows this diversity of approach to improve the overall ecosystem. Once again, understanding each other and how activities relate increases momentum.

Method is defined as the way an activity is delivered. To determine method, leaders were asked to discuss how they delivered activities. Twelve methods were identified and then grouped into four categories.

- **One to Many** were classes, presentations, speaker events, panel presentations, and discussions.
- **Actively Doing** was where mentoring, internships, and hands-on events were grouped.
- **Competition or Pitch** included pitch events, hackathons and competitions.
- **Social Events** included things like happy hours, film screenings, breakfast meetings, and cookouts.

Table 9 shows that nearly 40 percent of activities were One to Many. Actively Doing and Competition or Pitch accounted for more than 50 percent.

Table 9
Delivery Method for Activities

Kansas City and St. Louis	One to Many	Actively Doing	Competition or Pitch	Social Event	Total
Community-Led	43	37	31	14	125
Economic Development-Led	12	6	2	2	22
University-Led	20	23	16	1	60
Total	75	65	49	17	207
	36%	31%	24%	8%	100%

Actionable Insights

Like purpose, the method of delivery shows that Entrepreneur Development can come in many forms. This needs to be considered when scaling or improving an ecosystem or sub-ecosystem. This is especially true with connectivity (the factor I feel contributes most to ecosystem momentum). In my observation, One to Many activities, such as panel discussions, have opportunities to create more connectivity.

Purpose and method impact the cost of Entrepreneur Development activities. This needs to be considered when organizations are deciding what activities to deliver and how to deliver them. Activities delivered during the earlier phases (Discovery and Idea) need to have a low cost per participant. Many-to-many method and interactive approaches are best for this. Many-to-many attracts lots of people and creates an environment where people find their own way. This means they need to use entrepreneurial approaches to sort things out. Many of these activities will not advance to the next phase of evolution, and this is a good outcome for several reasons: 1) Individuals hear from many other entrepreneurs, and this increases their individual entrepreneurial IQ more quickly than one-on-one approaches; 2) People with bad ideas or approaches get feedback from many people, and this is hard to ignore; 3) People make their own decisions and self-select to continue or not; 4) It is easy to reflect, reconsider, and make a definitive commitment before moving forward; 5) The process weeds out ideas or individuals before they spend time and money; and 6) People understand the ecosystem and feel comfortable reentering after reflection.

Activity planners have an opportunity to increase connectivity and momentum by regularly rethinking their purpose and method. Higher connectivity approaches use less resources and can increase energy and entrepreneurial IQ by involving many people at once. Volunteer mentors and subject matter experts have more fun at these types of events. They also have the opportunity to make new connections as they give back. Entrepreneur Development organizations should make connectivity an intentional goal when considering their purpose and method.

Resource Models

How are Entrepreneur Development organizations funded and sustained? The research provided some insights about this critical issue. During interviews, the organization leaders were asked, “What percentage of your funding comes from the following sources?” The choices were grants, economic development organizations, private donations, earned revenue, sponsorships, mature ecosystem organizations, member dues, corporate contributions, and other. Choices for universities were grants, university funding, entrepreneurship center funding, school funding, earned revenue, sponsorships, community partners, economic development, and donor-designated gifts.

Economic development organizations and universities funded their Entrepreneur Development activities with mostly internal resources or grants. As mentioned earlier, Entrepreneur Development is only one part of these organizations’ broader, multi-faceted missions, and their overall strategies dictate how many resources they allocate to Entrepreneur Development.

Community organizations are more likely to have Entrepreneur Development as their primary mission. Their resource models and how they fund their activities are quite different when contrasted to economic development organizations and universities. Table 10 shows the funding sources for community organizations and indicates that community Entrepreneur Development leaders cobble together resources from many places. As stated earlier, interviews indicated that they act entrepreneurially to accomplish this. They are persuasive, creative fund raisers who pursue government grants, foundations, philanthropists, corporations, civic leaders, sponsorships, and any other sources they can uncover. Some have earned revenue streams that support what they do.

Table 10
Funding Sources for Community-Led Organizations

Grants	Sponsorships	Earned Revenue	Private Donations	Corporate Contributions	Economic Development	Mature Ecosystem Organization	Member Dues	Other	Total
35%	15%	14%	13%	8%	5%	3%	3%	4%	100%

Community organizations’ entrepreneurial, grass-roots approach to starting and funding their activities is both an opportunity and a threat. They sometimes provide their own startup funds or begin an activity with minimal resources. As they bootstrap, they work on convincing funders about the value of their work and then ask for more funding. This can be a good way to test for value since it takes less resources and time. However,

survival is a major issue. The framework and measurements can overcome these issues by showing how they contribute to economic outcomes later in the startup pipeline.

Actionable Insights

Creating and implementing collective Entrepreneur Development fund raising strategies is a major opportunity for entrepreneurial ecosystems. Community-affiliated organizations use enormous amounts of time and energy in fund raising. Funders are inundated with requests for meetings or appeals for funding, and “donor fatigue” is a common complaint. The framework and measurements can be used to create a collective view that is aligned and broadly understood.

Public-sector granting agencies, philanthropic foundations, and other ecosystem funders almost always require collaboration as a condition for awards. Communities that have low levels of collaboration and connectivity find it hard to prepare compelling submissions for this collaboration requirement, especially if the response time is short. The relationships and information that come with the framework and measurements are a major asset for grants that require collaboration. This, once again, increases collaborations leading to resources that are needed to scale an ecosystem.

The framework and measurements give regions the tools and information to develop and communicate collective impact models, rather than continuing their fragmented fund raising. In my interviews, one idea that came up was to have economic development take a more active role in this process. A second idea was to develop sub-ecosystem-specific fund raising plans that appeal to new funding sources who directly benefit from the cultural or wealth outcomes from a dynamic, high-momentum sub-ecosystem in their area of interest.

Implementation and fund raising strategies need to consider and respect the differences between top-down planned approaches and bottom-up entrepreneurial approaches. Blending these two is a major opportunity that can result in new, more affordable, outcome-based resource models. I say this because I have experienced and seen the frustration that can happen when the two approaches do not collaborate or understand one another. I hear comments like:

“They just don’t get it.”

“How could they allocate that much resource to a consulting study?”

“Duplication and repetition are happening everywhere and need to be consolidated.”

The framework and measurements offer a mechanism for improving understanding and collaboration between top-down and bottom-up organizations and individuals.

Coordinated Entrepreneur Development funding strategies are critical for acquiring the resources that are needed to generate momentum, vibrancy, and maturity. Community, economic development, and universities that work together will create the next generation of vibrant ecosystems. Collective strategies supported by adequate resources are the key.

CONCLUSIONS

Regions need to recognize Entrepreneur Development as the foundation for their entrepreneurial ecosystems' culture and entrepreneurial IQ. It is critical to the health and vibrancy of their entrepreneurial ecosystems. It is where most entrepreneurs start, develop, and then move forward to create economic outcomes. Connectivity is the source of more and better entrepreneurs in a region. It leads to fluidity, diversity, and density, and these are measurable with the framework. Understanding and measuring the people and relationship aspects of ecosystems are critical to momentum and maturity.

Regions need to give Entrepreneur Development the same status as Venture Development and Economic Development. Policymakers and local leaders have the ability to make this happen. Entrepreneur Development requires specific strategies, approaches, and funding that support and recognize the Entrepreneur Development organizations and activities. Both top-down (planned) and bottom-up (entrepreneurial) approaches need to be understood and pursued in concert through collaboration.

Regions need to inventory and measure Entrepreneur Development to improve outcomes and support fund raising specific to Entrepreneur Development. Collaboration between community-led, economic development-led, and university-led organization is needed. This orchestration is a delicate task. Funders often comment that there are too many activities and organizations. They feel duplication needs to be eliminated to achieve efficiency. Entrepreneur Development leaders state that it is hard to communicate what they do and why they are different. The framework and measurement offered in this paper can solve this dilemma. This will lead to better understanding and collaboration. Focusing on an ecosystem's collective momentum is a goal that needs to be embraced by an ecosystem's many players.

Over-controlling an entrepreneurial ecosystem can be harmful. Care needs to be taken to preserve the entrepreneurial energy and vibrancy that come from the entrepreneur champions who create and deliver Entrepreneur Development activities. A balance between chaos and organization is needed to achieve vibrancy and momentum. The framework and measurements cause collaboration that support an orchestration approach.

Regions across the nation need to create high-momentum, next-generation entrepreneurial ecosystems that create leap frog and not just incremental momentum. The current pace of innovation is not adequate. We need to set more aggressive goals for ecosystem progress. Incremental improvement, 20 percent to 30 percent momentum per year, is not enough. States and cities need to support entrepreneurial ecosystems, especially Entrepreneur Development. Ecosystems need to engage all people and parts of society in the innovation process. Let's work together and get on with it.

Next Steps

Reactions to the inventory framework and measurements are positive. Entrepreneurial ecosystem and sub-ecosystem leaders and practitioners are already beginning to apply them. This is a good sign. The next step is to build upon this early enthusiasm by

demonstrating the full value of practical use. This will require:

1. Increasing connectivity and relationships across ecosystems and sub-ecosystems.
2. Tracking progress against the newly established Entrepreneur Development baselines.
3. Creating additional baselines that count entrepreneurs and ventures, including tracking fluidity, diversity, and density across the phases of evolution.
4. Using the inventory framework and measurements to both Venture Development and Economic Development to assess venture fluidity, diversity, and density for those parts of the ecosystem.
5. Measuring the speed and momentum of ecosystem and sub-ecosystem startup pipeline(s) to show how they cause economic outcomes.
6. Using and refining the inventory framework and measurements to different settings, including:
 - a. Regions and communities with different attributes than Kansas City and St. Louis.
 - b. Innovation Districts, Smart City Infrastructures, research parks, coworking spaces, and regional economic clusters.
 - c. Early-maturity-stage ecosystems and sub-ecosystems that are developing implementation plans that need to be measured.

¹ <https://www.amazon.com/Startup-Communities-Building-Entrepreneurial-Ecosystem/dp/1480563854>

² <https://www.brookings.edu/wp-content/uploads/2016/07/InnovationDistricts1.pdf>

³ https://en.wikipedia.org/wiki/Smart_city#Flagship_cases

⁴ https://en.wikipedia.org/wiki/List_of_research_parks

⁵ <https://www.ncbi.nlm.nih.gov/pubmed/10187248>

⁶ http://www.mitpressjournals.org/doi/pdf/10.1162/inov_a_00252

⁷ https://en.wikipedia.org/wiki/Kansas_City_metropolitan_area

⁸ <http://www.kcdigitaldrive.org/playbook/>

⁹ <http://www.wecreatekc.com/wecreatekc-report-by-kcsourcelink.pdf>

¹⁰ <http://www.kauffman.org/>

¹¹ <http://www.kcsourcelink.com/s/umkc-innovation-center>

¹² <http://www.kcsourcelink.com/>

¹³ <http://www.umkc.edu/>

¹⁴ <http://kcai.edu/>

¹⁵ https://en.wikipedia.org/wiki/St._Louis

¹⁶ http://www.mitpressjournals.org/doi/pdf/10.1162/inov_a_00252

¹⁷ <http://stl.cic.us/>

¹⁸ <http://www.downtowntrex.org/>

¹⁹ <http://cic.us/>

²⁰ <http://cortexstl.com/>

²¹ http://acceleratestlouis.org/resources_category/entrepreneurs/

²² <https://wustl.edu/>

²³ <http://www.slu.edu/>

²⁴ <http://www.lindenwood.edu/>

25 <https://www.umsl.edu/>
26 <http://www.webster.edu/>
27 <http://www.hssu.edu/>
28 <https://www.maryville.edu/>
29 <https://www.stlcc.edu/>
30
http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2015/03/measuring_an_entrepreneurial_ecosystem.pdf
31 <http://www.kcsourcelink.com/resource-navigator>
32 <https://www.stlpartnership.com/>
33 <http://www.stlregionalchamber.com/>
34 <http://www.illinoisinnovation.com/siu-e-east-st.-louis-small-business-development-center>
35 <http://edckc.com/>
36 <http://www.ecjc.com/>
37 <https://wustl.edu/>
38 <https://skandalaris.wustl.edu/>
39 <https://engineering.wustl.edu/current-students/outside-classroom/discovery-competition/Pages/default.aspx>
40 <https://gradpages.wustl.edu/bec>
41 <http://www.kcsourcelink.com/s/umkc-innovation-center>
42 <http://www.kcsourcelink.com/>
43 <http://www.artistinckc.com/>
44 <http://www.whiteboard2boardroom.com/>
45 <https://elimindset.com/>
46 <http://info.umkc.edu/sbt/dc/>
47 <https://skandalaris.wustl.edu/training/internship/>
48 <http://www.answers.com/>
49 <http://thebalsagroup.org/>
50 <http://www.1millioncups.com/>
51 <https://startupweekend.org/>
52 <https://www.score.org/>
53 <https://www.sba.gov/tools/local-assistance/wbc>
54 <http://www.vetbiz.com/>
55 <http://vencaf.org/venture-cafe-st-louis-2/>
56 https://en.wikipedia.org/wiki/Mastermind_group
57 <https://elimindset.com/>
58 <http://www.1millioncups.com/>
59 <http://www.kcsourcelink.com/>
60 <http://gew.co/>
61 <http://fasttrac.org/>
62 <https://www.pipelineentrepreneurs.com/>
63 <http://www.artistinckc.com/>
64 <http://idealabsincubator.org/>
65 <http://thebalsagroup.org/>
66 <http://archgrants.org/>
67 <http://stl.cic.us/>
68 <http://www.techshop.ws/>
69 <http://www.techstars.com/>