



Accelerate Wichita: Regional Entrepreneurial Ecosystem Report

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Introduction

The COVID-19 coronavirus pandemic has provided an opportunity for communities to assess their growth strategies and define trajectories for future success. It's been a time to confirm assumptions or redirect efforts to new and fresh ideas. Innovative communities are making the most of the COVID-19 effect to take steps to radically improve their entrepreneurial ecosystems.

To this end, the Greater Wichita Partnership hired a preeminent expert, Tom Chapman and his firm, Chapman and Company, an Omaha-based firm that specializes in entrepreneurial ecosystem evaluation and development, to help Wichita evaluate its ecosystem's strengths and weaknesses, provide recommendations on how to take community-based steps to strengthen the ecosystem, and consistently give guidance as Wichita implements these recommendations. While Tom Chapman provided remarks regarding the entrepreneurial ecosystem in May 2019, this report marks the inception of the firm's assessment and strategic work in Wichita.[1]

With years of research and ecosystem building experience, Chapman and Company uses a process that provides a unique near-time glimpse at how an ecosystem is functioning. Building an ecosystem is difficult, but so is collecting near-time information, which is why many national firms studying overall economies may miss key elements of the near-time ecosystem, which is extremely changeable and dynamic. Thus, the Chapman process favors information that is timely, over information that is near-perfect (such as the U.S. economic census—where the data can be lagged by a decade). So, to execute this report about Wichita, Chapman and Company collected information via interviews and discussions with local leaders and entrepreneurs, research using multiple data sources[2], and direction and guidance from leaders in the ecosystem regarding near-term challenges.

[1]In this report, data is primarily from the Wichita MSA. Thus, as we reference Wichita, we are most often referencing the Greater Wichita region, rather than the City of Wichita. We believe this to be a better way to evaluate an ecosystem as the system generally works across a region rather than separated by locational boundaries.

[2]Including the U.S. Census Bureau, Bureau of Labor Statistics ("BLS"), National Science Foundation databases, Pitchbook, Crunchbase, SEC Filings, Inc. Magazine, the National Center for Education Statistics, the Small Business Administration, and other national and regional data.

Building an entrepreneurial ecosystem is a long-term and multi-faceted effort that surpasses anyone plan or strategy. Therefore this report is stepping into an existing, well-orchestrated flow of reports and information. It comes on the heels of significant local and statewide research, analysis, and strategy, including the Regional Growth Plan, Project Wichita, Wichita Community Foundation's Focus Forward Initiative, and the Kansas Framework for Growth, among many others. Each of these reports highlights and recommends increased investment in the regional entrepreneurial ecosystem. This report is designed to further flesh out how that might be accomplished.

Wichita Startup Context

Wichita has a rich history of successful entrepreneurs and entrepreneurial ventures. Over the last several years, the ecosystem has seen pointed and encouraging structural improvements. NXTUS, the National Institute for Aviation Research, Groover Labs, the Create Campaign, and many other efforts continue to mold the Wichita ecosystem signaling Wichita's desire to evolve and grow its economy. By doing so, Wichita is laying the foundation for new wealth creation, attracting innovative new talent, building a reputation as a place for innovation, and building new businesses that will make its forebears proud.

However, in order to grow the ecosystem, honest assessments must be made. Both conversations with Wichitans and ecosystem data revealed that the community is under-performing in some key areas. The ecosystem does not produce enough startup activity compared to peer communities (e.g., Wichita's current business ownership rate is about .8% lower than its peer communities - a significant discrepancy). To improve, Wichita needs to increase this startup rate, particularly among underrepresented groups.

The first, most important thing that Wichita must do is help its people to start more companies. The first step in this journey is to find Wichita's current entrepreneurs, understand their challenges, solve for those challenges, and then, encourage more people to start companies. To be clear, entrepreneurship is not for everyone, but Wichita suffers from having a paucity of startup activity compared to peers, suggesting that more would-be entrepreneurs should be encouraged to start companies.

An Overview of Entrepreneurial Ecosystems

Over the last two decades, increasing scholarship has revealed the importance of entrepreneurs and their businesses to the economic vitality of communities. For example, in a 2009 paper, “Where Will the Jobs Come From?”, Bob Litan and Dane Stangler explained that virtually all net new jobs come from young businesses (less than 5 years old).[3] In response to this paper, many forward-thinking economic development leaders are now developing creation and attraction strategies that focus on young companies.

Litan and Stangler explain that small businesses employ more than 50% of the workers in the United States, but young businesses are the key to long-term job creation. This can lead some astray to think that small (or main street) businesses are unimportant. This is false. Main street businesses provide critical economic backbones for local economies – particularly personal services and local culture. Consider a Wichita without local restaurants, salons, or auto-shops. This is not the unique, diverse place that Wichitans love. COVID-19 has opened many buyer’s eyes to their personal love and dependence on main street businesses, and the economics of that dependence reveal their true importance to local ecosystems.

But, the Litan and Stangler paper, and many supporting its conclusions, explain why economic development organizations have shifted toward an integrated economic development approach that reinforces “creation” as the third leg on the economic development stool (along with attraction and retention). Because young companies are so critical to economic development, many thought leaders have begun to study and identify how these companies emerge.

[3]https://www.kauffman.org/wp-content/uploads/2019/12/where_will_the_jobs_come_from.pdf



The underlying reality is that the entrepreneurial process is complex - making a formulaic approach difficult. But, the systems approach has revealed key building blocks in an economy that make startup activity more likely. Hence, the emergence in the last decade of the concept of entrepreneurial ecosystem building.

*An **entrepreneurial ecosystem** is the system of support that surrounds an entrepreneur during the business creation process. It helps them find collaborators, mentors, customers, and employees. It helps them find the appropriate level and type of capital. It supports them with training, physical space, knowledge, and policy. It empowers them to succeed, tells their story as they succeed (and fail), and it creates a shared narrative of the community's economic growth. Ecosystems, like entrepreneurs, are unique to their specific geography. So, although there are common elements across ecosystems and regions, each community is building its own unique system following the lead of its local entrepreneurs and culture.*

Startup Business Types

Just as the ecosystem elements will differ between various communities, companies that are created within the ecosystem will also vary. Generally speaking, startups come in two flavors: main street businesses (sometimes called small businesses or “MSBs”) and scalable businesses (sometimes called high growth businesses or “HGBs”). This distinction is important because MSBs and HGBs require different types of ecosystem support and produce different types of economic activity.

Main Street Business

MSBs are destined to grow into what many refer to as small businesses - representing an essential form of business creation in communities. Clearly, there are more MSBs, than HGBs - 99% of all businesses are categorized as small. But the economic impact of these businesses is quite large.

According to the Small Business Administration[4] (“SBA”), MSBs provided 47.3% of private-sector jobs - including 65% of net new jobs in the U.S. economy in 2019. In addition, in 2019, overall company creation for the country included 33,000 new MSBs.

This paper defines MSBs, not as simply having fewer than 500 employees which is the SBA definition, but as having a primary focus on serving a local geography. Consider a local service company (e.g., an optometrist or plumber, restaurant, or salon). These companies generally scale against new people, not an economy of scale on a process or tool. These companies frequently serve clients from their local neighborhood or city – not from an entire state, nor the entire country. Thus, an MSB can provide incredibly important cultural enhancement and quality of life, but they generally do not import wealth from outside the region. Instead, they circulate imported wealth more quickly – retaining money in a region. They also provide three critical elements for HGBs and the importation of wealth from other businesses.

First, they provide critical, base-level employment and industry for the creation of other businesses. For example, construction businesses (general contractors, plumbing, HVAC, electricians, etc.) rarely grow into huge, multistate businesses. Wichita has more than 1,500 businesses in the construction sector, \$880 million in payroll, and more than 12,000 employees. There are constantly companies starting and closing in this industry and others dominated by MSBs. Without the construction of new healthcare clinics or lawyers, other businesses could not be formed or succeed. Thus, many MSBs are critical service providers for the creation of other businesses, including HGBs.

Second, these MSBs often provide the early capital for new HGBs. Doctors, lawyers, small business entrepreneurs, and bankers often are the backbone of early-stage angel groups. This capital is used as the seed money to grow and accelerate other MSBs, and ultimately HGBs. In other words, the equity capital that is the foundation of many burgeoning high tech, exportable industries was originally the capital of MSB entrepreneurs that willingly deployed that capital into HGBs. In Wichita, organizations such as NXTUS have benefitted from the small business community through partnerships and support, including financial assistance and as early investors.

Third, MSBs accelerate the spread of capital through local economies. According to the American Independent Business Alliance, 48% of dollars spent at a local small business will be re-circulated in a local economy compared to 14% by chains[5].

[4] Annual Report of the Office of Economic Research, Fiscal Year 2019 (sba.gov)
<https://cdn.advocacy.sba.gov/wp-content/uploads/2021/01/21085350/OER-Annual-Report-2019.pdf>
[5] <https://www.amiba.net/resources/multiplier-effect/>

This does not mean that the money moves from one small business to another, but instead circulates throughout the entire economy at a much higher rate. This is called the 'multiplier effect' by economists.

High Growth Businesses

Conversely, scalable businesses or HGBs provide services to markets that are more than 50 miles away, require specialization, and generally are targeting large (\$1B+), addressable markets. Thus, the target market is not only local, but often regional, national, or international. Most software businesses fit this category – but, so do most manufacturing, mining, cleantech, and biotechnology businesses. HGBs are critical for regions because they generate capital and wealth for the region. Without exports, a single town or region would not have dollars to circulate through MSBs. Thus, a good ecosystem will have both HGBs and MSBs.

With HGBs, the first customers and early adopters likely are local; thus, recruiting businesses from the region to be early customers is extremely important. But, as the scalable business grows, it begins to access markets that are outside its local region, and require specialization. These markets are large, often over \$1 billion in market size. In a well-functioning ecosystem, HGBs are critical for the region because they generate capital and wealth.

Conversely, an HGB often has economies of scale that are created by conducting activities in which the margins increase by increasing sales. For example, a manufacturer will receive preferred pricing on components with higher purchase volumes. This means that a company can potentially grow dramatically and increase wealth and volumes at the same time. In a well-functioning ecosystem, scalable businesses are the apex trees in the forest. They provide long-lasting jobs, investment, and wealth for their community – scattering contracts, philanthropic donations, and other key capital across the market.

Wichita has a long history of strong, scalable businesses – particularly in aerospace, oil and gas, manufacturing, and agriculture. These industry clusters are important components of the three-part economic development strategy, and they are fertile ground for new business creation. The density of regional clusters often creates regional expertise, talent and personnel density, early customers and expert buyers, and unique service and supply chains. This helps create an environment where successful startups are more likely than in other less densely organized industries.

In some rare occasions, these industries create what Chapman and Company refers to as “genealogical trees” within the greater ecosystem. Essentially a genealogical tree in this context is a vein of companies that derive from the same tree. These companies often cluster around specific pain points and issues at the original company. But the tree does not just involve the type of company - it also involves a system of things built to help those new outgrowths survive - capital, employees, early customers, existing networked relationships, etc. In this way, these genealogical trees often produce significant “offspring” businesses that reinforce each other.

To summarize, communities need both MSBs and HGBs. But, HGBs have key traits that make them particularly attractive to economic development - including the importation of wealth and talent, large opportunities (often in total addressable markets over \$1B), and cluster around existing areas of regional expertise and culture.

Ecosystem Framework

The ecosystem framework is built on the idea that entrepreneurship flourishes when communities find, empower, and surround their entrepreneurs with key systemic support. This cannot be understated. Startups are built by singular individuals and small teams. Thus, the most important activities that a community seeking growth can undertake are to identify, empower, and support its entrepreneurs.

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The ecosystem framework is built on the idea that finding and empowering entrepreneurs is critical.

These growth-oriented activities require a variety of other elements that act as support structures and provide guardrails and empowerment to new business formation. To facilitate understanding and provide a structure to these amorphous ideas, Chapman and Company has created a mental map for communities to consider when thinking and strategizing about their entrepreneurial ecosystem, dubbed “The Chapco Method”, illustrated below in Figure 1. Chapco Method.

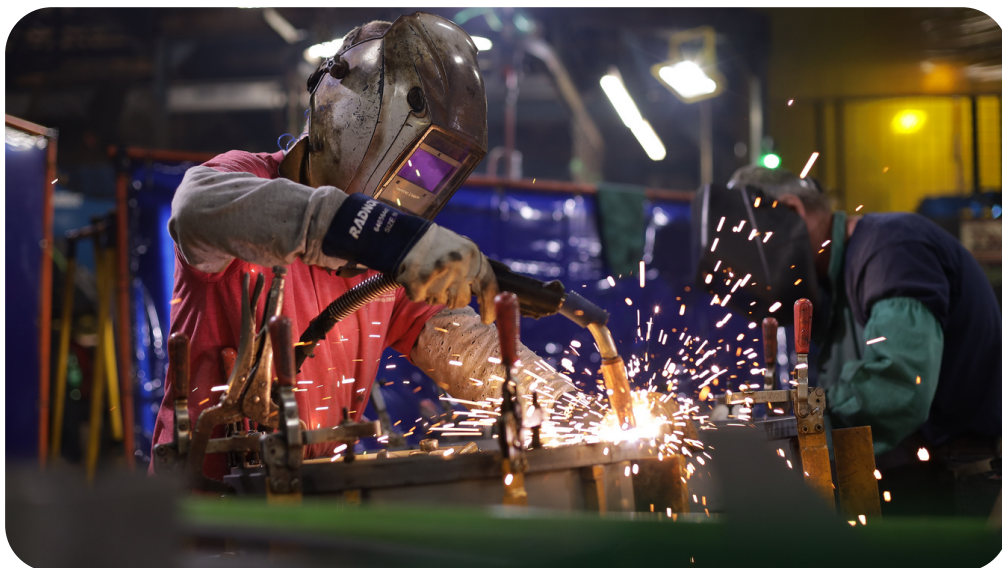
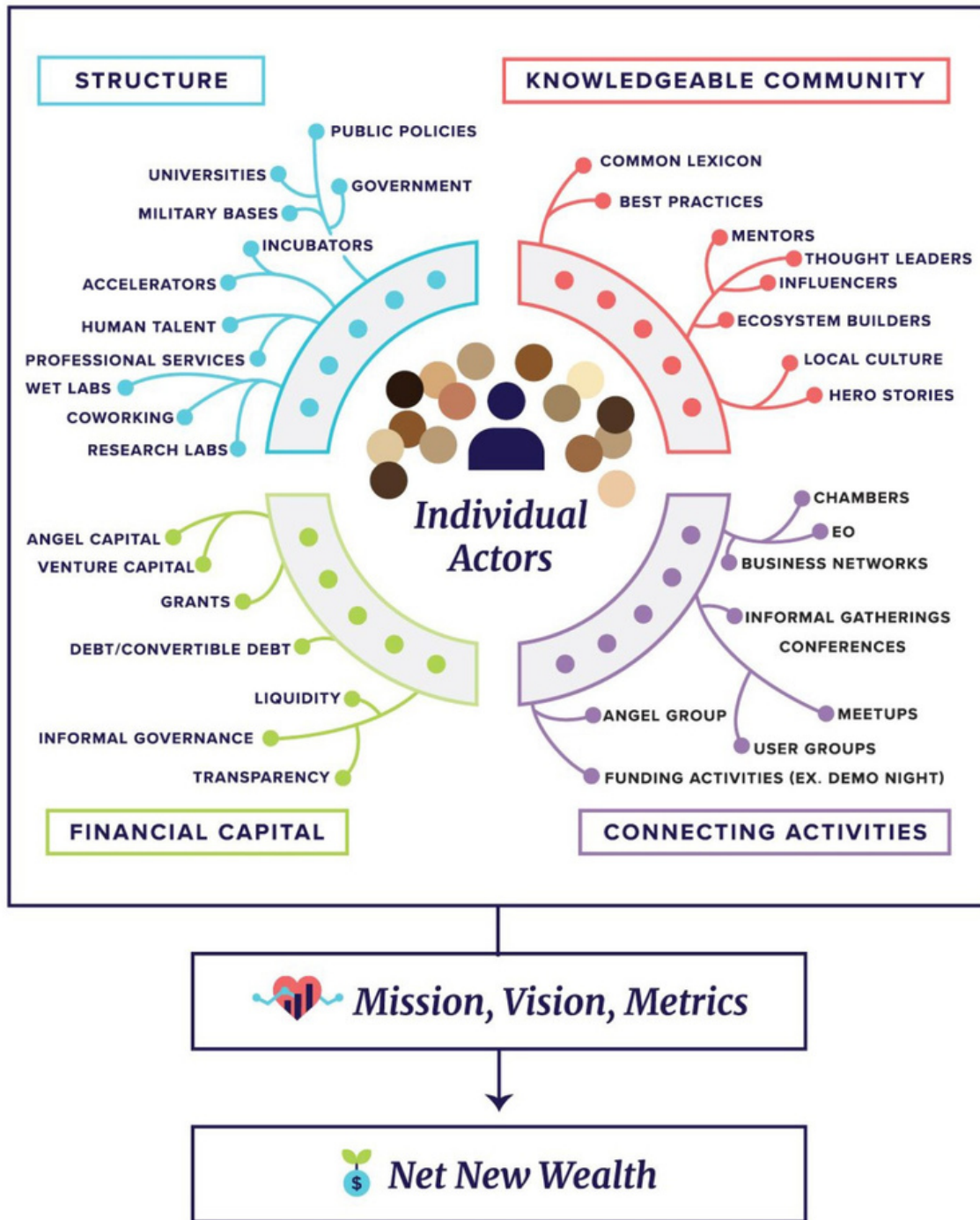


Figure 1.



Supporting Elements of an Ecosystem

At the center of the entrepreneurial ecosystem is the entrepreneur. Thus, the first strategic activation in communities is to find, engage, and support entrepreneurs. Many ecosystem builders naively wander past this step, jumping to “more exciting” elements, but few people within a community have a clear picture of their actual entrepreneurs because most only see slivers of activity germane to their industry, neighborhood, or social circle. This is one reason that under-represented groups stay systemically underrepresented because they are often outside of the vision of key actors in a community. Developing ways to be intentional about finding and encouraging all the entrepreneurs in Wichita is extremely important to the ecosystem’s long-term growth rate and success. This is not just about diversity, equity, and inclusion (“DEI”), but DEI puts a lens on many ecosystems’ failures to find and empower every entrepreneur. Wichita should be intentional about finding its entrepreneurs, and in so doing, the community will lay a keystone to prosperity.

Beyond the center, the mental map provides four other key areas to consider as a community is building its ecosystem. These categories are not fixed or permanent, and many programs have purposes that cross between the elements. We tend to say that they provide a mental map of how ecosystems work, rather than a straight line. The four elements are: 1) financial capital, 2) connecting activities, 3) knowledgeable community, and 4) structure. Each element provides a key organizing principle to the ecosystem – thereby focusing builder activities. For example, in identifying weaknesses in the capital environment, an ecosystem builder can build necessary structures, relationships, and policy. This whole program of work resides in the Financial Capital element but also overlaps each of the other three categories when we consider solutions – such as policy changes (structure), introductions to capital sources (connecting activities), and understanding financial instruments (knowledgeable community). This is one way to understand that this is a reinforcing system approach, not a project-based one.

Financial Capital

When talking about entrepreneurship, many advisors will describe the need for capital, or for venture capital, as the key challenge. But, the reality is that a well-functioning ecosystem has many types of capital needs – generally split into three categories.

First, the best capital is that which does not need to be repaid. Some states, cities, and regions have grant and competitive award programs that help spur entrepreneurship with free, non-dilutive grants to businesses. Even small grant programs have had significant effects in areas and industries where the lack of early capital has prevented entrepreneurs from founding businesses. The following list provides a range of successful programs from around the country:

- The Arch Grants program in St. Louis is globally recognized as having been a critical component of that region’s efforts to grow its entrepreneurial base. This program provides a small grant, which must be matched by other dollars, to businesses that show promise and commit to locating in the community for a period of time.
- The national SBIR/STTR program, which is run within eleven separate federal agencies (including the Department of Defense, Energy, and Transportation), incentivizes business creation and technology transfer.
- The State of Kentucky has created a strong matching program for these SBIR/STTR grants that helps pay for the application (which can take up to four weeks of work time) and provides additional financial support to successful applications.
- Many university business plan competitions, such as those at Rice University and the University of Chicago, where student business plans (often MBA or technical graduate student led teams) compete for hundreds of thousands of dollars of non-dilutive “awards”.

These grant and competitive award programs represent a smattering of the ways that companies can find “free money,” but they also create a means for an ecosystem to uncover the region’s entrepreneurs. Providing an award via a ceremony or acknowledging receipt via publication, creates an opportunity to gather and/or support entrepreneurs. These events that champion entrepreneurs have many different positive outcomes – including transparency into the

ecosystem (especially through those that attend), publicly reinforcing risk-taking and innovation behaviors, and identifying companies early in their creation-cycle to lend new types of support.

Second, debt is a helpful tool to capitalize and fund young companies, especially MSBs. This parlays into one of Wichita's key strengths - the quality and engagement of its local community banks. Having a strong local banking community is a significant asset for Wichita and can be a critical component of the effort to build a more robust ecosystem. Having financial resources to purchase key equipment, vehicles, or other capital is often the lifeline for young companies seeking to grow. Thus, debt is often a necessary component of many new entrepreneur's efforts to begin a business. Ensuring there is clear communication about availability and underwriting variables, a score of financing options from trusted partners, and underlying confidence from both entrepreneurs and ecosystem builders is extremely important to building an ecosystem that has appropriate debt instruments available.

In addition, to traditional bank loans, there are other types of debt that can aid businesses and founders who may not qualify or need a more targeted vehicle (such as revenue-based lending). For example, one vein of debt-providing institutions is the Community Development Financing Institution (CDFI) that helps build creditworthiness within new small business entrepreneurs through early financing tools. The goal of many CDFIs, such as AltCap out of Kansas City, is to help main street business owners get started with small loans that may not qualify under traditional bank lending guidelines.

Another good example of a riff on traditional debt lending is the work done by Network Kansas to provide alternative and often additive loans to traditional sources. For example, the Kansas Capital Multiplier Loan and the Minority and Women Business Multiplier Loan both provide loan boosts to more traditional lending structures.

Early-stage equity capital (sometimes called risk capital) is a third form of capital for startups. Raising equity is uncommon among most MSBs AND HGBs, but it often dominates the conversation about entrepreneurial ecosystems.

Venture capital is a class of risk capital – but not the only class. Investors use personal, pooled, or institutional capital to buy equity in new companies. These companies are often HGBs, rather than MSBs, because of the opportunity to generate a large return through either the sale of the company, sale of the investors' stake, or a public offering by the company.

In other words, risk capital buys percentage ownership in private enterprises – providing those enterprises with money to grow, but also with connections, expertise, and advice. While these investors expect some of their investments to fail, they also expect other investments to succeed making up for these losses and balancing their portfolio to account for risk. Two common descriptions of equity capital are angel capital (or angel groups) and venture capital. These forms often are deployed in stages of growth – targeting 12-24 months of 'runway'[6] for a startup company.

Angel capital is often the first capital provided to HGBs that is not from personal savings or closely tied individuals (family or friends). Angels are often high net worth individuals (HNWIs) who have had successful careers – often as entrepreneurs in either MSBs or HGBs. Angel capital often is organized around a group that meets regularly such as at a monthly meeting where entrepreneurs will “pitch” the group for investment. These groups and the individuals who participate in investments as angels represent a key foundational component to early-stage HGB formation.

Venture capital, on the other hand, is institutional – meaning that the structure of the investment is organized around an entity, not a collection of HNWIs. Usually, venture capital firms are structured as limited liability partnerships (LLPs) – with a general partner who manages the fund and limited partners who provide investment capital. These companies typically receive a fee for their managerial services and what is called carry – defined as a percentage of total investment following the return of the original capital to the investors. Basically, a \$50 million fund returns the first \$50 million to the investors, and then the fund management team receives a percentage (usually 15-30%) of all returns beyond the original investment amount.

[6] Runway in this context means capital that extends the amount of time that a high growth business can lose money in operations – while having enough time and resources to build a business that ultimately will scale.

Well-functioning environments in communities similar to Wichita will often have a mix of early-stage investment groups - including a few angel groups and/or small venture firms. These groups represent a conduit to the broader venture investment community, particularly to regional venture capital hubs such as Austin, Chicago, Dallas, and Denver. Small local seed and early-stage funds work with larger funds in other regions to provide capital and lead investment in Series A and larger rounds. This connectivity empowers a community, such as Wichita, to have a vibrant venture environment where the creation of significant venture funds is not required prior to the creation of the businesses that need those funds, but instead local capital provides first capital in and connections to future investors.

To summarize, communities need a robust stack of capital providers, usually this includes non-dilutive grants and awards, debt, and equity.

Connecting Activities

The second element of support for entrepreneurs in an ecosystem is “connecting activities”. These activities should focus on making connections (both personal and digital) to entrepreneurs and telling (and repeating) the story of entrepreneurship in the community. Intentional connecting also provides a powerful, viral force to establish more interlocking relationships across diverse leaders and networks. It helps buoy the community against sudden shocks and lays the foundation for broad-based leadership across neighborhoods, demographics, industries, and social circles. Fundamentally, connecting activities are about democratizing entrepreneurship for all.

One immediate misconception that arises is that this section is about events. In fact, it is not necessarily about events. And it is only about events that fundamentally focus on improving the lot of the entrepreneur. There are several great events in which great connections can be made for entrepreneurs in the Wichita ecosystem, including NXTConnect, One Million Cups, Founder’s Grove activities, Wichita State activities, Startup Grind, and others.



There are also some excellent venues and physical spaces that have regular events - such as Groover Labs, Labor Party, and the Hive. However, constant care should be given to ensure that activities are driven by the needs of entrepreneurs, not the need to have attendance for the supporting organizations. To that end, entrepreneurs are best served with contexts that reinforce the elements of the ecosystem - more easily connecting them to talent, customers, capital, and other support structures.

In today's digital age, these connecting activities need to go beyond physical events (and COVID-19 has really hit this home). In a modern connected world, building systemic appreciation for digital introductions, Google and LinkedIn strategies, and entrepreneur-centric approaches to key individuals is critical. In particular, the global companies headquartered in Wichita are well-positioned to provide this type of support to entrepreneurs. Making these connections easier and more structure for entrepreneurs should be the goal of "connecting activities." The more intentional and warm the connection, the easier it is for the entrepreneur to succeed.

But, one consistent flaw in many communities' efforts is how a new person to the entrepreneurial ecosystem can enter. With existing relationships and unknown social circles, it is often daunting for a new person to know how to plugin. One way that communities have made it easy for entrepreneurs to join the community is by creating a welcoming video that is displayed in multiple locations and at many community events. For example, Charlotte uses this welcome video before many first step programs - such as One Million Cups and Tech Brew. The video is short (less than three minutes) and provides a quick overview of programs and organizations that can help plug a person into the community quickly. We would suggest a similar process to build first-step community engagement.

Beyond connections, these encounters during activities cast the vision of what the community culture is and helps individuals participate, even if they are not entrepreneurs. The connections provide fertile ground for planting the stories of other entrepreneurs and teaching about key concepts in the ecosystem. They can leverage viral tools, such as social media and word of mouth, to share the ethos of Wichita. This paints a picture of what is possible and can allay fears when companies fail. Through intentional network building, connecting activities provide the framework for subtle and strong communication - in the community and abroad, exposing Wichita's growth to broader systems of national support and interest.

Knowledgeable Community

The Accelerate Wichita Report that you're reading is a great example of why having a more knowledgeable community is important. Systems-thinking is hard. Ecosystem building at its core is premised on the understanding that the entrepreneurial framework is a complex economic system, and that the more that system can be understood by a community, the more successful it becomes. This effort is about building a common understanding, shared by many organizations aligned and working together.

This implies a growing intelligence across all the people involved. Usually, this is built through sharing heroic entrepreneurial stories and developing a common language, or lexicon. A storytelling culture provides opportunities to highlight the vision of entrepreneurship by focusing on the stories of founders and companies as they navigate the process. Beyond that, it provides an organic and consistent way for local entrepreneurs to hear reinforcing, positive feedback. It also provides a means for local community members to share information, thereby fostering a forum for customers to self-identify, new entrepreneurs to find mentors, and talented job candidates to select these startup businesses for employment.

More small business stories that tell the human elements of entrepreneurship are critical to building local knowledge and understanding about the success and struggle of startup businesses. One program that we have identified as a means for the Greater Wichita Partnership and Wichita to improve their storytelling is a partnership with Chapman and Company and their tech blog, Mug News. That said, local media must be a key component – including the Wichita Business Journal, KMUW, the Wichita Eagle, and other key local voices.

A good example of a local blog that has made some inroads is the Chung Report (<https://www.thechungreport.com>). For example, in an October 2020 post – the Chung Report described some of the excellent programs and program goals of NXTUS, particularly around piloting software. This is useful as an article to share vision and ideas, but it also lays the foundation for a number of key concepts – including being a place where early software can find customers and support. This example illustrates the concept that storytelling is not just about the personal journey stories, but also about building a common lexicon. Common lexicon allows conversations around vision, community goals, and successful outcomes to be recognized...and to be understood by the diverse parties that inhabit the Wichita ecosystem.

Creating a common lexicon equates to building the overall capacity for a community to understand what other people are saying. In many communities, a gap exists among various groups and the language they use. By establishing a lexicon, the community can begin to communicate more challenging information and topics in a succinct way beyond a person's immediate tribe. While it may not appear so at first, entrepreneurial ecosystems do involve a lot of short-hand terms and topics that often confuse new entrants, so building significant communication resiliency is essential.

One way that multiple organizations can participate collectively in this effort is to provide reinforcing social media comments through local news sources – both traditional and non-traditional. For example, some of the best sources of information may be the Twitter feed of a particularly well-connected person. Rather than trying to shut this person down, local organizations can piggyback and amplify the messaging across their channels. This type of amplification is key to the region becoming more aligned and more aware of entrepreneurs in their midst.

A key goal of this report is to build a broader entrepreneurial lexicon, one that is common across the community. The more people that understand some of the key terms and ideas (e.g. venture capital, connecting activities, HGBs/MSBs), the less friction in communication. The less friction, the more entrepreneurs are served and supported.

Structure

Structure is the element by which most entrepreneurial support organizations participate and support the entrepreneurs in an ecosystem. Universities, non-profits, policymakers, venue owners, and many other groups are part of “structure”, the unique fabric that makes the region special. These groups work together to meld efforts to support entrepreneurs – acting as a bonding agent for the whole ecosystem. These organizations often help entrepreneurs answer vexing questions – such as “where should I go to work?”, “where can I reach out for support?”, and “are there other founders like me in our ecosystem?”

One key element that often is raised when we discuss structure is the idea of density. Density is an amorphous term when it comes to ecosystem building, but it generally means physical proximity in the ecosystem. This idea has led many communities to build an entrepreneur “hub.”

Moreover, successful communities are often represented as dense, even when the physical geography is often problematic. In other words, physical density is not required – but community engagement leading to collective support is.

Through interviews with entrepreneurs in the Wichita area, this lack of density has been noted. So, while some have suggested that Wichita needs more entrepreneurial support structures and others more physical space, what the group has recognized is a relatively low level of entrepreneurial support entities. The peer city comparison data does confirm this insight.

However, the last few years have seen growth to respond to this limitation, and these organizations and their trajectory are encouraging. For example:

- Wichita State continues to be a bright spot in its innovation, research funding, and entrepreneurial support programs.
- NXTUS is a great example of a program that is building community “density” around HGBs in Wichita.
- The Create Campaign, led by Christina Long, is bringing critical awareness and support to minority founders in Wichita.
- Network Kansas provides a variety of important resources, and with their new structure, including Wichita Technology, there appear to be even more services on the horizon.
- Groover Labs provides a unique co-working and makerspace for makers and engineers – incredibly strategic for Wichita, home to many engineers.

Each of these efforts and more like them represent significant evolutions of Wichita’s “structure” within their ecosystem.

Developing entrepreneurial support structures often means more funding, but it also means a commitment to align those funding dollars with the goals of the region and its entrepreneurs. Wichita should lean into its strengths – aerospace, engineering, energy, smart manufacturing, and agriculture. These are capital-intensive industries, and startups in these spaces need cash to research, develop, innovate, and grow.

When thinking about structure, one key consideration is time. Building a physical structure is a semi-permanent and significant capital outlay that may not be aligned with the needs of the entrepreneurs today or in the future. Many communities have spent significant money on physical structures.

Instead, forward-thinking communities have focused on understanding the cycles of entrepreneurial ventures. There are two relevant cycles - an 18–24-month cohort cycle and a 5–7-year funding cycle. Each provides critical guideposts for communities seeking to add more startups. First, structures should help organize companies that are in the same cohort through programs and initiatives. One common program in this cohort cycle is an accelerator.

Second, ensuring that there is enough and staged financial capital for a 5–7-year investment cycle is very important. Structurally, these funding sources range across all three funding types (grants, debt, and equity) but they are no flash-in-the-pan initiatives for a single cohort but one that focuses on changing an entire venture funding cycle with approximately 3–4 full cohorts.

Thus, a \$20 or \$40 million influx of capital over seven years in Wichita-based companies can produce numerous well-financed companies that can help facilitate regional capital connections, future angel development, and other efforts that stem from company creation, not infrastructure construction. This type of awareness of the time horizon to change the venture cycle has helped many communities better weather the changing dynamics of venture creation in their community.

By leaning into this cycle, Wichita can also leverage its existing industrial strengths. These companies have longer prototype and development periods. And, they will need cash rather than facilities, which can be manipulated to provide the necessary infrastructure on a budget. Further, it is wise for Wichita to lean into its aerospace and engineering capacities. Running programs, building connectivity, and broadening the educational initiatives around STEM, all feed the ecosystem with more potential startups and entrepreneurs. But, those funders need supportive structures - peers, mentors, and capital providers to maximize their vision and efforts. Building programs that are more than vanilla efforts to support all entrepreneurs can catalyze high-growth entrepreneurs in the unique industry clusters of the Wichita area. This is a differentiated strategy from other communities, and extremely difficult to replicate by fast-follower cities.

One other critical element of structure is public policy. In the early 2000's, Kansas state policy supporting high tech and bioscience entrepreneurship were often cited as the model for other Midwestern states. However, the last decade has seen the end or the vulnerability of a variety of those policies, including angel investment tax credits, the original KTEC, and the Kansas Bioscience Authority.

These programs have left a significant hold on the statewide efforts to facilitate entrepreneurial growth.

Regional and state reports, such as the Regional Growth Plan, Project Wichita, and the Kansas Framework for Growth, call for the growth of the entrepreneurial efforts to enable greater wealth creation. The Wichita region should step into the public policy breach and help to strengthen the key programs that grow the startup ecosystem, and it should lead the state in defining the statewide approach, as well. It is critical to use private, public, and philanthropic mechanisms to facilitate the growth and awareness of new companies, and the Wichita community is uniquely equipped to lead the way in this effort.

Vision, Mission, Metrics

The final unifying theme associated with the building of an entrepreneurial ecosystem is ensuring that the area shares a vision of what it wants to become. Consider the following view of how we think about mission, vision, and metrics – and why it is important:

- Vision – what is the change that you want to see in your community? This should be both directed toward the distant future and visceral in terms of description.
- Mission – what can each organization do to facilitate the desired entrepreneurial ecosystem change? Your organization’s mission should be tactically aligned with existing organizations when appropriate; on the other hand, your organization should be cognizant of efforts and ideas that lie beyond the mission scope. This allows for and points to the need to create broader organizations or to assign new owners to fill the gaps.
- Metrics – how do we measure our community’s progress toward accomplishing the vision? These are quantitative measures that are aligned with what you want your city to become.

Our interviews in Wichita did not reveal a unifying vision. This is not necessarily bad nor unusual, but it can lead to efforts that end up siloed or separate from the greater whole. In conversations with ecosystem builders, entrepreneurs, and leaders in the Wichita area, some issues were highlighted that are common to many cities attempting to grow their ecosystem.

There is a perception that some long-time business owners resist the urges to join ecosystem work due to the fact that they had no such help when they started and launched their businesses. Others perceive that some in the ecosystem give too much weight to HGBs, at the expense of support for MSBs. Additionally, there is a perception that the community desires entrepreneurship, but cannot clearly articulate why. To this point, there is clear excitement and dynamism in the discussions, but there lacks a unifying vision to accompany the desire.[7]

Although there will always be diverse voices and perceptions with an entrepreneurial ecosystem, focusing on the needs of the entrepreneurs will bring the cleanest consensus and vision. And based on the interviews with local entrepreneurs, being heard is what they desire most. Sometimes their voices are indistinct or unclear, and thus the message is difficult to ascertain, even to the entrepreneurs themselves. This is why Wichita must work hard to communicate more effectively with each other, stay aligned around some fundamental goals, and find, prioritize, and listen to more actual entrepreneurial voices – suffering from the pandemic and issues endemic to the local ecosystem. This group will be most effective in driving small tweaks and needed programs – not the ESOs or legacy entrepreneurs.

To sum up conversations with entrepreneurial leaders, the key driver in building the Wichita ecosystem would simply be “more.” They feel like their efforts are isolated and thereby unknown and underappreciated. They believe that more entrepreneurs, more capital, more programs, and particularly more local customers would cause a dramatic awakening in Wichita. This is generally true and the idea behind ecosystem building. But, it is not a vision that can be translated into a mission for an organization. Thus, discerning how to proceed is the challenge. Providing this sort of direction is fundamentally why the Greater Wichita Partnership engaged Chapman and Company.

What follows in this report are observations and recommendations about how Wichita can develop that vision, manifesting into a more vibrant, diverse ecosystem.

[7] This is actually very common in many communities of Wichita’s size, but it can lead to being a community that follows economic development or ecosystem-building trends. This follower attitude can lead communities to strategies that are not right for their specific situation. For example, this led many communities in the early 2000s to embrace bioscience as the 21st-century economic driver. For some communities, this was an excellent decision. But, the decision should be buoyed by local knowledge, experience, appetite, and vision – not an attempt to land grab the next big thing, even when the community is not well-positioned.



Ecosystem Summary:

1. Entrepreneurs are critical.
2. Communities require a full capital stack including grants/awards, debt, and equity.
3. Connecting activities should focus on getting entrepreneurs co-founders, mentors, customers, and capital.
4. Having a knowledgeable community allows groups to communicate effectively on challenging topics, breaking down silos.
5. Structure is less about physical infrastructure and more about building fast moving freeways, guardrails, and signposts into the ecosystem.
6. Through these elements, defining an actionable, community vision that leads to organizational missions is possible.

Wichita's Standing

This section evaluates Wichita's current entrepreneurial ecosystem using the Chapco mental model and data analysis relevant for evaluating entrepreneurship in the region. Chapman and Company's expertise and experience leads us to use multiple data sources and perspectives to provide a near-time review of the current state of a community – rather than simply relying on marginal data from the U.S. government that often has a significant lag time. Generally, this means that the data used is consistent with but not exactly the same as the subsequent government data sets. With that said, the unprecedented economic effects caused by the COVID-19 pandemic are difficult to contextualize and measure, so this report contemplates 2019 data to ensure some amount of stability when necessary.

Chapman and Company interviewed many people familiar with Wichita and its entrepreneurial environment. Chapman and Company was assisted by Trish Brasted (Wichita Technology/Network Kansas) and Mark Torline (Wichita State University) immensely in this effort. This small team, along with Evan Rosell (Greater Wichita Partnership), provided many introductions and local insights that benefited the writing of this section and Chapman and Company's review.

So, how is Wichita doing? The short answer is okay, but not nearly as well as it could be. Many community leaders will feel as if this is a failure. It is not. In building ecosystems, there is always a degree of struggle; very few communities around the world have successfully built thriving entrepreneurial ecosystems. The more important message is that Wichita is poised for entrepreneurial growth if it chooses to pursue it. In order to pursue growth, there are several truths with which Wichita leaders must wrestle, understand, and ultimately overcome.

First, Wichita needs to face its relatively low rate of entrepreneurship head-on. The data around startup rate, venture backing, other funding data, and other indicators are all aligned in that Wichita does not have enough startup companies. Facing this as a fact rather than debating it will allow the community to move to a place where facing the challenge is possible.

Second, Wichita has a number of legitimate, unique, and differentiating assets that can make it a special place for entrepreneurs and companies to evolve and grow. Wichita should lean directly into these assets, even if that flies in the face of what might be done on the coast or other Midwest cities. Push against the tendency of short-term thinking (which will lead toward replication of other communities' strategies); focus instead on understanding how and why new efforts will facilitate a uniquely Wichita vision of success. The building blocks are there for fast community growth and exciting company creation.

Third, Wichita is not missing something special (in the community's soul) that other successful ecosystems have. Instead, begin with the humility that Wichita is not unique in struggling with the building of an entrepreneurial ecosystem. Every ecosystem had a beginning or a key inflection point. Wichita is beginning to sense that inflection point - with an alignment of entrepreneurs, entrepreneurial support organizations, and private and public sector leadership. The effort will take time, and it will sometimes be uncomfortable, but ultimately it will function to create growth and opportunity for all in the community. It is a mission worth committing time and energy.

To evaluate the Wichita entrepreneurial ecosystem, Chapman and Company analyzed six key indicators of ecosystem strength:

1. Company creation and ownership
2. Funding - sources and scale
3. Workforce and entrepreneurial talent
4. Industrial clusters and strengths
5. Programmatic and network advantages
6. Current diversity of the ecosystem

These elements were evaluated in the context of the firm's experience but also with the help of multiple peer communities. These communities often provide context for evaluation and have been used to illustrate differentiation and opportunities. While communities do compete, entrepreneurial ecosystems are rarely competitive in their own right. Instead, many work collectively through funding syndication, customer identification, mentor sharing, and other collaborative ways. Thus, while Wichita does have standards below some of its peer communities in key elements, the reality is that Wichita is not really competing with these communities in the same way that they might to attract an economic development project. Instead, there are ample opportunities for communities in this report to work together with benefits spreading across the region and to multiple communities. Entrepreneurship is not a zero-sum game.

Companies

Fundamentally, entrepreneurial ecosystem building is about entrepreneurs and startups. Therefore, one key indicator is the number of startups and early-stage companies in a region. There are few good ways to evaluate the number of businesses that are being created in a market at a given time. The primary resource that many researchers use is the U.S. Economic Census – but the data is severely lagged. The most recent data set is from 2012.

Wichita, according to that data set, has a 7.99% business ownership rate which is below the average of 8.74% for the peer communities. However, this is only a single snapshot of a number that is often not particularly instructive. The nature of the political boundaries and wealth dispersion often affect the actual ownership rate in medium-sized metropolitan areas in particular, in a way that can be misleading at times.

Therefore, this data should be accented by alternative measures to provide a more comprehensive view of the company creation effort in the region: SBA 7(a) loans, Inc. 5000 companies, and venture capital investments are means to identify company creation and growth.

Although measuring entrepreneurial ecosystems is never precise, these indicators represent the best current methodology that can be used to glean an accurate view of the evolving ecosystem. Each represents a slice of the local ecosystem, but importantly, the slice allows for a relatively contemporaneous view of the market. Even during the pandemic, the data reviewed could be evaluated at near-time (within six weeks) of the process for each of these measurements allowing for timely analysis.

SBA 7(a) Small Business Loans

For those unfamiliar, the Small Business Administration provides a guarantee on small business loans. This program involves bank lenders underwriting a loan, but the SBA provides a guarantee to prevent complete loss on the loan. This activity provides an incentive for a bank to potentially add some risk to its portfolio because of the government's protection from complete loss.

Wichita's SBA loan rate is in-line with the other markets to which it is compared. This suggests that access to capital for main street businesses is good. Moreover, this is a strong buoy of local economic activity, jobs, and local investment in small buildings and retail space. As mentioned in the "Financial Capital" section of this report, the local community banks are active lenders to main street businesses across the State of Kansas, and particularly in Wichita.

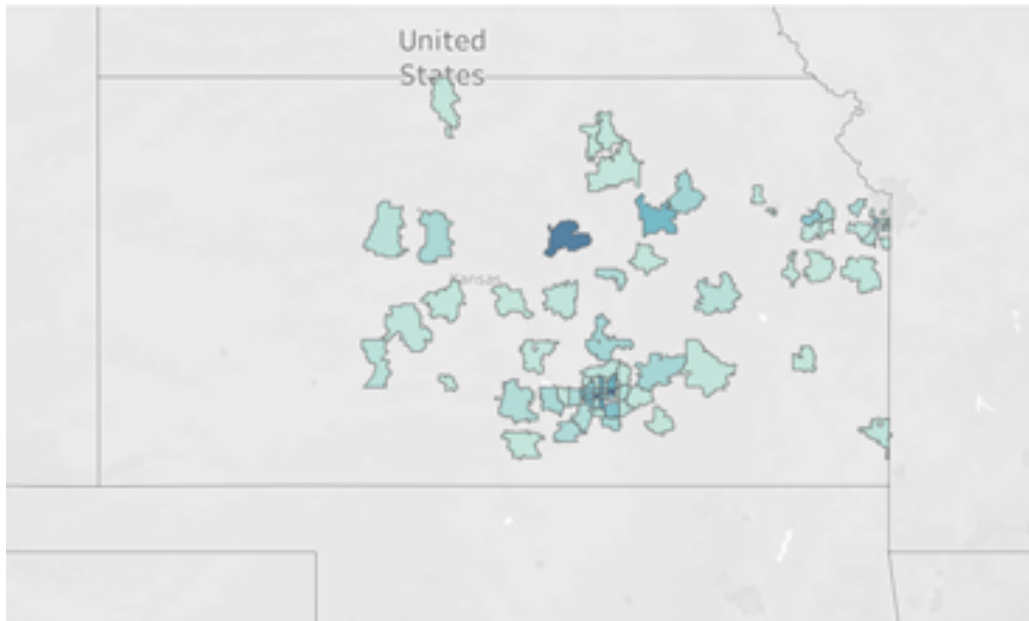


Figure 2. Kansas Lending Map

See Figure 2. Kansas Lending Map (shown here again for convenience). This is a strong foundation from which to improve the number of baseload and main street businesses – particularly those with diverse founders.

As we come out of the pandemic, there will be additional money and leverage available for banks and CDFIs to provide investment and capital for local, main street businesses to rebuild or start. Wichita should be preparing today regarding needed businesses and services for the region. This is consistent with the Greater Wichita Partnership's focus on the downtown area and placemaking; the federal small business push may provide some needed capital to further shape that vision. Being prepared and proactive may be a key means to facilitate small business retention and reinvestment by entrepreneurs closed by the pandemic.

Inc. 5000

Annually, Inc. magazine provides a list of the 5000 fastest growing private companies in the country. The list requires the company to fill out an application, but it is one of the very few revenue-based listings with any size and scope. Moreover, the Inc. list has been published since 1982 with relatively stable criteria for involvement, which allows for longitudinal ecosystem and company analysis. Thus, many researchers use this list to measure growth of businesses in a region.

From the outside of the region, this is a signal to potential investors and relocators. It signals vibrancy and growth. Often there is some clarity around sectors and types of jobs, and frequently, a strong entrepreneurial ecosystem will reveal itself with many companies on the list.

However, Wichita's position regarding Inc. 5000 companies is not strong[8]. The average for the peer communities is between 13 and 14 companies per MSA, but Wichita has the lowest totals in both 2019 (2) and 2020 (4) when compared to its peer communities.

On a positive note, one reason that we use this measurement is because it is self-reported. This means that a community that is intentional about awareness and facilitates application, can often move rapidly regarding company inclusion.



[8]Companies listed include: Profit Builders, Freddy's, All Things Barbecue, Elite Staffing Solutions, Occidental Management, Walton's, Superior Tool Service, West Hills Capital, Syndee Outsourcing, Professional Home Builders, Integra Technologies, and Farha Roofing.



Figure 3. Inc. 5000

As we consistently describe, ecosystem building includes intentional communication. Wichita can improve its numbers by simply encouraging more local businesses to apply to the program. There are certainly more than four businesses that qualify for the Inc. 5000 in Wichita. A renewed call for participation in this program would help to strengthen Wichita's position in the regional rankings and provide more potential for identifying entrepreneurs and growth companies.

Venture Capital

As mentioned in the "Financial Capital" section, venture capital is a class of risk capital that includes institutional venture funds and angel groups. Chapman and Company uses Pitchbook as its primary data set that includes early-stage capital, seed capital, angel capital, accelerators/incubators, and later stage venture capital as specific deal descriptions.

The dataset also identifies the first time a company receives investment by one of these categories. Thus, it marks a good way to look at high-growth, venture-backed businesses. And because so much of the early capital investment is provided by local angels or early-stage/seed funds, it also reveals the current level of capital formation for these types of deals in the region.

Wichita performs relatively low in venture fundings compared to its peer communities. Madison and Provo in particular have built strong venture communities that lead to significant venture activity, but closely compared cities, such as Omaha and Des Moines, outperform Wichita by almost two times every year over the last seven-year cycle. This differential is suggestive of a significant difference between current startup activity levels. See Figure 4. Funded Companies 2014-2020.

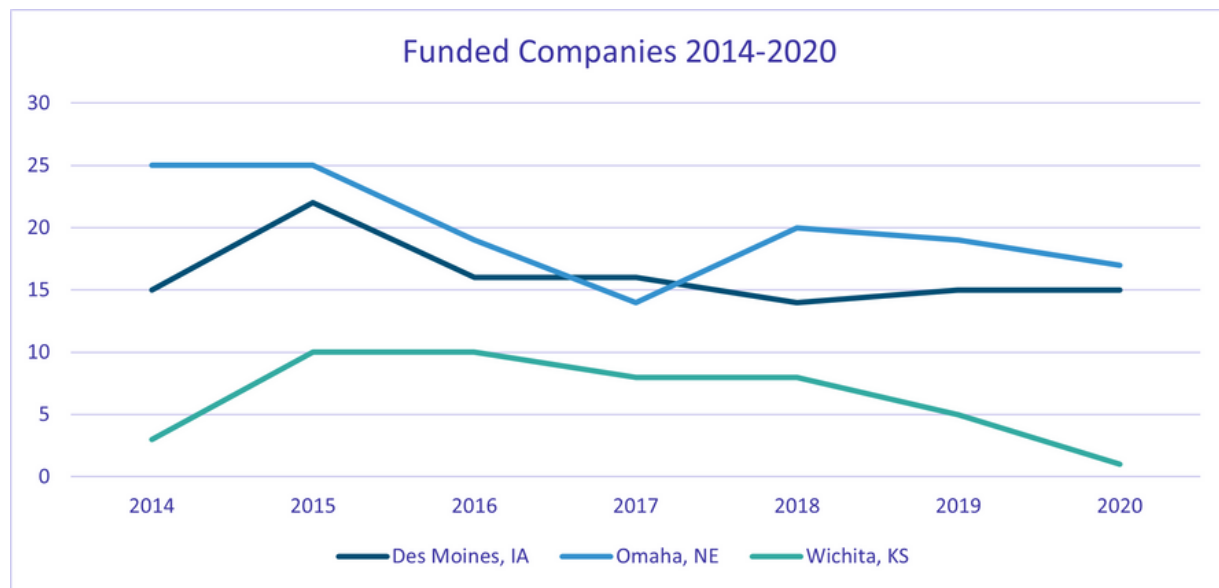


Figure 4. Funded Companies 2014-2020

Moreover, this is consistent with the bellwether measurement that we use regarding funding – first fundings. Omaha and Des Moines have relatively consistent first fundings – Whereas Wichita has a paucity – with zero first fundings in 2019 and 2020 combined. See Figure 5. First Fundings 2014-2020.

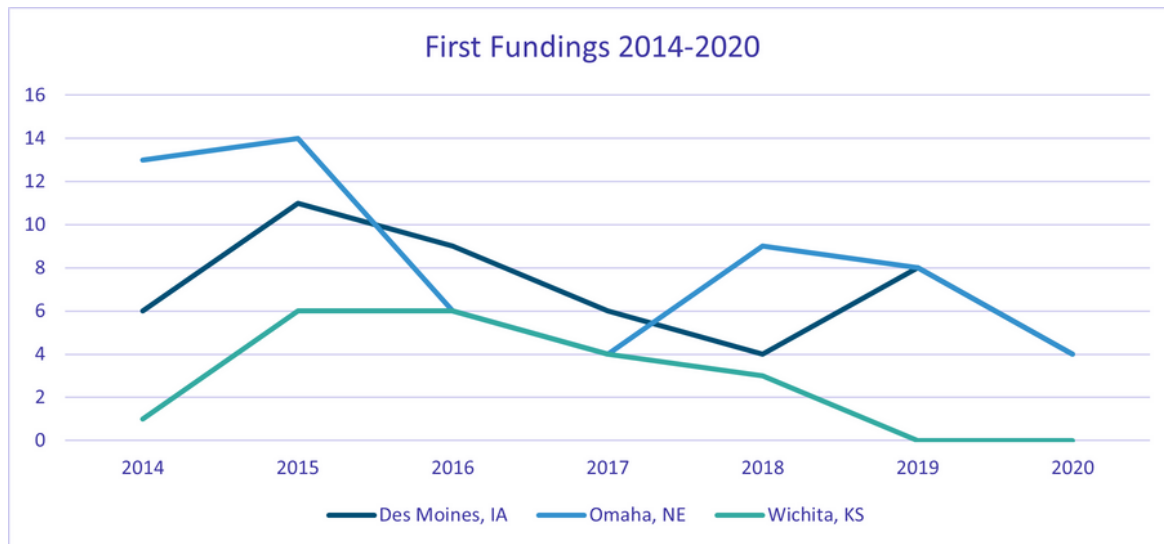


Figure 5. First Fundings 2014-2020

What this means is that over the course of the last seven-year cycle, Omaha has had 58 at-bats, Des Moines – 48, and Wichita – 20. Simply put, with so few companies coming through the high growth deal pipeline, Wichita is substantially less likely to produce a significant successful high-growth company. This is part of the reason that Wichita does not have a Flywheel (an Omaha company that exited for more than \$100 million in 2019) or Dwolla (Des Moines company that has raised more than \$50 million in venture capital) to point to as a success story. However, it also marks an area where some current conversations are likely to lead to relatively immediate shifts.

Simply put, the city and region need to commit to more company creation activities. There are several programmatic opportunities to support an increase in early-stage investment activities, particularly first investments:

- A potential model for Wichita is Gener8tor’s g-beta program out of Madison/Milwaukee. Having small cohorts of five companies every year ensures a number of small first fundings. Lincoln has used this program in concert with their Launch Lincoln grants (which are similar to the Arch Grants in St. Louis) to further reinforce early startup activity.
- Other communities have focused on angel group activity with low entry prices (\$25k) to launch annual or bi-annual funds. These small funds – \$500k to \$2mm – are intended to fully deploy in a short lifespan with no follow-on dollars. Instead, the follow-on dollars are up to individual angels. This has also been a mechanism for non-profits and donations to create evergreen funds that have short lives – but then have the ability to be evergreen over time.

- Many universities have small funds that are intended to jumpstart student small business creation (such as the Maverick Venture Fund at the University of Nebraska-Omaha, which provided \$10k investments to Retail Aware and Logica) which have gone on to become significant successes.
- Rain Source Capital has worked with the Appalachian Regional Commission to create seven funds. These funds are unique to the communities that are their home, but they share some resources with Rain Source Capital, including due diligence and mentoring. This allows a small fund to still have scale and connectivity to follow-on investment.

Establishing earlier ways for companies to get started is necessary – particularly in the prototyping, MVP (minimum viable product), and early traction stages of company growth. These companies require grants, convertible debt, and SAFE[9] structures to 1) create some runway for growth and 2) an on-going incentive to build a great (and big) company. The non-dilutive early capital allows entrepreneurs the ability to retain more ownership in the early stages – creating both authority/empowerment in the entrepreneur but also ensuring that later rounds of capital do not dilute the founder to a position of such weakness that it is non-incentivizing for building a big company.

For a successful step-up in production, Chapman and Company believes that it is necessary for Wichita to jump from approximately five first fundings per year to 20 per year. This involves some capital (an increase of \$2-4 million per year for seven years or a total of \$14-28 million) and possibly some support structure changes (maybe an accelerator or other company creation mechanism). These types of intentional programmatic shifts will seed the ecosystem with a larger number of opportunities.

[9] Simple Agreement for Future Equity (SAFE) are common structures that are akin to a convertible note without a coupon. Basically, a SAFE note is used early in a company's formation as a means to identify that funding was raised and that the investor will receive future equity at a discount or pre-set valuation cap. In doing so, the investor forgoes a priced round early in a company's life to prevent dilution to the founders at such an early stage. SAFEs are currently preferred because they do not create recourse around debt in the same way that many convertible notes do.



Talent

Having a robust pool of technical talent with skills to produce HGBs is an important measurement in the framework. These people provide needed skills and expertise - indicating a community's aptitude to develop certain types of companies. Talent has become the most desired element of modern-day economic development, and it is no different within the entrepreneurial ecosystem. Wichita is poised to leverage some of its current talent strengths and seek out key leaders in various sub-industries to move to Wichita to take the entrepreneurial work to the next level.

Wichita is nationally noteworthy due to its density of aerospace engineers. In general, the community reflects a high density of engineering related talent, particularly as compared to its relatively low levels of math, software, and other sciences. We call these BLS categories - "cool jobs" derived from the work of Richard Florida and his analysis of the "creative class." [10]

[10]Where the Creative Class Jobs Will Be - The Atlantic
<https://www.theatlantic.com/business/archive/2010/08/where-the-creative-class-jobs-will-be/61468/>

Metropolitan Statistical Area	15-0000 Math + IT	17-0000 Engineering	19-0000 Bio + Other Sciences	Total Cool Jobs	Percentage of Total Jobs
Madison, WI	23850	8140	8240	40230	10.18%
Provo, Ut	12570	3310	1800	17680	6.96%
Baton Rouge, LA	5760	9150	4430	19340	4.89%
Tulsa, OK	10310	11010	2460	23780	5.35%
Omaha, NE	20960	5450	3610	30020	6.09%
Des Moines, IA	16430	4490	2550	23470	6.31%
Colorado Springs, CO	15520	6350	1770	23640	8.22%
Fayetteville, AR	7940	2470	1220	11630	4.67%
Dayton, OH	15960	11300	3150	30410	7.99%
Boise, ID	10450	8190	2970	21610	6.44%
Wichita, KS	5920	7340	1530	14790	4.88%
Huntsville, AL	16290	19090	1430	36810	15.80%

Figure 6. May 2019 Occupational Employment Survey

Amongst its peer cities, only Huntsville, Alabama, shares Wichita's unique engineering capacity. Huntsville is home to a variety of Department of Defense operations, particularly those around missiles, space, and alternative applications for air superiority. Huntsville has had 47 venture-backed deals since January 2014, making it roughly 2.5x as vibrant from a venture activity perspective as Wichita. Within those deals there are many investments in sectors that Wichitans have suggested would fit in Wichita – specifically cybersecurity, missile/aerospace systems, Department of Defense technologies, and 3D systems and modeling. These startups make sense in an engineering-rich environment, as do companies more directly related to products and pieces for the larger aerospace environment (including drones, UAVs, rotating blade, and even hyperloop).

Choosing a path where talent already exists is more effective than trying to create talent to fill a potential need. The community has employers and industrial experts in engineering – across fields, not just in aerospace. Significant resources have been deployed at Wichita State and in the community colleges in the region to ensure a ready supply of workers for engineering related industry. This is a significant comparative talent advantage in the region. Therefore, leveraging the new Innovation Campus at Wichita State, National Institute for Aviation Research, and Deloitte's Smart Factory @ Wichita to create more transformative companies in emerging technologies may allow Wichita to transition toward the next generation of engineered products, manufacturing, and innovation. Wichita can be the national leader in this type of company creation.

Beyond having the talent to build, forward-thinking communities have been successful when attracting entrepreneurs, not just technical experts. Thus, it is critical to take steps to attract and retain entrepreneurial leaders in the key areas of Wichita's expertise and infrastructure. At the national level, there are entrepreneurs and leaders who would fit well with the Wichita framework. Accordingly, Wichita should seek out jockeys who are interested in aerospace, transportation, smart manufacturing, and robotics. These areas appear to be good targets to build technical expertise and a stable of strong startups.

Here are some of the companies that are out of business from the aerospace industry but that have raised more than \$5 million in the past decade:

- Vector Launch – Tucson, Arizona - \$94 million (Eric Besnard CTO + James Cantrell CEO)
- Trillium – Sunnyvale, California - \$15 million (Sachio Semmoto CTO + David Uze CEO)
- PAX Streamline – San Rafael, California - \$6 million (Francesca Bertone COO)
- Iso Nano International – San Diego, California - \$4.5 million (Randy Beck CEO)

These companies and their founders may on one hand represent failure. However, they have a deep understanding of the complexity that starting a business in the aerospace industry will require. Connecting the community to them is a means to begin to build a network of advisors and mentors for startups in the region. In addition, there may be potential jockeys^[11] on this list that could be recruited to start their next venture in Wichita.

[11]In entrepreneurial circles, jockeys is short-hand for the team running the company. Many believe that the team is more important than the technology or product, and thus, there is short-hand referencing this position. For example, a venture capitalist may say, "I am betting on the jockey, rather than the horse" in the context of an investment, meaning that the team running the company has illustrated competence such that the venture capitalist believes that they will move the company to where it needs to be to succeed. The theory stated in this paragraph suggests a similar strategy for Wichita – to find competent, successful teams that are in the targeted industry rather than trying to create every company de novo.

Structural Asset Evaluation

Wichita has some key assets that place it in a particularly attractive position for high growth entrepreneurial development, but many need to be further developed, communicated, and resourced throughout the community. For example, the community has “excellent” average broadband speed according to Broadband Now. However, this broadband speed is not ubiquitous, and in fact, in many parts of the region it is referred to as “poor.” This type of high variance is true for many aspects inside of the structure of Wichita. For example, access to capital varies dramatically based on one’s social network. Thus, making structural strengths available to all residents is a long-term process that starts by identifying and acknowledging what is really good and where there are gaps.

A good example of an excellent and unique asset is Groover Labs. Many communities have coworking and maker spaces. Groover is unique because of its manufacturing roots. For example, the program offers resin-injection molding infrastructure and help. This allows for mass-produced prototype testing prior to plastic injection molding. There is only one other maker space in the Midwest that offers this type of service (in Chicago). Thus, it can act as a magnet for certain types of regional projects. However, it needs to be locally supported and has complimentary features (such as prototype funding) to really excel.

NXTUS is another organization that is growing in its ability to support and empower entrepreneurs, especially in the HGB context. Their work with Accelerate Venture Partners (AVP), NXTStage, and NXTConnect have all brought deserved attending and resources to the scalable, high-tech startup space.

Similarly, the Create Campaign, led by Christina Long, works to support the minority founder community by helping to dismantle systemic and historic barriers that have delayed the full development of minority-owned firms. Her work is particularly needed because of the shifting demographics affecting the city of Wichita where more than $\frac{1}{3}$ of the city population is non-white. Thus, her work represents an impactful effort, but one that needs dramatic increases in support from the broader community.

NetWork Kansas is a statewide entrepreneurial support organization that works to cultivate resources and support to grow successful small businesses across Kansas. By shepherding multiple resources, including classes, broad regional and statewide connections, capital programs, and public policy work, they continue to transform the entire state's environment for business growth.

Wichita State and programs around WSU are creating commercializable technology and startups. For example, the National Institute of Aviation Research (NIAR) is a significant asset for the community - producing tens of millions of dollars in research, hundreds of jobs, and new ideas and technology that may help existing or new companies expand their offerings.

Building on this program and others that are tied to strengths of the community is an important bedrock principle of how Wichita can become its best self. Top-tier communities are able to expand through strength and small pivots rather than complete reinventions of new areas of research and expertise. NIAR, aerospace, and the adjacent talent and technologies will be a guidepost for the next century of innovation in the region. But the key to building programs and infrastructure is meeting the dynamic needs of the community. Many times, these programs will reveal the emerging ecosystem builder or the community's future champion.

Diversity, Equity and Inclusion

Communities across the U.S. continue to wrestle with diversity, equity, and inclusion (DEI) challenges. New and, in some cases, renewed focus has been directed at empowering wealth creation activities, particularly around entrepreneurship. Activating urban and minority entrepreneurs not only creates jobs and wealth within the region, but it also helps to empower, develop, and support communities that have faced historic barriers to this growth, ensuring an entrepreneurial opportunity for all. Efforts to build an ecosystem must include a robust focus on minority entrepreneurs.

Wichita is a diverse city that continues to grow its population of non-white residents. Today, the population is more than 1/3 non-white, and based on U.S. demographics, trends, and conversations, it appears likely that Wichita will continue to become significantly more diverse over the coming decades. This is relevant when it comes to business ownership statistics based on gender, race, and military experience. Wichita underperforms each of the averages from the peer group. Although Wichita is not the worst, the community does not excel in any single category of DEI-related entrepreneurship.

Unlike some communities that have clear work to do in a specific area – such as Provo with women-owned businesses, or Huntsville with both minority and veteran owned businesses – it appears that Wichita is performing at or near the average in every category. See Figure 7. Business Ownership Statistics.

Metropolitan Statistical Area	BUSINESS OWNERSHIP			Minority Delta	Veteran Delta
	Women %	Minority %	Vet %		
Baton Rouge, LA	40.5%	47.6%	10.7%	-13.70%	5.10%
Boise, ID	35.4%	8.4%	8.4%	-2.53%	-0.43%
Colorado Springs, CO	36.2%	16.2%	11.9%	-5.52%	-3.36%
Dayton, OH	41.5%	35.5%	11.5%	-9.15%	3.20%
Des Moines, IA	34.3%	18.1%	9.6%	-6.47%	3.36%
Fayetteville, AR	33.5%	8.9%	7.7%	-11.85%	2.00%
Huntsville, AL	39.0%	26.0%	10.8%	-12.39%	-0.51%
Madison, WI	35.4%	13.5%	7.2%	0.11%	2.84%
Omaha, NE	34.2%	17.6%	10.0%	-4.56%	2.79%
Provo, Ut	28.5%	13.1%	5.0%	1.56%	2.67%
Tulsa, OK	32.7%	23.1%	10.9%	-12.91%	3.43%
Wichita, KS	33.7%	18.1%	8.6%	-7.30%	0.55%
Average	35.4%	20.8%	9.8%	-6.77%	2.28%

Figure 7. Business Ownership Statistics

But, based on interviews, this is not good enough for Wichita. The Wichita community earnestly and consistently expressed the desire to improve the DEI outcomes within the entrepreneurial space. This expression of will is a great starting point, and Chapman and Company has three recommendations to build on that desire.

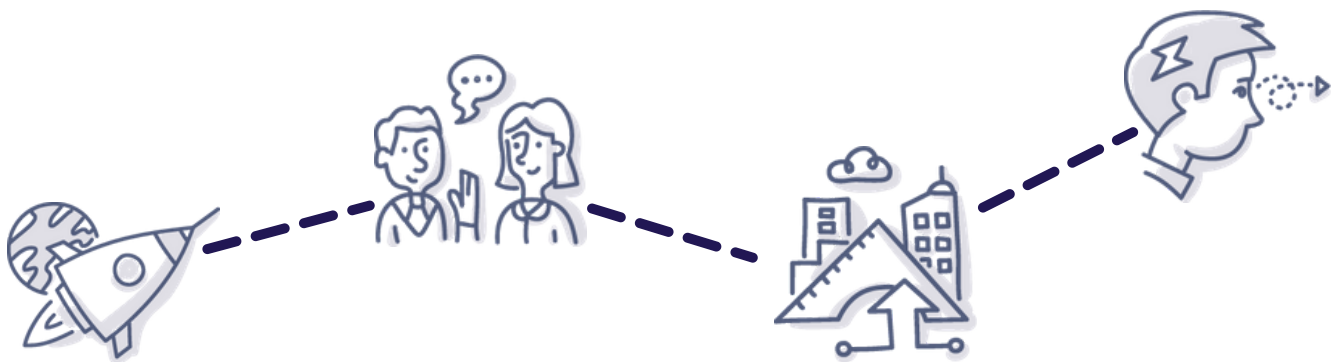
First, the focus should be on improving access points for each of the targeted groups identified. Communities have done this using a variety of tactics. In general, the programs run by Christina Long around the Create Campaign and in her business - CML Collective - are positive starting points. These programs should be integrated and amplified into the broader entrepreneurial ecosystem.

Another good example comes from Forward Cities – ABIDE programming. This program provides context and programming that fosters communication and breaks down some preconceived (or unacknowledged barriers) for many entrepreneurs of color.

Second, Wichita has a strong military population, as does the surrounding areas of Kansas, but relatively weak entrepreneurship in this population. This is noteworthy from a diversity perspective because (according to the Pew Foundation's 2017 report), 43% of active-duty military represent ethnic and racial minorities. Thus, proactively working with military veterans through various veteran organizations may be a means to create a super-charge in diversity programming in the region. Several national funding opportunities, programs, and networks exist - making an easier integration into Wichita possible. One good example is Bunker Labs, a national veteran startup program. Bunker Labs has chapters and events in almost every state, with a goal of being in every state by the end of 2021. They are not yet in Kansas, providing Wichita with a clear partnership opportunity.

Third, an intentional effort to facilitate the development of women-owned businesses would serve the Wichita ecosystem well. There are a number of national companies and local chapters of entities that provide strong programming and engagement. For example, Hello Alice jumpstarts women founded companies. 37 Angels is committed to helping women close the gender gap in startup investing. Other examples include the Massachusetts Women's Conference and Madison's Doyenne Group. Many of these efforts have yielded significant company creation and networking that have helped the entire ecosystem.

Ultimately, some of these focus areas and strategies can help the Wichita ecosystem grow in developing the critical DEI engagement that it needs. It will, however, be important that the whole entrepreneurial ecosystem commit to this broadly, including amplifying these issues regularly at ecosystem and other community events.





Transforming the Wichita Ecosystem

While there are several things Wichita can address to develop its ecosystem weaknesses (see above: more companies, develop talent, improve structural support, and amplify DEI initiatives), equally as important is the focus on leveraging the community's strengths. Leaning into these strengths will help to resolve some of the weaknesses mentioned in this report.

Wichita has a robust history of oil/gas, industrial, and entrepreneurial successes that have produced significant wealth and investment capability within the region. Additionally, the Wichita community has world-renowned depth in aerospace (including talent, manufacturing, innovation, and financial resources). The transformation of Wichita State University over the last decade has created incredible opportunities to capitalize on the future of aerospace technology, smart manufacturing, and defense-related industries. And, importantly, Wichita has the desire and starting pieces of critical infrastructure to support a growing, dynamic ecosystem. When these strengths are actualized, Wichita has the potential to be the worldwide leader for creating and building transformative engineered products, services, and companies.

But, to accomplish this vision and harness the community's strengths, Wichita will need to commit time, money, resources, and expertise to entrepreneurs and the entrepreneurial ecosystem.

It will need to build depth in areas that it does not currently have – capital formation, startup talent, and storytelling. Wichita will also need to prioritize its focus on strategies that will produce their desired results, to the exclusion of other “cool” strategies and programs that other communities (distinct from Wichita) may choose to pursue. Strategy is a trade-off that requires stopping certain behavior to focus on those that have the highest and most desired effects.

Below are more targeted ways that Wichita can catapult itself into being a global leader in its targeted entrepreneurial areas.

Aerospace

Wichita’s aerospace industry is second to none. No place in America lives and breathes aerospace quite like Wichita. From an entrepreneurial perspective, this depth of talent and expertise has the makings of a breakout global ecosystem player. This is bolstered by current innovation happening within the key aerospace companies with operations in the region, but it must also be driven by aerospace leaders starting new companies as well.

This will require finding and encouraging local aerospace leaders to start those companies and can also involve finding “jockeys” to move to Wichita to start their companies within the global aerospace cluster. This specific talent attraction will also ultimately support the existing aerospace operations because the success rate of entrepreneurial startups affords for significant transition and talent attraction. In communities with dense and entrepreneurial industrial clusters, talent is consistently recycled through the system - adding value in both directions to startup and veteran alike.

Starting with talent, one key goal in aerospace is to target graduate students within key clusters, particularly aerospace. That means targeting new relationships and students from top schools that spin out entrepreneurs and technologists, such as MIT, Georgia Tech, and CalTech. Tangible strategies to attract the attention of this talent, include business plan competitions, student competitions in engineering, and innovation competitions, such as X Prize. These programs when targeted can draw talent to visit and participate in the community - prior to being recruited to move. WSU, through NIAR, Smart Factor @ Wichita, and Innovation Campus and its partners within industry, are well-positioned to take the lead in these efforts. Locally, these programs provide early on-ramps to entrepreneurial behavior and business startups for students and nascent entrepreneurs.

Wichita should also be mindful of “orphan technologies”, which are technologies that have been created and often tested, but for one reason or another have not been taken to the market or received market attention. This may be because it was created in an academic or industrial process that was not intended to commercialize. It could also be that the company or institution simply elected not to try to take a product to market.

Orphan technologies are commonplace occurrences around the United States, and a community that builds a scalable process for qualifying and commercializing orphan technologies has an opportunity that other communities have not been willing to match. One way to keep tabs on orphan technology portfolios within the region is to review SBIR/STTR grants that have not been commercialized (which is most of them). These grants usually reveal a trove of technologies and researchers interested in starting companies in aerospace, energy, and advanced/additive manufacturing. For example, since the beginning of 2018, the federal government has funded 435 grants to entities with the term “aerospace” in their SBIR abstract. Targeting these interlocking industries for building a scalable process for commercialization may yield regular, consistent company formation opportunities. Wichita is uniquely positioned to find and develop companies using this type of strategy.

From a programming perspective, Wichita should intentionally develop a listening campaign to determine the key challenges, opportunities, and needs of the aerospace startup community, not just in Wichita, but globally. To do this, a “listening post” can be developed using Google keywords, alerts, and news feeds. This will identify stories, articles, fundings, and other information about startups in the industry. It is pretty niche and does not have a dominant hub, yet. Wichita leaders should also reach out to local industry to discuss and learn about young and early-stage vendors. This may also include corporate investments in outside innovation. Through this listening campaign, Wichita can be prepared for the next phase which is to reach out to startups, investors, and others in the aerospace startup space. This will lead to direct engagements with aerospace startups which can lead to better understanding Wichita’s fit as a player in this global market. By taking these steps, Wichita will build its local and global aerospace startup awareness to better position Wichita for aerospace startup growth.

Even an awareness of aerospace startup fundings will empower Wichita to move forward. For example, Hermeus is an Atlanta-based aerospace startup that intends to build hypersonic aircraft.

Since its founding in early 2019, the company has received nearly \$18 million in venture funding from Canaan Partners, Khosla Ventures, Revolution, and Bling Capital, as well as, an USAF grant. Wichita leadership should engage company founders – AJ Piplica, Skyler Shuford, Glenn Case, and Michael Smayda – to understand their needs and how Wichita may be able to provide resources and participate in Hermeus’ success.

To develop strategies to identify startup opportunities, talent attraction, and innovative possibilities, Wichita should lean on its industrial leaders in the industry. Regular conversations with these leaders targeted at entrepreneurship (not just corporate struggles) will produce an awareness of not just “what current is” but also “what can be”. These leaders would also be well-positioned to identify startup companies that might be willing to move their headquarters, open a second office (particularly engineering, testing, or MRO), or to support that are generated locally.

To synthesize into an executable plan:

Step one – listen to the existing startups in the US that are already working in aerospace and defense.

Step two – reach out and communicate with these startups. Understand what they have but also what they need and cannot find.

Step three – build toward hard-to-solve problems that other communities cannot solve.

Step four – establish programs, competitions, etc. that begin to reveal the creation of the startup aerospace industry in Wichita.

Energy

Wichita has a strong energy industry anchored by one of the country’s largest diversified industrial companies – Koch Industries. Oil and gas are part of the energy industry, but not the only part. Forward thinking cities are identifying and leveraging both the institutional strength of energy, but also its trajectory toward wind, solar, and other alternative energy sources.

Wichita has multiple strategic lanes in energy where the community is uniquely suited to grow new companies. But, unlike aerospace, there are many large communities that also have comparative advantages and have prioritized energy innovation – such as Dallas, Houston, Los Angeles, and the Research Triangle Park area. Three good examples of near-term development of energy technologies include: improved energy efficiency around transportation (particularly flight) and hydrocarbons, decentralized energy storage technology creation and manufacturing (energy + aerospace), and internal durable parts for terrestrial flight, space expiration, and resilient communication equipment (energy, smart manufacturing, and aerospace). Each utilizes other unique strengths to provide a uniquely Wichita strategy.

Wichita, in particular, is well suited to design, engineer, and build the “guts” of energy efficiency equipment and then to provide maintenance and repair to broken or obsolete parts. Similar to aerospace, listening, positioning, and engaging with industry leadership must be part of the effort. Local industry leaders, however, are well-positioned to define the particular energy technologies on the forward edge of the market and primed for growth.

Some of these companies may already exist within the Wichita landscape, so the task will be to find, cultivate, mentor, and grow these energy entrepreneurs into healthy, growing companies. Energy is capital intensive and requires a long-range focus – because most of the innovations discussed will take decades to reach market maturity.

Smart Manufacturing

The future of manufacturing is inarguably evolving, decreasing dependence on humans and shifting dependence to technology and innovation. This transition was only hastened by the manufacturing disruptions caused by the COVID-19 pandemic. To this end, innovative new programs, such as Deloitte’s Smart Factory @ Wichita, have positioned Wichita to benefit from the production shift that seems primed to occur.

Re-shoring and attracting new robotic and artificial intelligence-driven facilities are attraction strategies that overlay the emerging opportunity in entrepreneurship. But, Wichita needs to create, recruit, retrain, and upskill talent targeted at the smart manufacturing opportunity – regardless of filling relocated, new, retained, or created jobs. Many of the initial entrepreneurial opportunities will be in support of smart manufacturing – not necessarily the manufacturing itself.

This industry is also capital intensive, and new operations will require significant investments. But, the community has started to make the investments necessary to create opportunities for smart manufacturing entrepreneurs. Another adjacent challenge is payment structures in manufacturing. If Wichita is to succeed in this industry, one way to jumpstart the manufacturing support structure is to focus on local recipients to keep payment terms simple and cycles short. This would create a significant OPEX (operational expenses) capital advantage for local companies supporting this industry.

Such production may also include expansion in 3D printing, AR/VR high-end visualizations, and new ways to integrate finished products into built landscape analyses. Currently, this is still more academic development than economic development, but Wichita has an opportunity for that which few other communities are as ready. Within this, it also reveals some talent-related gaps. While the region has significant engineering talent, this ecosystem transformation will require more information technology talent than can currently be produced from the local education system. Thus, building software and IT-related talent development programs focused on smart manufacturing is a must to execute on this opportunity. Forward-thinking communities have integrated this type of programming through K-12, community colleges, and workforce development programs - akin to the aerospace programs in the region.

The last major hurdle may be the population size and growth rate. Wichita's population growth rate remains below the peer community average. Talent will remain a top issue that is exacerbated by entrepreneurial success - not resolved by it. That being said, being intentional about telling stories about entrepreneurial success, particularly in key engineering markets (such as Los Angeles and Huntsville) may make attraction and recruitment easier in the future. Culture and entrepreneurial dynamism can drive talent and engineering graduates to a region[12].

[12]Weirdly, technology blogs and traditional media have shown more inclination to tell stories about new companies rather than existing ones when we surveyed the data. For example, in Nebraska, over the course of 2020, there were more stories about the limited number of startups in Tech Crunch, Venture Beat, and Forbes than about existing technology companies. This may not be universally true, but in the Midwest, startups appear to be more attractive to editors than existing company technology successes.

Agriculture Technology

Agriculture and agtech are not well-defined industries in economic papers, but in this case, the opportunity for Wichita's entrepreneurial opportunity is clear: proteins. Wichita already has a key industrial headquarters in Cargill Protein, but it also has an incredibly high surrounding population tied to cattle feeding and meat processing. This creates a variety of knowledge sets that can be leveraged for new innovation and entrepreneurial startups. While more similar to other regional markets regarding the opportunity in Ag and agtech, Wichita has multiple differentiated or important assets to deploy to facilitate company creation.

The key to this and other emerging opportunities is that Wichita needs to build a beachhead associated both with its process and its expertise. Virtually every community in the Midwest is attempting to build an ag-tech hub. Many other areas beyond the Midwest describe agriculture or other commodity production as their region's primary industry. However, focusing on very specific niches within this industry creates unique understanding and opportunities.

Whether in protein or aerospace, Wichita must show discipline around industry definition and technology identification. To build a protein-specific process, Wichita should identify specific protein-related problems at five specific focal points – creation, raising, feeding, processing, consumption.

These focal points all represent slightly different types of long-term challenges. For example, one major shift in behavior is the environmental footprint of protein when a consumer purchases protein (in whatever form). Thus, acknowledging this issue may reveal opportunities – such as local herd management, small-batch processing, or software that tracks the environmental effect of a serving. Each of these may be desired at some future point – but the development requires a deep level of expertise that is not possessed by industry outsiders.

For example, tracking, tracing, and communicating information to consumers (of food) is of growing importance. In fact, more than 100 startups (many backed with significant venture investments) launched in these spaces during 2019 and 2020. Thus, software that manages logistics and information about protein sources is emerging – but much of it is being created away from the protein sources (Silicon Valley and New York have a disproportionate share). Rather than widening the gap between protein and software production, communities like Wichita can engage users, test in the field, and potentially develop better software solutions than those companies more removed from the space.

Thus, by intentionally leveraging protein expertise and coupling it with software development and process engineers, Wichita can utilize its geographic position to build new startups in this space. To mobilize the necessary community and industry support, Wichita should better inventory the regional and state-wide experts in the five stages – creation, raising, feeding, processing, and consumption. Following that, use these resources to identify opportunities for process improvement or value creation. Hosting and maintaining this type of dialogue will reveal opportunities to build startups that solve existing and emerging problems in the protein industry.

Emerging Fields

There are also many emerging fields[13] that sit in the periphery of Wichita's particular strengths. For example, smart manufacturing and aerospace overlap along certain manufacturing practices, such as smart materials, sensors, and internal electronics/avionics. These are potential growth areas for Wichita's startup scene, but they are not currently deep within the region industry clusters. Wichita should be aware of emerging startups in these areas – nurturing them with customers, connections, and capital.

Specifically, for many of these emerging fields, partnerships with Wichita State and other universities around SBIR/STTR grant awardees may be particularly effective. One key element of the SBIR/STTR process is the Phase II-III transition when many companies seek to establish competitive viability for their product. Building a pipeline of customers that could pull SBIR award companies to Wichita (with founders moving onto the WSU faculty or Innovation Campus) would be a strong inducement unique to the region.

A good example of a slightly different but similar program, that has paid entrepreneurial dividends for a region, is the USTAR (Utah Science Technology and Research Initiative) program adopted by the State of Utah. It has helped induce the relocation of multiple labs and experts from universities such as Northwestern and the University of Arizona to universities in Utah. This program was tactical – in that it involved less than \$40 million in state funds, but targeted specific labs identified to accelerate targeted industry growth opportunities for the university and the state. They also provided linchpin focal points for the emergence of talent, evolution of industries, and new companies.

[13]Clean energy, Internet of Things – particularly sensors, smart materials for manufacturing, engineered product software, new material prototyping innovation, etc.

Main Street Business Position

Much of this paper is written and applies to HGBs, so MSBs and their advocates may say “what about me”. The reality is that MSBs benefit from the growth of the community. Exporting businesses provide wealth and drive growth. However, MSBs also benefit from more robust ecosystems in the areas targeted. HVAC companies, plumbers, and electricians are critical providers of service to new buildings and expanded technical infrastructure. Restaurants and salons benefit from people having more discretionary income, as many engineers and technical workers are likely to command. New real estate will be built helping agents, contractors, and architects. New children will be born helping doctors, daycares, and private schools. The point is that growth spills over from the targeted areas above to include many MSBs too.

However, it is essential that this growth also acts to lift up entrepreneurs of color. It is essential that it provides resources and opportunities in areas of Wichita stricken by poverty. Those two statements are not synonymous, and actively working to facilitate success for these groups, particularly when they overlap, will be a long-term challenge that requires attention and focus. Wichita’s success has not always flowed to all of its residents. Northern suburb MSBs have often replaced or outstripped long-standing urban businesses. With this in mind, it is incumbent on Wichita and its leadership to consider the impact of success on MSBs, the MSB systems, and particularly those starting businesses from positions of weakness.

Conclusion

In conclusion, Wichita’s nascent entrepreneurial ecosystem needs a boost. Finding entrepreneurs is the first step – and they do exist. Through our research we have bumped into many that feel isolated and question their ability to grow a great company in Wichita. Therefore, the first step is to find and help these existing entrepreneurs.

To do this, the Greater Wichita Partnership and the broader community need to make entrepreneurs and their startups a priority. This is not just about acknowledging their existence, but building the systems that support entrepreneurs. This is essential to the community’s long-term ability to birth and nurture new companies.

As the economy evolves in the twenty-first century, Wichita has a unique opportunity to lead in key industries – including aerospace and smart manufacturing. But, it needs to get started. Many other communities are angling for these opportunities because of their large market sizes and the new technical revolution emerging in both areas.

It will require a system-wide, long-term view that places entrepreneurs at the center of the effort. It will require building systems that are attractive not just to local businesses, but those from around the world in key industrial targets. And it requires the will to build something greater. This "will" is revealed by early indicators – such as NXTUS, Groover Labs, and Wichita State. But, more financial capital for companies is necessary as is the discovery of more potential entrepreneurs for key sectors.

In short, Wichita has a path, but, as with most things that signal greatness, it will be a difficult one. It requires courage to have a vision and work towards it for a full generation. But, that is what is needed, a generational effort to evolve Wichita into something greater.



