



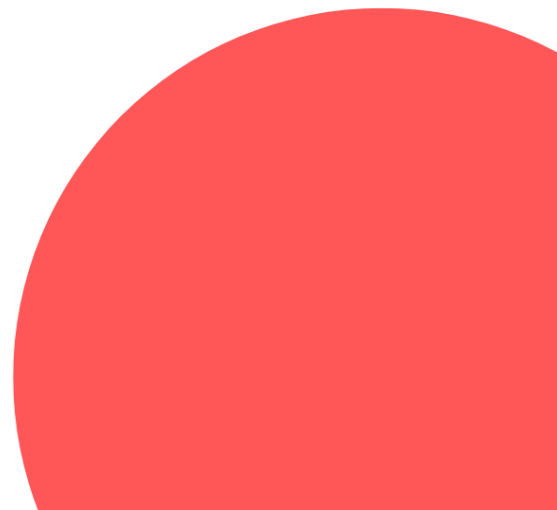
**NORTH IOWA AREA  
COUNCIL OF GOVERNMENTS**

**REGIONAL  
ENTREPRENEURSHIP  
ASSESSMENT &  
STRATEGY**

Prepared For :

NIACOG

525 6th St. S.W.  
Mason City, Iowa



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## EXECUTIVE SUMMARY

An entrepreneurial ecosystem is part of the broader economic landscape of businesses, consumers, and support organizations. Every region has an entrepreneurial ecosystem whether they recognize it or not, but some regions take more action to support and grow theirs. This Regional Entrepreneurship Assessment & Strategy report is designed to help the North Iowa Area Council of Governments (NIACOG) region get a detailed perspective on their entrepreneurial ecosystem and provide recommendations for opportunities they may want to explore and invest in.

The main goal of this Regional Entrepreneurship Assessment & Strategy is to identify and analyze key factors related to fostering a strong entrepreneurial ecosystem in the NIACOG region. The term “entrepreneurial ecosystem” describes an environment that has a mix of technical support, capital, networks, training, and regulatory requirements which support emerging entrepreneurs.

The research is developed around the Delta Regional Authority’s Small Business Entrepreneurship Policy Framework (Stapleton, 2012). According to this framework, entrepreneurial ecosystems are driven by five factors:

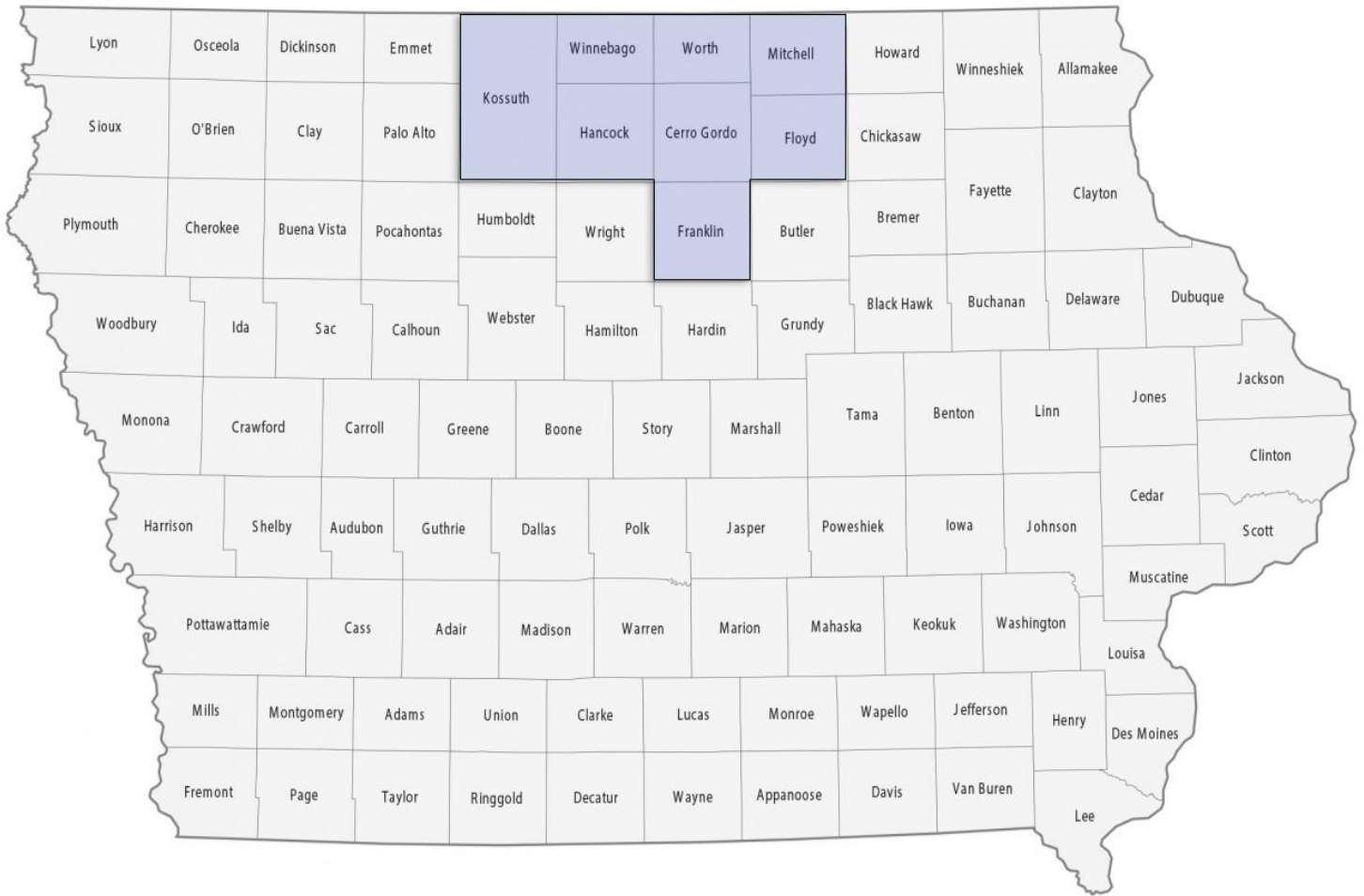
1. Developing a Pipeline of Educated and Skilled Entrepreneurs
2. Cultivating Technology Exchange and Innovation
3. Improving Access to Capital
4. Promoting Awareness and Building Networks
5. Optimizing the Regulatory Environment

The NIACOG region clearly has a strong entrepreneurial ecosystem in place already. This is evident from both the data we’ve analyzed and the many resources, programs, and activities available in the region. Some of the regional strengths within the NIACOG entrepreneurial ecosystem include:

- Large variety of programs and resources supporting entrepreneurs and small businesses
- Focus on youth entrepreneurship clearly present
- High rate of entrepreneurial activity from new business starts and small business expansions
- Stable growth in establishments that sell products outside of the region
- Strong patent activity
- Access to high-speed internet
- Strong industry clusters around manufacturing and agriculture

In the Recommendations section we outline several opportunities to build on or develop for the NIACOG region to further support their entrepreneurial ecosystem. The recommendations are intended as suggestions for resources or activities the region could develop and implement within the existing organizations supporting the regional entrepreneurial ecosystem. Most are focused on ways to add more value to entrepreneurs and small business owners by building on current programs and adding new components to them. Effective entrepreneurship development efforts are more likely to succeed when they are focused on the entrepreneurs, leverage existing assets, led by few but impacting many, driven by collaboration, and inclusive of all stakeholders.

# NIACOG REGIONAL MAP



## INTRODUCTION AND OVERVIEW

Economic, business, and workforce development efforts are important issues in Iowa. As we move beyond the initial challenges faced during the first years of the Covid pandemic, many communities are now seeking to prepare and address the next set of challenges. While lingering impacts from supply chain issues to financial uncertainty to changes in the workforce landscape are still playing a role in today's economic environment, the issues ahead will look different.

When we zoom in on the entrepreneurial ecosystem, as a subsection of the overall economy, we can't ignore the bigger picture. The behaviors, needs, and challenges of fostering entrepreneurship and innovation are intertwined with everything else in the national and global economies.

In the past, many communities focused significant portions of their economic development efforts on recruiting large and medium sized companies to their region. These were often manufacturing facilities, warehousing, and other industrial operations. While the factories and warehouses could provide stable jobs with good wages, they didn't always address all the long-term needs for a community to thrive. One approach that has been shown to add value to economic development efforts is adding a focus on supporting the entrepreneurial ecosystem. If this ecosystem is improved, then more businesses will start, more diversity in job opportunities will ensue, improved workforce skills will be realized, and innovative behaviors are more likely to lead to economic impact.

Analyzing the entrepreneurial ecosystem is important for several reasons. For one, it has become evident that young, small growth-firms are responsible for the vast majority of new jobs in the country (Haltiwanger et al., 2013). Additionally, it is clear that the old economic development method of focusing solely on recruiting large firms is less likely to be effective in today's economic environment. This is particularly true for rural economies (Macke et al., 2014).

**The first objective of this report is to provide a better understanding of the entrepreneurial ecosystem in the NIACOG region.** This is achieved through a process of extensive information-gathering from data sources and research.

**The second objective is to develop actionable recommendations based on the findings from the first objective.** These recommendations will help guide the region's efforts towards fostering long-term entrepreneurial development initiatives.

The research conducted for this report is focused on the geographical region of North Iowa Area Council of Governments. The region comprises eight counties: **Cerro Gordo, Floyd, Franklin, Hancock, Kossuth, Mitchell, Winnebago, and Worth.**

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## METHODOLOGY

The methods used in this analysis gathers information from a number of sources both quantitative and qualitative. Each source provides a unique perspective on the strengths and challenges of the NIACOG region's entrepreneurial ecosystem. We mainly use three distinct research approaches to gather and analyze information from the different sources:

1. Secondary data profiles - The secondary data sources are objective and provided by federal and private data systems, including:
  - a. The National Establishment Time Series (NEST) - The Business Dynamics Research Consortium (part of the Institute for Business & Entrepreneurship in the University of Wisconsin System) under their Your Economy platform.
  - b. Industry and industry cluster data - Economic Modeling (Emsi)
  - c. Occupational workforce data - Economic Modeling (Emsi)
  - d. General data - U.S. Census, Bureau of Labor Statics, etc.
  - e. Innovation Intelligence Index data - Statsamerica (The Indiana Business Research Center at Indiana University's Kelley School of Business)
2. Regional programs and resources - We approach this by searching for specific resources, programs, organizations, events, etc. related to each of the five drivers of the entrepreneurial ecosystem. We look for evidence to help assess what can easily be discovered through basic search via Google, what is available to entrepreneurs and business owners, and whether some resources are “hard to find” due to lack of promotion or information. To ensure that we assess how easy/hard it is to find and access information and programs on relevant matters, we use three individuals with no knowledge of the region or expertise in entrepreneurial ecosystem research to see what they find when asked to search for information. These are basically three individuals who represent regular people that might be interested in starting or growing a business. We use their findings and feedback on how long it took to find information and how easy it was to understand as an indicator of how easy it would be for a regional person in the NIACOG region to find the same information.
3. Review of regional programs and resources - We approach this by reviewing the information provided on websites, social media pages, articles, and other online content about relevant programs and resources for each of the five drivers of the entrepreneurial ecosystem.

Recommendations for the entrepreneurial ecosystem are based on the information obtained from these sources. Every effort was made to ensure an accurate interpretation of the information gathered.

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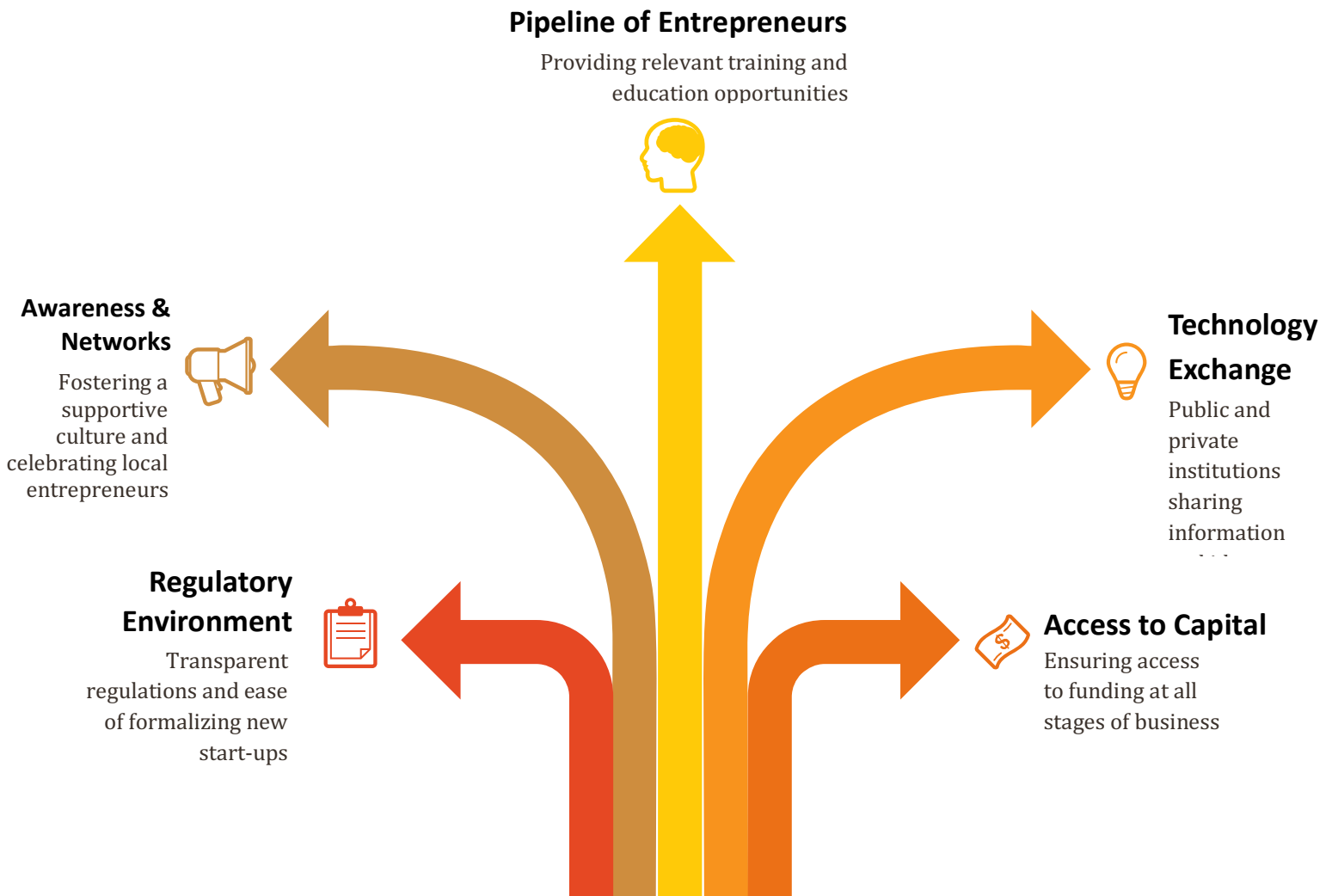
## POLICY FRAMEWORK

The Small Business and Entrepreneurial Policy Framework (Stapleton, 2012) is a strategic development tool created by the Delta Regional Authority as a roadmap for creating and fostering entrepreneurial ecosystems in local communities. The five key drivers of the framework are: (1) Developing a Pipeline of Educated and Skilled Entrepreneurs; (2) Cultivating Technology Exchange and Innovation; (3) Improving Access to Capital; (4) Promoting Awareness and Building Networks; and (5) Optimizing the Regulatory Environment.

Using the framework as a strategic roadmap helps keep the focus on relevant issues facing today's entrepreneurial ecosystems. The long-term goals are to help spur job growth through entrepreneurial activity, foster an innovative business environment, and create long-term regional competitive strengths. Each component of the framework provides insight into what is currently happening in the NIACOG region, as well as ideas for new initiatives that could help foster the future of the entrepreneurial ecosystem.

For the framework to have its intended impact it is important to understand that it must interact with broader economic development efforts and policies. Furthermore, for the recommendations to be successfully implemented, a diverse group of stakeholders must work toward common goals and mutually beneficial relationships must be established. Stakeholders include entrepreneurs, innovators, existing businesses (both small and large), elected officials and policy makers (local, state, and federal), educational institutions, social networks, and community advocates.

Detailed explanations of each of the five drivers are laid out in the “Five Drivers of Entrepreneurship” section. Before we dive into the five drivers, we start with a broader look at the region’s demographic, economic, and business landscape in the next section.



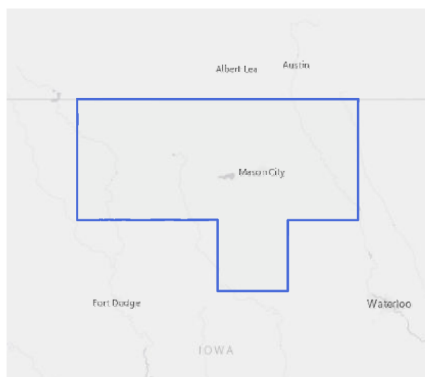
## PROFILE OF THE REGION

The eight-county region of NIACOG is what we could consider a mostly rural area with one larger community, Mason City. While there is economic activity across the entire region, much of what we commonly associate with entrepreneurial activity and resources is found in Mason City. As a regional population-center this is very common for rural regions. This does not mean, however, that economic and business activity that can support an entrepreneurial ecosystem is only found in Mason City. As we see throughout this report, the keys to fostering the entrepreneurial ecosystem in this region can, and will have to, be found and supported from all areas.

As the Population Snapshot infographic below shows, the NIACOG region is home to a little over 120,000 residents, but have experienced a small population decline in recent years. It is also a region with a higher proportion of the Greatest Generation, Baby Boomers, Gen Xers compared to state of Iowa. 46.9% across all of Iowa as compared to 54.8% from those three generations in the NIACOG region. NIACOG also has a lower wealth index of 74 compared to 81 for the state. But, average mortgage spending and the percentage of income spent on a mortgage is lower in NIACOG than the overall state, indicating a more affordable region.

Overall, this is not a region that is doing incredibly poorly or incredibly well, but rather a region that has its own set of strengths, weaknesses, challenges, and opportunities to move forward with a strong economy and ways to create value from entrepreneurial activities.

We next move to a detailed breakdown of regional trends.



## POPULATION TRENDS AND KEY INDICATORS

NIACOG

122,984	52,972	2.27	45.6	\$55,396	\$131,301	74	214	21
Population	Households	Avg Size Household	Median Age	Median Household Income	Median Home Value	Wealth Index	Housing Affordability	Diversity Index

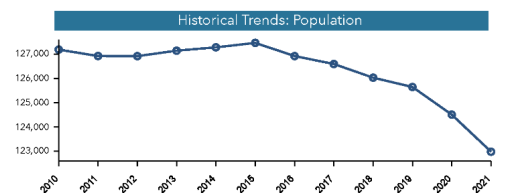
### MORTGAGE INDICATORS



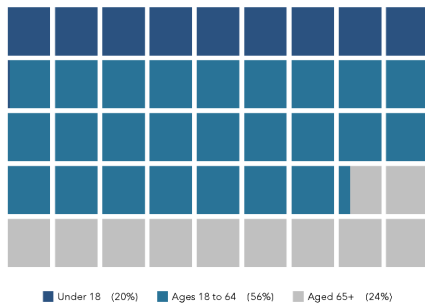
**\$8,081**  
Avg Spent on Mortgage & Basics



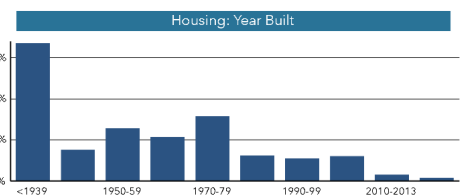
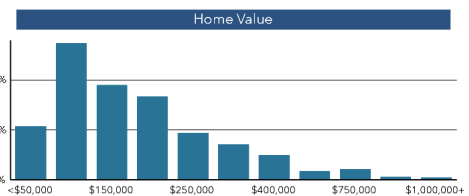
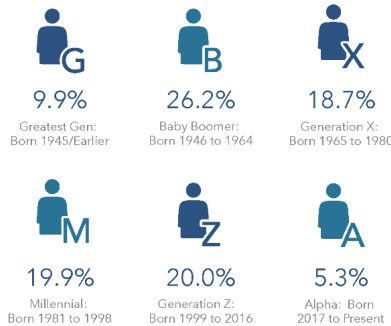
**9.9%**  
Percent of Income for Mortgage



### POPULATION BY AGE



### POPULATION BY GENERATION



This infographic contains data provided by American Community Survey (ACS), Esri, Esri and Bureau of Labor Statistics. The vintage of the data is 2015-2019, 2021, 2026. © 2022 Esri



## DEMOGRAPHIC AND ECONOMIC DYNAMICS

The first deep dive we take into NIACOG’s demographic and economic dynamics is a look at population trends. At the root of all entrepreneurial activity are people. While we know that “quality over quantity” matters for an entrepreneurial ecosystem to thrive, it does help to have population growth. The NIACOG region experienced a decline of 3.28%, or a little more than 4,000 residents, in the 2010 to 2020 period. Current population data indicates that the negative trend continued in 2021.

None of the individual counties showed a population increase, suggesting that this is a regional challenge and not isolated areas causing the downward trend. Considering that the state of Iowa saw a 4.73% population increase, exploring why people are leaving, or not locating into the NIACOG region, would be a good step towards exploring the underlying needs of residents to stay there.

	2010 Population	2020 Population	2010-2020 Change	2010-2020 % Change
NIACOG	127,258	123,083	-4,175	-3.28%
Cerro Gordo	44,151	43,127	-1,024	-2.32%
Floyd	16,303	15,627	-676	-4.15%
Franklin	10,680	10,019	-661	-6.19%
Hancock	11,341	10,795	-546	-4.81%
Kossuth	15,543	14,828	-715	-4.60%
Mitchell	10,776	10,565	-211	-1.96%
Winnebago	10,866	10,679	-187	-1.72%
Worth	7,598	7,443	-155	-2.04%
Iowa	3,046,355	3,190,369	144,014	4.73%

Source: US Census

The next considerations for understanding the regional population is to look at age brackets. Ideally a region has a balance of children, young adults, and older adults that ensure the next generation of entrepreneurs will be there, that some are currently available, and there is a source of experienced people to guide the first two.

The NIACOG region appears have a slightly older population when compared to the overall state. This is not uncommon for rural and semi-rural areas, but something the region still has to take into consideration in economic planning efforts. For the entrepreneurial ecosystem, it may add challenges to growing the next generations of startups and growth companies. Young adults in the region may be less inclined to stay and start businesses if their peers are not staying. Attracting talent from outside is harder when there are fewer peers in a region to champion the reasons to move there.

	0-19	20-39	40-59	60+
NIACOG	29,540 (24%)	26,848 (22%)	29,079 (24%)	37,615 (31%)
Cerro Gordo	9,959 (23%)	9,635 (22%)	10,272 (24%)	13,261 (31%)
Floyd	3,900 (25%)	3,304 (21%)	3,792 (24%)	4,632 (30%)
Franklin	2,511 (25%)	2,108 (21%)	2,349 (23%)	3,051 (30%)
Hancock	2,516 (23%)	2,310 (21%)	2,544 (24%)	3,425 (32%)
Kossuth	3,558 (24%)	3,062 (21%)	3,337 (23%)	4,872 (33%)
Mitchell	2,732 (26%)	2,297 (22%)	2,511 (24%)	3,026 (29%)
Winnebago	2,678 (25%)	2,420 (23%)	2,396 (22%)	3,185 (30%)
Worth	1,679 (23%)	1,718 (23%)	1,876 (25%)	2,169 (29%)
Iowa	820,896 (26%)	833,373 (26%)	757,036 (24%)	779,064 (24%)

Source: Economic Modeling Inc (EMSI)

The last considerations we look at in this section are some of the key economic factors that are important for an entrepreneurial ecosystem. While there are many economic factors we could look at, we use the three in Table 1.3 because they provide a good variety of economic perspectives. And, if the region wants to track progress in the future, these are also data points that are tracked consistently over time.

The median household income is lower in the region when compared to the state, but the individual counties vary considerably. Hancock County is the only one higher than the state median household income, but Mitchell and Worth are both close. Looking at income levels as a factor in the entrepreneurial ecosystem is a helpful way to get a sense of economic opportunity for entrepreneurs. For one, it is often harder to launch a local business in a community where consumers have limited disposable income. Low-income levels also tend to mean fewer individuals with large enough net worth's to act as potential private investors/financial partners.

The cost-of-living index is slightly higher than the state index, but again it varies from county to county. Not surprisingly, counties with relatively high median household income also lean towards the highest cost of living. One reason this is important to explore for an entrepreneurial ecosystem goes back to the discussion on age brackets in the region. Showing an affordable cost of living can help make a region more attractive to young adults and young families. While they may not look at it on their own when deciding where to live, a region can use it to market itself and create more awareness for its current younger residents and to attract potential young adults from other areas.

The last factor looks at poverty in the region. Simply put, poverty is bad for the entrepreneurial ecosystem. Being under financial constraints and stress does not tend to lend itself well to the ability and opportunity to venture into entrepreneurial endeavors. The NIACOG region fortunately appears to be mostly in line with the state poverty rate. While there is a fair amount of variation between counties, only Franklin County stands out as 12.66% poverty compared to the state rate at 11.38%.

Table 1.3 – Economic Factors			
	Median Household Income (2021)	Cost of Living Index	Percentage of Households below poverty
NIACOG	\$53,396	98.9	10.80%
Cerro Gordo	\$53,963	98.6	11.36%
Floyd	\$50,406	96.7	11.86%
Franklin	\$56,419	99.5	12.66%
Hancock	\$61,761	100.8	10.98%
Kossuth	\$56,073	98.9	10.83%
Mitchell	\$58,302	102.2	6.84%
Winnebago	\$49,870	94.8	9.53%
Worth	\$57,130	99.4	8.89%
Iowa	\$60,523	97.8	11.38%

Source: Economic Modeling Inc (EMSI) and ACS 2015-2019

## EDUCATIONAL DYNAMICS

Next, we look at educational dynamics. Having a well-educated population helps create a stronger pool of knowledge and ideas to draw from when working on growing entrepreneurial ventures. This applies both to finding the right team/employees for a new venture and to learning from partners or mentors. In both cases,

it benefits the individual entrepreneurs when the population has a variety of people with different educational attainment levels. This does not mean that pushing for more people to get bachelor’s or master’s degrees is what is needed, but rather that having diversity in educational levels and disciplines is helpful. Therefore, we also have to recognize that alternative sources of education and training are critical.

For the purposes of this section, we start by simply looking at the broad picture of overall educational attainment. Exploring what specific disciplines or alternative education people in the NIACOG region have obtained is beyond this analysis. However, we review what entrepreneurial/business trainings the region has to offer in later sections on the different drivers of the entrepreneurial ecosystem.

The NIACOG region shows a relatively modest level of educational attainment. In regions with a relatively high concentration of agriculture and manufacturing businesses, this is fairly common. Some counties, such as Cerro Gordo, Hancock and Winnebago, have relatively high rates of residents with bachelor’s degree or higher. While there are a lot of different opinions on whether college degrees really matter when it comes to entrepreneurial success, it is hard to argue that having a well-educated population is a bad thing for the entrepreneurial ecosystem. As suggested above, entrepreneurial success is not a solo-show and every business that takes off need people internally to work and grow the company and people externally to provide professional services and support. For the NIACOG region, the solution may not be to push more people through a formal bachelor or master’s degree, but exploring how educational providers and private industry can collaborate on programs and resources for the workforce to get continuing education that also count as degrees.

Table 2.1 - Educational Attainment (2022)

	High School or less	Some College	Associate’s Degree	Bachelor’s Degree	Graduate Degree or Higher
NIACOG	41.0%	21.6%	15.3%	16.3%	5.7%
Cerro Gordo	37.5%	22.7%	15.3%	16.8%	7.6%
Floyd	44.4%	19.5%	15.2%	16.5%	4.3%
Franklin	42.5%	22.7%	15.4%	15.4%	3.9%
Hancock	42.0%	17.0%	14.1%	22.0%	4.9%
Kossuth	43.5%	22.8%	17.0%	13.2%	3.6%
Mitchell	43.2%	20.7%	14.8%	14.7%	6.5%
Winnebago	40.8%	22.0%	14.6%	17.1%	5.5%
Worth	42.6%	23.5%	15.6%	13.4%	4.7%
Iowa	37.9%	20.6%	11.8%	19.9%	9.7%

Source: Economic Modeling Inc (EMSI)

**ESTABLISHMENT DYNAMICS**

In this section, we dive into establishment trends. An “establishment” in this data is defined as a business unit that provides goods or services at a single physical location. That means that if one company has two or more locations in the region, each location counts as “1”. Establishment sizes are broken into five brackets which helps us better explore trends in the entrepreneurial ecosystem.

The main questions we want to explore with this data is, “where is growth or decline in establishments occurring?”.

Overall, there was a decline in total establishments between 2010 and 2020. But between 2010 to 2015, there was an increase. It's important to note that between 2015 and 2019, the total number of establishments was fairly stable ranging from 8,062 in 2015 down to 7,846 in 2017, but then increased to 8,178 in 2019. It was only by the end of 2020 that it dropped significantly to 7,494, likely caused by business closures due to covid-19 pandemic. When we look even closer at the establishment dynamics, we find that 1,369 establishments were lost and only 685 new ones gained for 2020, resulting in the net loss of 684. The second biggest year with a net loss was 2007 at 266 total net loss of establishments. And, when looking at the net change in the years leading up to 2020, we find that 2018 and 2019 both had net gains of establishments at 135 and 197, respectively. All of this indicates a region that actually has a strong foundation for supporting the growth of new establishments, but just as almost all other areas experienced a decline in 2020. See appendix I for more detail on the year-to-year establishment trends for the region.

When we look at the individual establishment brackets, we find:

- Self-employed – decrease between 2010 and 2020, but what is interesting is that it has actually gone up since 2015.
- 2 to 9 – largest decline between 2010 and 2020 – increased from 2010 to 2015, which is likely due to many that started out as self-employed grew into this bracket.
- 10 to 99 – most stable – this is important, because many regions put significant resources and support behind larger companies with 100+ employees as well as startups, but don't necessarily have a strong focus on these small companies.
- 100 to 499 – small and consistent decline – some of them may simply have decreased in employees and moved to the 10 to 99 bracket, but that can't account for all 10 fewer between 2010 and 2020. Considering that when just one of these establishments closes it means a loss of more than a hundred jobs, they play a critical role in the economic foundation of the region.
- 500+ - appears to be only one less, so overall actually good.

Besides looking at the trends within each establishment size bracket, this data also provides insights on where annual changes comes from. Specifically, we can look closer at new establishments gained from "starts" vs "move in", and establishment losses from "closed" vs. "move out". Since 2010, the vast majority of new establishments have come from "starts", with an annual range between a low of 229 in 2011 and peak of 1,118 in 2012. Most years new establishment "starts" were around 400 to 600. But it's noteworthy that 2018 had a strong 1,065 "starts" and 2019 a fairly high 655. In other words, leading up to the 2020 pandemic the region appeared to have a healthy amount of entrepreneurial activity from new businesses starting. Very few establishment gains, however, came from "move in". Put simply, new establishments added in the region from a company that have moved their location into the region ranged from a low of 7 to a high of 30. When we look at losses from "closed" establishments we find a peak in 2020 of 1,342 lost establishments and a low of 219 in 2013. Losses from "move out" establishments ranged from a low of 8 to a high of 27. In other words, a very small portion of establishment losses are a result of companies moving a business location out of the region. This provides important context to the discussion around traditional economic development efforts that often focus on recruiting new companies from outside. While this does play an important role in overall economic development, this data suggests opportunities to focus more on locally grown companies as a strong source of economic development activity (see appendix I for full detail on gains/losses data).

One key insight from the establishment dynamics is that most of the year-over-year change occurs in the number of "2 to 9" sized establishments. This isn't really surprising, since many of these are startups that got off the ground but within the a few years struggle and close. However, what a region such as NIACOG can do is to explore the specific resources and support it brings to these micro-establishments. They're often somewhat overlooked in the discussions on supporting the entrepreneurial ecosystem, in part because a lot

of focus ends up on either the “startups” or the “20-50 employee growth startups”. And another reason these “2 to 9” sized establishments are so important is the sheer number they make up of the total establishments. In NIACOG it has historically been around 5,000 to 5,500, or more than 65%.

See Appendix I for detailed establishment trends data for the region.

Establishment Size	2010	2015	2020	2010-2020 Change
Total	7,768	8,062	7,494	-274
Self-employed	1,549	1,294	1,487	-62
2 to 9	4,833	5,406	4,631	-202
10 to 99	1,288	1,270	1,289	1
100 to 499	89	83	79	-10
500+	9	9	8	-1

Source: youreconomy.org

We also ran the establishment trends for each individual county. Since the focus of this report is regional, we won’t dive deep into the establishment dynamics of each county. Rather, we include the county level data to provide context of where establishment trends are clustered and whether the region is reasonably balanced in establishments.

Main highlights for each county from 2010 to 2020:

- Cerro Gordo – Small increase in self-employed, but may be from 2 to 9 establishments shrinking. But positive that 10 to 99 increased.
- Floyd County – Decrease across the board
- Franklin County – Decrease, or no change, across the board
- Hancock County – Decrease, or no change, across the board
- Kossuth County – Increase in 10 to 99, but decrease in all smaller, and no change in 100 to 499
- Mitchell County – Small decrease in smaller establishments, but one increase in 100 to 499
- Winnebago County – Increase in all, expect one less 500+ and no change in 10 to 99
- Worth County – Increase in 10 to 99, but decrease, or no change, in the others

Overall, each county appears to have followed similar trends with small overall decline in total establishments. Winnebago is the main outlier with a total gain of 57 between 2010 and 2020, and Worth with a small gain of 17 over this time period. The main thing to note is that where there are gains in establishments they primarily come from the smaller sized establishments, further supporting the importance of the entrepreneurial ecosystem.

Establishment Size	2010	2015	2020	2010-2020 Change
Total	2,893	2,889	2,827	-66
Self-employed	533	439	610	77
2 to 9	1,776	1,875	1,619	-157
10 to 99	545	542	564	19
100 to 499	33	27	28	-5
500+	6	6	6	0

Source: youreconomy.org

Table 3.3 – Floyd County Establishment Trends				
Establishment Size	2010	2015	2020	2010-2020 Change
Total	820	833	752	-68
Self-employed	158	129	133	-25
2 to 9	510	551	475	-35
10 to 99	140	145	138	-2
100 to 499	11	7	5	-6
500+	1	1	1	0
Source: youreconomy.org				

Table 3.4 – Franklin County Establishment Trends				
Establishment Size	2010	2015	2020	2010-2020 Change
Total	556	547	488	-68
Self-employed	122	87	82	-40
2 to 9	336	364	312	-24
10 to 99	89	88	85	-4
100 to 499	9	8	9	0
500+	0	0	0	0
Source: youreconomy.org				

Table 3.5 – Hancock County Establishment Trends				
Establishment Size	2010	2015	2020	2010-2020 Change
Total	630	637	605	-25
Self-employed	126	110	125	-1
2 to 9	403	439	391	-12
10 to 99	96	83	85	-11
100 to 499	5	5	4	-1
500+	0	0	0	0
Source: youreconomy.org				

Table 3.6 – Kossuth County Establishment Trends				
Establishment Size	2010	2015	2020	2010-2020 Change
Total	1,172	1,233	1,081	-91
Self-employed	258	203	197	-61
2 to 9	744	865	704	-40
10 to 99	158	152	168	10
100 to 499	12	13	12	0
500+	0	0	0	0
Source: youreconomy.org				

Establishment Size	2010	2015	2020	2010-2020 Change
Total	580	650	550	-30
Self-employed	121	120	96	-25
2 to 9	360	436	358	-2
10 to 99	94	88	90	-4
100 to 499	5	6	6	1
500+	0	0	0	0

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	728	834	785	57
Self-employed	151	143	174	23
2 to 9	460	564	494	34
10 to 99	105	112	105	0
100 to 499	10	13	11	1
500+	2	2	1	-1

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	389	439	406	17
Self-employed	80	63	70	-10
2 to 9	244	312	278	34
10 to 99	61	60	54	-7
100 to 499	4	4	4	0
500+	0	0	0	0

Source: youreconomy.org

## JOB DYNAMICS

In this section, we look at job trends based on the five establishment size brackets. Understanding the dynamics of jobs within different establishment sizes is a good way to look at how a region can support the entrepreneurial ecosystem. We often look to the larger companies as job creators, but in many cases the small and medium sized companies not only account for the most jobs total, but also play a key role in creating new jobs. The argument is not that communities should invest in and support large companies less, but rather that adding more support and investment into small and medium sized companies tend to have a strong economic impact from job stability and job creation.

Looking at the overall picture, approximately 68% of jobs are in establishments with fewer than one hundred employees. And more than 30,000 of those jobs are in the 10 to 99 establishment size. With over 23,000 jobs in larger establishments, however, this is also a region that gains a lot of its economic base from those bigger companies. From the standpoint of the entrepreneurial ecosystem, the positive opportunity is that individuals who want to venture out on their own to explore their own business ideas, might be better able to do that

knowing that either there are stable jobs from regional companies to fall back on in case their own venture doesn't work out, or look at both the companies and their employees as potential customers depending on the type of venture they want to start. Regardless, the NIACOG region appears to have a good balance of self-employed, small, medium, and larger companies.

When we look at the timeline of job trends from 2010 to 2015 and to 2020, the region shows an overall loss of more than 3,000 jobs. However, when we look at the year-over-year (See Appendix I for detail), we find that from 2015 to 2019 the region actually increased to a little over 77,000 total jobs, but in 2020 experienced the same dramatic decline as so many other areas did.

At first glance, it appears that the largest companies with 500+ employees have been the most stable and created new jobs over the 10-year period. But, when we look closer on a year-over-year basis, we find a more nuanced picture. From 2010 to 2019, jobs in the 2 to 9 sized establishments actually increased by more than 2,000, whereas all the other establishment sizes decreased in total jobs. But with the 2020 pandemic, it appears that the small and medium sized companies were hit hardest, while the largest companies managed to stay strong in that year (See Appendix I for detail).

An important take-away from the jobs trends is that the NIACOG region appears to have a strong base of entrepreneurial talent that are supporting jobs in the small and medium sized companies already. And the region is also fortunate enough to have a strong presence of larger companies that support significant job stability. See Appendix I for detailed jobs trends data.

Establishment Size	2010	2015	2020	2010-2020 Change
Total	76,359	73,863	73,325	-3,034
Self-employed	1,549	1,294	1,487	-62
2 to 9	18,154	19,887	17,883	-271
10 to 99	31,767	29,810	30,759	-1,008
100 to 499	15,463	14,246	13,510	-1,953
500+	9,426	8,626	9,686	260

Source: youreconomy.org

We also looked at the job trends for each individual county. But similar to the Establishment Trends, we won't take an in-depth look into the job dynamics of each county.

Main highlights for each county from 2010 to 2020:

- Cerro Gordo – Overall a decline in total jobs, mostly from losses in the 100-499 establishment size
- Floyd County – Overall a decline on total jobs, mostly from losses in the 100-499 establishment size
- Franklin County – Overall a small decline in total jobs
- Hancock County – Overall a decline on total jobs, mostly from losses in the 10-99 establishment size
- Kossuth County – Overall a decline in total jobs, but small gain in the 100-499 establishment size
- Mitchell County – Overall a small gain in total jobs
- Winnebago County – Overall a small gain in total jobs
- Worth County – Overall a small gain in total jobs

Overall, the individual counties are showing somewhat similar job trends, with relatively stable number of jobs across the establishment sizes. None of them appear to stand out as a major hub for job gains or losses. It's also important to keep in mind that all counties, except Winnebago, showed a fairly high loss in jobs from



2019 to 2020. In the years leading up to 2020, all counties performed well across the different establishment sizes when it came to job stability and job creation.

Establishment Size	2010	2015	2020	2010-2020 Change
Total	34,534	31,922	33,413	-1,121
Self-employed	533	439	610	77
2 to 9	6,779	7,186	6,595	-184
10 to 99	13,865	13,336	13,914	49
100 to 499	6,430	5,534	5,208	-1,222
500+	6,927	5,427	7,086	159

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	7,955	7,352	6,632	-1,323
Self-employed	158	129	133	-25
2 to 9	1,938	2,052	1,779	-159
10 to 99	3,525	3,441	3,410	-115
100 to 499	1,834	1,230	810	-1,024
500+	500	500	500	0

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	4,606	4,310	4,417	-189
Self-employed	122	87	82	-40
2 to 9	1,234	1,254	1,182	-52
10 to 99	1,919	1,838	1,872	-47
100 to 499	1,331	1,131	1,281	-50
500+	0	0	0	0

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	5,210	4,961	4,389	-821
Self-employed	126	110	125	-1
2 to 9	1,441	1,605	1,439	-2
10 to 99	2,392	1,995	1,863	-529
100 to 499	1,251	1,251	962	-289
500+	0	0	0	0

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	8,524	8,202	8,406	-118
Self-employed	258	203	197	-61
2 to 9	2,740	3,053	2,587	-153
10 to 99	3,823	3,217	3,694	-129
100 to 499	1,703	1,729	1,928	225
500+	0	0	0	0

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	4,493	4,569	4,552	59
Self-employed	121	120	96	-25
2 to 9	1,371	1,541	1,421	50
10 to 99	2,226	2,033	2,192	-34
100 to 499	775	875	843	68
500+	0	0	0	0

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	8,001	9,422	8,152	151
Self-employed	151	143	174	23
2 to 9	1,739	2,077	1,829	90
10 to 99	2,748	2,782	2,571	-177
100 to 499	1,364	1,721	1,478	114
500+	1,999	2,699	2,100	101

Source: youreconomy.org

Establishment Size	2010	2015	2020	2010-2020 Change
Total	3,036	3,125	3,364	328
Self-employed	80	63	70	-10
2 to 9	912	1,119	1,051	139
10 to 99	1,269	1,168	1,243	-26
100 to 499	775	775	1,000	225
500+	0	0	0	0

Source: youreconomy.org

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## INDUSTRY DYNAMICS

We now move on to exploring the region’s entrepreneurial ecosystem and opportunities for it through the lens of industry dynamics. One of the key ideas with looking at the landscape of different industries is to gain insights into where entrepreneurs in the region might have opportunities or advantages. And for the region’s

entrepreneurial support organizations, this can be a useful approach to exploring where their efforts to provide support and resources might have the biggest impact. One example of industry-focused support for entrepreneurs is to develop peer-groups that are industry specific, so when aspiring entrepreneurs within that industry need help, they can connect with experienced peers from that particular industry.

The first dataset we look at breaks down job trends by Local, External, and Non-Trade industry sectors (Table 5.1). This is a helpful way to explore the types of industries that are driving the regional economy and creating employment opportunities. And where there are strong job trends also tends to be a good indicator of entrepreneurial opportunity. The three types are defined as follows:

- Local – Establishments that tend to sell their products/services to customers within the region. For example, restaurants, banks, real estate agencies, auto repair shop, brick and mortar retail, etc.
- External – Establishments that tend to sell their products/services to customers outside the region. For example, manufacturing, agriculture, distribution services, logistics services, tourism, etc.
- Non-Trade – Establishments that are non-profit (including hospitals), or government. For example, schools, local government, nonprofit hospitals, etc.

In the NIACOG region, the Local and Non-Trade industries both show an overall loss of jobs, while External industries have gained jobs between 2010 and 2020. All three have fluctuated with jobs year over year, but the External industries appear to have been the strongest and most stable. This is a good indicator that entrepreneurs looking to start or grow a business in External industries are in a good ecosystem to learn from and collaborate within.

The challenge is that for NIACOG’s entrepreneurial ecosystem to thrive over the long run, efforts to grow the Local and Non-Trade might be needed. As an example, if there’s a successful manufacturing company in one of the communities, but limited restaurants, banks, and retail, that company may end up struggling to retain and attract the workforce they need. And this also puts a damper on potential entrepreneurs that might see an opportunity in starting a business that fits within the manufacturing cluster (e.g., specialized marketing services for manufacturing companies).

Overall, this suggests both opportunities to explore how the region can bring additional support and resources to External industry companies and entrepreneurs to leverage the growth in those companies for further economic growth. And for the region to look across its communities and identify where gaps in Local and Non-Trade companies might present a risk.

Tables 5.1 - Local, External, and Non-Traded job trends - NIACOG				
	2010	2015	2020	2010-2020 Change
Local	30,201	29,185	26,541	-3,660
External	19,839	20,359	22,635	2,796
Non-Trade	26,319	24,319	24,149	-2,170

Source: youreconomy.org

Next, we dive into specific industries using the more traditional approach of NAICS (North American Industry Classification System). It’s important to note that we used a different data-source for this, because the data from Youreconomy does not provide industry details. This means that the definition of a business is not going to be “an establishment” but rather a “pay-rolled business location” which is very close but may in some cases differ a little bit in how it is collected and presented. The main purpose of looking at industry data, however, is to explore potential strengths and opportunities for the entrepreneurial ecosystem to leverage, so using a different data source is not going to affect the analysis in any negative ways.

The two data points we look at are total number of businesses and the 2021 Location Quotient (LQ). For total number of businesses, we want to compare both a time period and current number. This provides an idea of how the industry is doing in a general sense. For the LQ, we are looking at whether an industry is relatively concentrated in the NIACOG region as compared to the nation. In other words, if the LQ is above 1, it indicates that an industry might be stronger in this region than elsewhere in country as a proportion of total industries.

Industries that have grown in number of business locations since 2010 include agriculture, manufacturing, wholesale trade, transportation and warehousing, finance and insurance, management of companies, admin. and support and waste management and remediation services, educational services, healthcare and social assistance, and arts/entertainment and recreation. From this list, we find that agriculture and manufacturing have very strong LQs. Wholesale trade and healthcare and social assistance also have LQs slightly about 1, but from the standpoint of biggest strengths we look mainly towards those that stand out with LQs above 2. This suggests that entrepreneurial activity might have advantages when they are focused on businesses that either directly provide products/services in agriculture or manufacturing. Or when they create supportive products/services for those two industries. There is likely to be a better regional knowledge pool to draw on, better access to supply chain needs such as inputs and distribution, and more experience from supporting services such as lending, accounting, legal, HR, and management for businesses in those industries.

This is also a good way to explore what regional support services, events, and resources might be worth investing in for highest ROI. Hosting business workshops focused on key issues in agriculture and manufacturing is likely to be more relevant, attract participants, and have impact over time than hosting generic business workshops that don't focus on any particular industry. This is not to suggest that other industries should be ignored when it comes to support activities, but rather that efforts can be made to create some activities that cater to these strong industries to support their continued growth.

	2010	2020	2021	2021 Location Quotient (LQ)
Agriculture, Forestry, Fishing and Hunting	130	181	181	4.21
Mining, Quarrying, and Oil and Gas Extraction	15	12	12	0.74
Utilities	27	23	23	1.21
Construction	433	427	425	0.98
Manufacturing	216	229	226	2.24
Wholesale Trade	338	344	341	1.21
Retail Trade	610	545	540	1.09
Transportation and Warehousing	182	206	207	0.86
Information	80	73	74	0.52
Finance and Insurance	278	325	292	0.85
Real Estate and Rental and Leasing	130	128	125	0.34
Professional, Scientific, and Technical Services	277	272	277	0.35
Management of Companies and Enterprises	24	30	31	0.60
Admin. and Support and Waste Mgmt and Remediation	161	198	194	0.57
Educational Services	25	27	26	0.71
Health Care and Social Assistance	313	479	477	1.04
Arts, Entertainment, and Recreation	71	77	76	0.96
Accommodation and Food Services	292	268	267	0.73
Other Services (except Public Administration)	417	351	352	0.97
Government	411	389	386	0.89

Source: Economic Modeling Inc (EMSI)

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## CLUSTER DYNAMICS

Industry clusters are groups of similar and related businesses in a defined geographic area that share common markets, technologies, worker skill needs, and which are often linked by buyer-seller relationships. The classic example of a successful industry cluster is the “tech industry” in Silicon Valley. Due to that established cluster, tech entrepreneurs have consistently located their startup there. The highest caliber engineers, support resources like lawyers and banks, early-stage and late-stage investors, industry experts and mentors, and tech-focused incubators/accelerators programs are easily found in the area due to the strong cluster formation around the tech industry. Having a strong cluster can help provide companies with competitive advantages compared to companies in areas without the same clusters showing up as strong.

The Harvard Business School, under the leadership of Michael Porter, designed the way to measure the concentration of companies in particular sectors, i.e., “industry clusters”. The Harvard approach breaks industries into 71 unique categories of industry clusters. These industry clusters are ranked on performance by using five key metrics, each “weighted” according to importance. The outline below defines each metric and what “weight” we set it at for the NIACOG industry cluster analysis:

1. Earnings (2X) – “How important is it that industries have high earnings per worker”
2. Growth (4X) – “How important is it that industries have high overall job growth”
3. Regional Competitiveness (2X) – “How important is it that regional job growth exceeds the national average job growth for an industry”
4. Regional Specialization (2X) – “How important is it that regional job concentration is higher than the national average job concentration for an industry”
5. GRP (1X) – “How important is it that industries make a high contribution to overall gross regional product”

Put simply, we valued job growth as the most important factor in exploring which industry clusters are strong in the NIACOG region. The rationale for this is that to support the entrepreneurial ecosystem, it helps to consider whether future entrepreneurs in specific industry clusters would be able to draw on a strong, growing pool of experienced employees from companies in the region.

The data in table 6.1 provides an overview of the five strongest industry clusters in the NIACOG region. The maximum score an industry cluster can have is 100. The score is not a benchmark against other regions, but rather it compares the relative performance of clusters within NIACOG to each other. So, while a higher score is a good sign that a specific industry cluster is very strong within its own region, medium scores are not necessarily a negative sign of lacking industry cluster strengths. Rather, it could simply be that the region has more diversity in clusters so no one, or two, specific clusters account for most of the jobs and economic growth and concentration.

In the NIACOG region, we find industry clusters around energy generation, pharmaceutical/biological product manufacturing, construction, agricultural productions in crops and animals, and manufacturing of farm equipment and other industrial heavy machinery, as the top industry clusters. This not only appears to support the data discussed in the traditional industry dynamics section above, but provides further insight into where entrepreneurial talent might have great opportunities to start and grow businesses. For example, an entrepreneur wanting to start a marketing firm may have unique opportunities in focusing their marketing strategies and tactics around how companies in the agricultural and manufacturing clusters can best create a sales funnel specific to the unique customers in those industries.

And it is another indicator of specific industry areas the region might want to add extra focus when developing and delivering trainings and technical support services.

	Score	Jobs
Electric Power Generation and Transmission	61	192
Biopharmaceuticals	57	1,016
Construction Products and Services	57	925
Agricultural Inputs and Services	53	3,466
Production Technology and Heavy Machinery	53	1,591

Source: Economic Modeling Inc (EMSI)

See Appendix II for additional Industry Cluster data.

## INNOVATION INTELLIGENCE INDEX DYNAMICS

Lastly for the Profile of the Region sections, we review the Innovation Intelligence Index. This explores the resources, or raw materials, typically required to foster an innovative economy within a region. It looks at the resources and trends in recent years to assess a baseline of “innovation potential”. It does not necessarily say whether a region is actually being innovative or not. Rather, it helps explore and identify which resources might be leveraged better for future innovation and which resources might be lacking that could be invested in as a strategic effort to foster more innovative activities.

Fostering a strong innovative region can help support economic growth and resiliency. Investing in the resources identified in the Innovation Intelligence Index may cultivate more entrepreneurial behavior with the population. It may spur innovative solutions from medium and large companies. And, it might play a positive role in bringing both public and private entities together in an ecosystem that is focused on finding and supporting growth opportunities.

Defining what an “innovative region” actually looks like is hard. But betting on factors that can foster more innovation doesn’t have to be. This should not be seen as an attempt by any region to replicate Silicon Valley for tech-driven startups or Boston for healthcare innovation. Instead, think of it as a strategy for any region to grow its own innovation around a focal point that fits that particular region.

The Innovation Intelligence Index has three index levels:

- Overall Innovation Intelligence Index score
- Five sub-innovation index scores
- Key factor index scores for each of the five “sub-innovation indices”

For each index score, we have included both NIACOG and Iowa state scores. However, it’s important to note that scores are not directly comparable between a region and a state. This is in part due to the state score encompassing the region. We have included the state index scores here, however, to provide some general context between regional and state level potential for innovation. Providing both may prompt the NIACOG region to further investigate its role within Iowa state. We won’t analyze the state scores, but instead focus the discussion on what the index tells us for the NIACOG region.

	NIACOG	IOWA
<b>Innovation Intelligence Index</b>	107.4	99.8
<b>Sub-Innovation Index Score</b>		
Human Capital and Knowledge Creation	109.1	98.5
Business Dynamics	117.8	96.9
Business Profile	81.1	85.2
Employment and Productivity	108.0	92.3
Economic Well-Being	121.3	125.9

Source: statsamerica.org

At 107.4 the NIACOG region has a moderately good innovation score. Considering the rural nature of the region, a 107.4 score essentially suggests that there are enough “raw materials” within the region to foster and grow some activities with potential for innovative outcomes.

To better understand the overall score, we turn to the five sub-innovation scores. We’ll take each one in turn and outline key highlights.

**Human Capital and Knowledge Creation - 109.1**

Definition: The Human Capital and Knowledge Creation suggests the extent to which a region’s population and labor force have the collective cognitive capacity and know-how to engage in innovative activities.

	NIACOG	IOWA
<b>Human Capital and Knowledge Creation</b>	<b>109.1</b>	<b>98.5</b>
<b>Educational Attainment</b>	<b>114.2</b>	<b>123.6</b>
High School Attainment	111.4	170.6
Some College Attainment	103.7	102.4
Associate’s Degree Attainment	199.4	189.7
Bachelor’s Degree Attainment	97.9	97.4
Graduate Degree Attainment	58.8	57.8
<b>Knowledge Creation and Technology Diffusion</b>	<b>93.4</b>	<b>87.6</b>
Patent Technology Diffusion	74.3	57.9
University-Based Knowledge Spillovers	112.5	117.2
<b>STEM Education and Occupations</b>	<b>96.6</b>	<b>83.0</b>
Technology-Based Knowledge Occupation Clusters	127.8	79.3
Average High-Tech Industry Employment Share	112.1	68.1
Average Prime Working-Age Population Growth	132.1	100.1

Source: statsamerica.org

At 109.1, this suggests a somewhat strong component to the overall Innovation Intelligence Index and therefore a likely source of potential for innovative behaviors. As with all measures that are comprised of several sub-factors, some provide more value than others. For the NIACOG region, points for “Graduate Degree Attainment” and “Patent Technology Diffusion” are low. Rural and semi-rural regions don’t tend to score high points on either of those, but that should not be taken as a cause to “fix them”. Rather, NIACOG should look to other areas where there’s already a strong baseline to work from and leverage into more opportunity for regional innovation.

- **Educational Attainment at 114.2** – The key driver of this score is the relatively high attainment of Associate’s Degrees. According to the EMSI Economic Overview profile, 15.2% of their population have associates degrees. That’s compared to Iowa at 11.7% and the US at 8.6%. In other words, NIACOG isn’t seeing a large share of bachelor’s or graduate degrees, but rather more individuals getting associate’s degrees. While having a relatively high percentage of people with associate’s

degrees isn't necessarily positive or negative for the regional economy, the question is where the industry and workforce needs are going to be in the future. Considering that various types of manufacturing and agriculture are major industries in the NIACOG region, having a relatively high share of associate's degrees may be a good fit. Increasing the number of people with bachelor's and graduate degrees may end up driving more of those individuals out of the region if the job market doesn't have a strong enough demand. Since innovative ideas and implementation happens both inside existing companies and by startups/individuals, focusing on continuing adult education could be a better way to support those people without bachelor or graduate degrees. This should include training and resources around topics such as design thinking, customer discovery, innovation strategies, leveraging new tools and technologies, and other topics known to improve creative and innovative problem solving.

- **Average Prime Working-Age Population Growth at 132.1** – This is another key driver of the overall "Human Capital and Knowledge Creation". When we look closer at the actual population trends of 25-to-44-year old's, however, it looks like the region only increased from 26,955 in 2010 to 27,071 in 2021. The region may be doing relatively better than the US as a whole, but it's not from a large increase in 25-to-44-year old's. The main focus on a regional scale should be to explore tactics for retaining and attracting young talent to avoid a decrease in working-age population. However, considering the national trend of a slow-down in population growth, this may prove hard for not just NIACOG but all regions.
- **Technology-Based Knowledge Occupation Clusters at 127.8** – This is the third highest score for the overall "Human Capital and Knowledge Creation" sub-innovation index. This indicates that there is a relatively strong base of people working in a variety of technology and science driven jobs. This includes IT, engineering, science, and other areas where technology and innovation tends to be a core component of the skills and knowledge. Based on occupational data from EMSI, the region appears to have a relatively higher share of people in areas such as "life scientists", "statisticians", "chemical engineers", and "chemists and material scientists". This doesn't mean that there are many people in those jobs, just that the region might have more than average.

### Business Dynamics 117.8

Definition: The Business Dynamics Index gauges the competitiveness of a region by investigating the entry and exit of individual firms, aka the creative destruction measures.

	NIACOG	IOWA
<b>Business Dynamics</b>	<b>117.8</b>	<b>96.9</b>
<b>Establishment Formation</b>	<b>105.0</b>	<b>87.1</b>
Establishment Births to All Establishments Ratio	N/A	N/A
Traded Sector Establishment Births to All Establishment Ratio	95.8	59.6
Jobs Attributed to Establishment Births to Total Employment Ratio	64.4	50.7
Change in Establishment Births to All Establishment Ratio	189.4	192.4
Average High-Tech, Early-in-Life-Cycle Establishment Ratio	61.4	53.0
<b>Establishment Dynamics</b>	<b>130.5</b>	<b>106.6</b>
Establishment Expansions to Contractions Ratio	98.9	76.3
Establishment Births to Deaths Ratio	156.9	138.2
Traded Sector Births and Expansions to Deaths and Contractions Ratio	135.9	105.3

Source: statsamerica.org



At 117.8, Business Dynamics is a large contributor to the overall innovation Intelligence Index score. The range of points in the sub-factors that comprise the overall Business Dynamics score is fairly wide. The two lowest points, “Jobs Attributed to Establishments Births to Total Employment Ratio” and “Average High-Tech, Early-in-Life-Cycle Establishment Ratio”, suggest that new jobs don’t come from startups as much they could, and that the region doesn’t have a lot of small, tech-startups. While not having a relatively high share of tech-startup companies isn’t necessarily something to worry about, since industry strengths as discussed elsewhere may lay outside those typical tech-startups, not generating a lot of jobs from new businesses is more concerning. This suggests that many startups in the region are either sole proprietors or only employ few people. To foster innovation through small businesses, it tends to be more likely to happen when they continuously grow and add employees. Adding employees is not only a sign of revenue growth, but is also often an indicator that a company is learning and adapting to finds its market-fit, and through the growth of employees may be more likely to come up with new ideas.

- **Change to Establishment Births to All Establishment Ratio at 189.4** – This factor is a main driver of the over “Business Dynamics” sub-innovation index. It suggests that the region has experienced a relatively high rate of new businesses opening compared to total businesses. The Innovation Index looks at 2013 and onward. This is different than just looking at the number of self-employed, 2-9 employee establishments, etc. year-over-year as we did in previous sections. This high score can be interpreted as a region that likely have a lot of entrepreneurial activity from people starting businesses consistently. While it doesn’t tell us anything about success or long-term economic impact from such entrepreneurial activities, it does indicate that people in the region are willing to take chances.
- **Establishment Births to Deaths Ratio at 156.9** – This is another way of measuring entrepreneurial activity in the region. The high score indicates that the region has seen more businesses being started than ones formally shutting down. While it doesn’t give us a clear idea which kinds of businesses are being started and by whom, it’s a potential source of strength for the NIACOG region to have people willing and interested in starting businesses.

### Business Profile 81.1

Definition: The Business Profile Index measures local business conditions and resources available to entrepreneurs and businesses.

Table 7.4 – Business Profile (Innovation Intelligence Index) - NIACOG		
	NIACOG	IOWA
<b>Business Profile</b>	<b>81.1</b>	<b>85.2</b>
<b>Venture Capital Dollar Measures</b>	<b>66.3</b>	<b>70.3</b>
Change in Average Venture Capital	50.0	59.5
<b>Venture Capital Count Measures</b>	<b>70.8</b>	<b>60.5</b>
Change in Average Venture Capital Deals	50.0	72.8
<b>Foreign Direct Investment Attractiveness</b>	<b>83.4</b>	<b>120.6</b>
FDI Employment Ratio, Foreign Source	50.0	105.3
FDI Investment Ratio, Foreign Source	50.0	105.3
FDI Employment Ratio, Domestic Source	114.8	109.9
FDI Investment Ratio, Domestic Source	118.9	162
<b>Proprietorship</b>	<b>103.7</b>	<b>89.4</b>
Farm Operators with Internet Access	79.7	121.1
Proprietorship Rate	81.7	61.3
Change in Proprietorship Rate	63.6	80.3
Proprietor Income to Total Wages and Salaries Ratio	189.9	94.9

Source: statsamerica.org

Before looking at specific index scores, it's important to note that the "Business Profile" sub-innovation index is driven mainly by factors on investment capital. It's hard for most small-medium sized regions to have a relatively high score. Even if there are regional investors, they might not be accredited venture capital firms, so their investments won't necessarily be counted here.

One score that stands out is the "Farm Operators with Internet Access". First, the actual definition used for this measure looks at the percentage of farms that use the internet to conduct business, so not necessarily whether farms and farmers have internet or not. However, with agriculture being an overall strong industry in NIACOG, this suggests an opportunity to further explore how, or if, farms are engaging in business activities online as a way to grow their revenue streams.

- Proprietor Income to Total Wages and Salaries Ratio at 189.9** – This is the strongest score for the "Business Profile" sub-innovation index. This indicates that enough business owners are making a good living that is above the income for regular employees. In other words, the region's entrepreneurs are experiencing some financial success. One potential opportunity is to identify who some of those are and explore if they're willing and interested in developing a more formal pipeline of investment capital for other aspiring entrepreneurs in the region. This does not have to be a venture capital firm, but could be simpler investment programs such as pitch competitions, startup classes with investment potential, industry focused startup competition, accelerator program, scale-up investment programs, etc.

### Employment and Productivity 108.0

Definition: The Employment and Productivity Index describes economic growth, regional desirability or direct outcomes of innovative activity.

Table 7.5 – Employment and Productivity (Innovation Intelligence Index) - NIACOG		
	NIACOG	IOWA
<b>Employment and Productivity</b>	<b>108.0</b>	<b>92.3</b>
<b>Industry Performance</b>	<b>99.2</b>	<b>N/A</b>
Latent Innovation	100.0	N/A
Industry Diversity	98.3	130.1
<b>Industry Cluster Performance</b>	<b>73.1</b>	<b>N/A</b>
Industry Cluster Growth Factor	53.4	155.3
Industry Cluster Strength	92.7	N/A
<b>GDP</b>	<b>92.5</b>	<b>82.3</b>
<b>Patents</b>	<b>144.3</b>	<b>70.3</b>
Change in Average Patenting Rate	119.0	88.8
Patent Diversity	169.6	51.7
<b>Job Growth to Population Growth Ratio</b>	<b>123.8</b>	<b>62.1</b>
Change in Share of High-Tech Industry Employment	115.3	154.7

Source: statsamerica.org

At 108, the Employment and Productivity sub-index suggests another positive contributor to the overall Innovation Intelligence Index. Most of the sub-factors used in this sub-index are relatively strong. The weakest sub-factors come from industry cluster performance. While the region does have some strong industry clusters, discussed in other sections, it appears that as overall contributors to growth and job strength the regional industry clusters are not as strong as they could be.

- Change in Average Patenting Rate at 119.0** – The high score on this suggests that patent activity has been growing in the recent decade. An increase in patent applications may be a potential source of innovative behavior in some parts of the NIACOG region. Understanding who are applying and what they're doing with the patents would be a good step to explore potential strength and

advantages the region’s business ecosystem might be able to leverage for further innovation and economic growth.

- **Patent Diversity at 169.6** – Similar to the increase in patent activity, the NIACOG region also appears to have a relatively high degree of diversity in the types of patents that are being applied for. Again, this can be seen as an opportunity for economic and business developers in the region to connect with the people and institutions/companies that are applying for patents to learn more about their ability and willingness to engage in activities to support further innovation. For example, many smaller companies might have ideas or abilities to develop new products or processes, but lack the capacity to understand and apply for a patent. Bringing those with the experience and expertise into the room with those without, could be an opportunity to add more innovation to the region’s economy.
- **Job Growth to Population Growth at 123.8** – While this score is also high, the concern is that the overall population is declining, so the high score simply means that the region is losing jobs relatively slower than the population decline. Good in some ways, but not necessarily a strong source of innovation.

### Economic Well-being 121.3

Definition: The Economic Well-Being Index explores standard of living and other economic outcomes.

	NIACOG	IOWA
<b>Employment Well-Being</b>	<b>121.3</b>	<b>125.9</b>
<b>Residential Internet Connectivity</b>	<b>145.1</b>	<b>100.7</b>
Broadband Infrastructure and Adoption	145.5	90.8
Broadband Adoption Barriers	124.0	100.8
<b>Compensation</b>	<b>69.9</b>	<b>81.5</b>
Change in Annual Wage and Salary Earnings per Worker	86.2	97.1
Per Capita Personal Income Growth	53.9	145
Average Poverty Rate	173.6	156.1
Average Unemployment Rate	186.5	184.4
Government Transfers to Total Personal Income Ratio	142.5	109
Average Net Migration	50.0	98.9

Source: statsamerica.org

At 121.3, The Economic Well-Being sub-index is the strongest score for the overall Innovation Intelligence Index. However, contributing points from the sub-factors vary a great deal. On the low end, “Average Net Migration” scores at 50, which means that more people are leaving the region than moving into the region. As human capital is a key ingredient in fostering innovation, losing residents is generally not a good thing. Another low score is the “Per Capita Personal Income Growth” at 53.9, suggesting that the average annual rate of change is not following close to the national rate of change. And thirdly, “Change in Annual Wage and Salary Earnings per Worker” scores at 86.2, indicating that regional wages/salaries increases are not keeping up with national rates. Lower income or slower wage/salary growth rates can make it harder for a region to attract and retain a diverse set of skilled and knowledgeable workers, which can make it harder to foster innovation.

- **Broadband Infrastructure and Adoption at 145.5** – A high score on this indicates that the overall region is performing well on providing high-speed internet to residents. For innovative behavior to be possible it is important that people and organizations can participate in online activities and commerce. This is true for “online businesses”, “tech businesses”, and also local main street

businesses. Accessing information and ideas from across the globe to use and implement at a small, local business can be a great source for creative problem solving. An entrepreneur needing to learn about specific technical concepts and skills will be much better positioned to do so with access to fast internet speeds. Whether people are buying, selling, or seeking information, one commonality is the need to access the internet through a broadband infrastructure. One consideration, however, is to look at whether broadband access is available equally in rural as well as city areas.

- **Average Poverty Rate at 173.6** – This high score indicates that poverty is well below the national average. The US poverty rate was an average of 13.4% in the 2015-2019 period. In NIACOC the highest rate was 14.5% in Floyd County. But six of the other counties were below the US rate. The lowest was 6.9% in Mitchell County. For innovation potential, having fewer people in poverty is considered positive because it suggests that more people have at least a relatively higher chance of investing in themselves to start a business, take risk, or do other things that might spur new ideas and solutions.
- **Average Unemployment Rate at 186.5** – Similar to the poverty rate measure, having fewer people unemployed is typically good for the economy and the potential for innovative behavior. The high score again indicates that the NIACOG region is doing relatively better than the national as a whole when it comes to keeping people employed.
- **Government Transfers to Total Personal Income Ratio at 142.5** – A high score on this suggests that usage of government programs such as social security, disability, and welfare payments, is lower in the NIACOG region than compared to national levels of government support. Having relatively fewer people receiving government assistance is associated with better chances of innovative activities, as dependency on income that is not work-generated tends to decrease innovative activities.

## FIVE DRIVERS OF ENTREPRENEURSHIP

In this part of the report, each of the five drivers of entrepreneurship are examined for their current role in the NIACOG region. Our interest is in determining what assets the region has that can be capitalized on for entrepreneurial success. Furthermore, the gaps in the entrepreneurial ecosystem are also important to identify since they may lead to specific actions the region can take to improve its entrepreneurial ecosystem.

### **Developing a Pipeline of Educated and Skilled Entrepreneurs**

A high level of focus on providing education and training for potential and existing entrepreneurs has been a proven way to advance the entrepreneurial ecosystem. The educational component should exist on all levels of formal and informal education, from the elementary school classroom, to college majors and minors, to publicly available support programs, to local networking groups. Providing resources for individuals to learn and apply the knowledge and skills necessary to succeed as an entrepreneur is a key component of creating an entrepreneurial ecosystem that can create new jobs, attract new industries, and spur economic growth.

### **Cultivating Technology Exchange and Innovation**

To help foster an innovative economy a region must understand and invest in technological advances and opportunities. This can happen through collaboration among educational institutions, companies, public policy makers, and entrepreneurs. This exchange of knowledge and ideas is a key factor in creating optimal circumstances for economic growth among small and medium sized establishments. The entrepreneurial ecosystem benefits in many ways from a high level of technology exchange and innovation, among which is the ability to attract and grow new competitive industries that will meet future market demands.

### **Improving Access to Capital**

A region's ability to provide the needed funding for new ventures, as well as growing companies, is essential to a healthy entrepreneurial ecosystem. Access to traditional bank financing is just one way to help entrepreneurs develop and grow. Attracting investors, whether they are angel investors, venture capitalists, or larger companies looking for new ideas, is also an important factor in ensuring the right type of funding can be accessed by entrepreneurs. Additionally, rural regions can benefit greatly from establishing gap financing tools such as revolving loan funds, intermediary lending programs, micro-loans, etc.

### **Promoting Awareness and Building Networks**

Promoting an entrepreneurial culture where entrepreneurs are valued and the community is willing to support local establishments is another key aspect of a successful entrepreneurial ecosystem. This may be achieved through developing local networking opportunities, creating mentorship programs, informing the public about the social and economic impact of entrepreneurship, and engaging entrepreneurs to address the region's greatest opportunities.

### **Optimizing the Regulatory Environment**

Helping entrepreneurs navigate and succeed within legal boundaries is the final key driver of a strong entrepreneurial ecosystem. This means that entrepreneurs should have easy access to information and help with understanding regulations and policies that affect their businesses. It also means that public officials should investigate the potential barriers that exist for entrepreneurs to thrive. A dialogue must be cultivated where both entrepreneurs and policy makers can meet and understand each other's needs and wants.

The next section examines the strength, challenges, and resources of the NIACOG region in each of the five drivers. This examination will help define impactful and actionable recommendations for the improvements of the entrepreneurial ecosystem.

## DEVELOPING A PIPELINE OF EDUCATED AND SKILLED ENTREPRENEURS

Perhaps the most critical determinant of a region's economic success is the quantity and quality of its entrepreneurs. For the NIACOG region to have a vibrant economy, it must have a supply of entrepreneurs that are able to build a sufficient number of companies to provide employment opportunities and wealth for residents throughout the region. The focus on a "pipeline" of entrepreneurs recognizes that there is a range of entrepreneurial talent in the region. Some entrepreneurs are well-established and successful having started one or more companies. Other prospective or potential entrepreneurs may have an idea and conducted some research, but have not made the commitment to start a firm.

Young people in school may also be potential entrepreneurs if they are exposed to successful entrepreneurs and taught essential skills of starting and growing a business. Ideally a region will be supporting the full range of entrepreneurs by meeting the varying needs of each group. For example, growth businesses may need specialized financial assistance, while aspiring entrepreneurs may need to learn how to develop an early-stage marketing strategy. Therefore, in this section, we will consider the current entrepreneurial talent in the region and also the extent to which entrepreneurs have access to a variety of relevant trainings and counseling they need. The aim is not only to strengthen the capacity and desire of more individuals to start their own enterprises, but also to develop an entrepreneurial culture in society; more individuals thinking and acting entrepreneurially.

As we saw in the Establishment Dynamics section, the number of self-employed establishments in the NIACOG region typically ranges from 1,300 to 1,500. And establishments with 2-9 employees ranges around 4,500 to 5,500. With approximately 8,000 total establishments, that means a little over 80% of all establishments in the region are small entrepreneurial businesses. This is strong baseline of entrepreneurial talent to draw from. While it doesn't address the quality of entrepreneurs, it does show a healthy quantity of entrepreneurs relative to the total number of establishments.

When we look further into the establishment dynamics, we find a high number of new establishments being started each year. Most years new startups hovers around the 500-600 mark (See Appendix I for details).

Each of these small business owners and new entrepreneurs can be considered a local source of knowledge and experience that can benefit other aspiring entrepreneurs. This may come through informal connections, mentoring, partnerships, etc. that happens naturally as people connect within the entrepreneurial ecosystem. But it can also be looked at as an opportunity to explore how to foster more interaction and connection between those with experience and those looking for expertise.

### **Regional Resources and Programs**

When we look at what the region has to offer for training/education for entrepreneurs and small business owners, we find a good variety of programs. While there is no research that provides a simple answer to how much is needed to have a thriving entrepreneurial ecosystem, or exactly what training/education programs should look like for maximum impact, we can look at it from the standpoint of whether the NIACOG region offers a reasonable number of diverse opportunities for entrepreneurs and business owners to take advantage of. In other words, if a region only offers a four-year bachelor's degree in "business" from a local college that wouldn't meet a sufficiently broad scope of options. Even taking into consideration that most have access to reliable internet where they can find countless business trainings, many still gain more from local, in-person, and direct training formats.

We include five training/educational programs we could easily identify in the NIACOG region. Highlighting these isn't just to show what is available, but also precisely because they were easily found by our three

regular people when we asked them to find entrepreneurial and business training programs in NIACOG. Put simply, if they could find them, it suggests that local and regional people should be able to find them as well.

- **North Iowa Area Community College - Entrepreneurship and Small Business Management, A.A.S.** – Having a traditional, formal associates degree program is a great source for those with the time, money, and need for formal education. Degree requirements/courses are comprehensive for a solid understanding of business, including entrepreneurship, management, accounting, marketing, human resources, finance, and law. And, as an associate’s degree it can be completed in two years which is great for those aspiring entrepreneurs who do want some formal education, but don’t want to go through a full four-year program.
  - [http://catalog.niacc.edu/preview\\_program.php?catoid=10&poid=1864](http://catalog.niacc.edu/preview_program.php?catoid=10&poid=1864)
- **North Iowa Area Community College Continuing Education** – We also found a variety of online business and financial management courses covering topics from business planning, accounting, online advertising, to YouTube for business. While the price tags range between \$195 to \$245 for those we found, this is another good indicator that entrepreneurs and small business owners have regional resources available on different business topics.
  - [https://niacc.augusoft.net/index.cfm?method=ClassListing.ClassListingDisplay&int\\_category\\_id=1&int\\_sub\\_category\\_id=8&int\\_catalog\\_id=](https://niacc.augusoft.net/index.cfm?method=ClassListing.ClassListingDisplay&int_category_id=1&int_sub_category_id=8&int_catalog_id=)
- **2022 Youth Entrepreneurial Academy** – Having programs focused on youth entrepreneurs is another key component of a strong entrepreneurial ecosystem. In particular, when it’s an immersive multi-day program that also includes a pitch competition, which the Youth Entrepreneurial Academy does. The focus on this program is high school students.
  - <https://www.pappajohncenter.com/education/k-12/youth-entrepreneurial-academy/>
- **Entrepreneur For a Day** – If having one youth focused program is good, having two is twice as good. Especially when they focus on different school brackets. This Entrepreneur for a Day program is for 5<sup>th</sup> graders and appears to already be incorporated into several schools across the region.
  - <https://www.pappajohncenter.com/education/k-12/entrepreneur-for-a-day/>
- **SBDC Trainings** – The Small Business Development Center (SBDC) also looks to have a good line up of business workshops. This includes free, online, self-paced courses such as Start Smart, Cyber Security, Digital Marketing, among others. For regional, in-person trainings we found they also offer a Venture School program and monthly TechTalks. In the past, it appears there have been a variety of other trainings such as Financial Fridays. We didn’t find regular in-person trainings like “small business financials”, “small business marketing”, “small business strategy”, “business planning”, etc. While those topics may be included in the online courses, Venture School, or TechTalks, it wasn’t clear if entrepreneurs could take short, individual workshops on such topics through the SBDC.
  - <https://www.pappajohncenter.com>

Overall, the NIACOG region appears to have a good variety of educational opportunities to support learning and development for entrepreneurs and small business owners. But we should be clear that just because something is available and reasonably easy to find when intentionally looking for it, doesn’t mean that those who might benefit from it will actually look for it and participate. A key consideration for the region is to explore how many entrepreneurs and business owners are actually aware of what they have available. And whether it’s offered in formats that meet their needs. And then developing awareness campaigns to be deployed through regional networks of banks, chambers, economic developers, and business owners.

## CULTIVATING TECHNOLOGY EXCHANGE AND INNOVATION

Innovation is often cited as a key ingredient to economic growth. Although the focus of innovation is often on major scientific breakthroughs, technology industries like biotech, robotics, or major IT companies like Google, innovation actually takes many forms. In nearly all industries, it is vital to innovate to command higher prices, reduce costs, or add value to production. Many innovations take place through incremental improvements in production, distribution, or marketing that result in an economic advantage for a company.

In examining this driver, “Cultivating Technology Exchange and Innovation”, the available platforms and activities that encourage knowledge and idea sharing are explored. These platforms and activities may be incubators, co-working spaces, industry organizations, conferences, networking groups, trainings, industry clusters, etc. First, however, the skills and infrastructure of the region with regard to information technology is examined. To what extent does the region have trained technology professionals, especially in information technology? Does the region have high-speed internet to facilitate rapid access, communication, and diffusion of information.

We can start by looking back at the Innovation Intelligence Index for insights on how the NIACOG region is doing overall when it comes to jobs in technology-focused occupations and industries. Three measures are helpful here:

- Technology-Based Knowledge Occupation Clusters score of 127.8 – Definition: The employment share of occupations that apply higher technology (e.g., scientists and engineers) relative to all jobs.
- Change in Share of High-Tech Industry Employment score of 115.3 – Definition: compares the share of high-tech employment from 2013 to the share of the latest year available.
- Average High-Tech Industry Employment Share” score of 112.1 – Definition: The share of employment in high-tech industries relative to total employment. While high-tech industries are predominantly in manufacturing, the definition also includes research and development companies and engineering firms.

The first measure looks specifically at occupations that tend to develop and/or use technology at a high level. The Innovation Intelligence Index uses a cluster approach with the following “occupation clusters” included: engineering, architecture and related disciplines; health care–life and medical scientists; health care–medical practitioners and scientists; information management and computing; mathematics, statistics, data analysis and accounting; natural sciences and environmental management; postsecondary education and knowledge creation; and STEM and applied science technicians. The score of 127.8 simply means that the region has a relatively higher share of people in these occupations as compared to the national average share. To help provide more context for what that means, we looked at the regional occupational data from 2010 to 2022 (See Appendix III for full detail). From this data we found six “tech” occupations that had increased in this time period, including

- Computer Occupations – 567 to 584 jobs
- Mathematical Science Occupations – 20 to 51 jobs
- Engineers – 302 to 420 jobs
- Life Scientists – 135 to 177 jobs
- Physical Scientists – 83 to 92 jobs
- Life, Physical, and Social Science Technicians – 132 to 166 jobs

There may also be other more specific occupations related to the technology-based occupations that have increased, but the main point is that not only does the region appear to have a relatively high share of those types of occupations, we can also see that several increased in numbers in the 2010 to 2022 period. This suggests that the region has a good baseline capacity around fostering innovative thinking and behavior, as



well as the “raw materials” in their workforce to create exchanges of insights and knowledge between people and organization.

The second two measures look at jobs within industries that tend to be strong drivers and users of technology and innovation. The Innovation Intelligence Index defines “high-tech industries” as: Chemical Manufacturing; Machinery and Equipment manufacturing; Computer and Communication Manufacturing; Electrical and Optical Manufacturing; Aerospace Product and Parts Manufacturing; Communications; Data and Internet; Architectural, Engineering, and Related Services; Scientific and Technical Services; and Management of Companies and Enterprises. The two measures used in the Innovation Intelligence Index suggests that the NIACOG region has seen both a positive increase and overall high average share of employment in the high-tech industries. When we look behind the data, we again see some specific employment trends that help clarify and provide context to the specific areas of potential opportunities for the NIACOG region. From 2010 to 2022, four tech-driven industries that increased in employment were:

- Chemical Manufacturing – 1,062 to 1,520 jobs
- Machinery Manufacturing – 1,284 to 1,829 jobs
- Data Processing, Hosting, and Related Services – 16 to 102 jobs
- Professional, Scientific, and Technical Services – 1,356 to 1,613 jobs

While not all of the jobs in these industries are critical to innovation, the importance of looking at job trends from an industry standpoint is that more growth in those types of businesses tend to be a positive sign of more potential for technology exchange and innovation.

Next, we look at high speed internet access. We can again start with a measure used in the Innovation Intelligence Index to get a broad sense of how the region is doing with respect to ensuring adequate access to high-speed internet. The “Broadband Infrastructure and Adoption” score is 145.5 for the region. The Innovation Intelligence Index defines this measure as a composite of five variables related to broadband infrastructure and adoption: 1) percentage of total 2018 population without access to fixed broadband of at least 100 Mbps download and 20 Mbps upload as of December 2019; 2) percent of homes without a computing device (desktops, laptops, smartphones, tablets, etc.); 3) percent of homes with no internet access (have no internet subscription, including cellular data plans or dial-up); 4) median maximum advertised download speeds; and 5) median maximum advertised upload speeds. The high score can then be understood as an indication that internet access in the region is broadly speaking much better than the national comparison on those five variables.

To get more detail we use the FCC’s data on broadband access. The key measure to look at is Fixed Broadband, defined as the percentage of population with access to at least 25 mbps download and 3 mbps upload speeds. This provides an overall view of whether people in the region have access to at least basic high-speed internet so they can engage in online activities as either consumers or creators of content. As Table 8.1 shows, most counties in the region have more than 80% of the population with fixed broadband, and only two with less than 70%. While it would likely benefit the region to explore the low rates and ways to increase it for Franklin and Kossuth counties, we also have to recognize that this measure doesn’t reflect the percentage of people who use mobile or other devices with data plans to access internet. Broadly speaking, the region appears to be in a good position to support the entrepreneurial ecosystem from an “internet access” standpoint.

Table 8.1 – Broadband Access	
	Fixed Broadband
Cerro Gordo	94.8%
Floyd	86.9%
Franklin	61.6%
Hancock	72.2%
Kossuth	65.8%
Mitchell	87.5%
Winnebago	98.4%
Worth	84.0%
Source: FCC.gov	

Lastly for the Cultivating Technology Exchange and Innovation driver, we also used our team to see what programs and resources we could find that help support technology and innovation for entrepreneurs. Two programs in particular stood out as meeting the expectations for “tech/innovation” focused efforts.

- **Venture School** – Having an 8-week program for tech and innovation entrepreneurs is a great way to engage and support the entrepreneurial ecosystem. Especially one that is developed around the National Foundation I-Corps curriculum.
  - <https://www.pappajohncenter.com/programs-events/venture-school/>
- **TechTalks** – While it wasn’t entirely clear whether these regular sessions are always focused on “tech”, the branding and intention behind having sessions where entrepreneurs, business people, and investors can connect and support each other is another great way to support high-growth potential startups.
  - <https://www.pappajohncenter.com/programs-events/techbrew/>
- **DeltaV Code 101 Workshop** – This is a one-day free workshop designed to give participants an experience of what it is like to be a software developer.
  - <https://www.niacc.edu/2022/09/07/free-deltav-code-101-workshop/>

For the DeltaV Code 101 workshop, it wasn’t clear if the program offers a more extensive coding class or bootcamp for those that decide it is a career path for them. If this is not already a program available, or in development, that should be considered as a next step to support tech-talent development in the region.

Overall, the NIACOG region appears to have a strong baseline around opportunities to further cultivate technological development and innovative behavior.

## IMPROVING ACCESS TO CAPITAL

A challenge facing new start-ups, small firms, and early stage growth companies is how to finance their ventures. The requirements that must be met to borrow money for risky investments, like financing a start-up or growth company, are often more difficult to meet today than they were in the past. But considering the fact that small growth firms create the most jobs in the country, the importance of ensuring access to capital continues to be critical for economic development. In this section, we dive into the data on flows of capital, availability of financial service providers, knowledge base from financial service occupations, and explore the availability of “alternative financing” programs to support higher risk investments.

From the Innovation Intelligence Index we find that, not unexpectedly, the region doesn’t derive a lot of economic impact from venture capital firms investing in regional companies. Most true venture capital investments occur in “startup hubs” like Silicon Valley, New York, Boston, Austin, and other major cities around the country. However, this does not mean that there are no investors in NIACOG, since this measure only looks at formal venture capital firms. It is more common in mid-sized and small regions to see local/regional investors organized as angel investors or through their own companies investing in deals and partnerships, but that data doesn’t show up in a neat way for us to identify and analyze. In fact, individuals with enough capital, knowledge, and willingness to invest in new startups tend to prefer not advertising this too much. These people are more likely to use their own networks of connections to help identify potential opportunities so as to avoid having aspiring entrepreneurs knocking on their doors every day to pitch their ideas. One approach to improving this matching challenge is to create a formal “startup pitch competition” through a regional organization that can manage and promote the competition publicly, and then have the investors stay relatively anonymous behind the scenes as the competition works to filter for good investment candidates. Startup competitions like these often have \$50K to \$100K tied as the cash prize for winners to attract high-quality startups from a broader region to apply. But a key point is to go beyond the monetary investment, and look at developing a program that also provides guidance, coaching, technical assistance, and peer-groups to support the growth opportunity of winning companies.

Next, we look at whether employment in financial services is increasing or declining as a way to explore whether the region’s entrepreneurs and small businesses have access to financial resources they need. While we have to acknowledge that many entrepreneurs these days can, and will, find access to the financial support they need through online services, there is still a core need for any community to have local resources. This is not only to ensure that there are locally available experts to support the entrepreneurial ecosystem, but also because local people tend to understand and know their local area better than “online people”. From the occupational data, we find the number of “financial specialists” employees in NIACOG decreased from 839 in 2010 to 801 in 2020. But, in 2022 is estimated to be back up again at 832. The take-away from this is simply that no major issue appears to be present in the region when it comes to trends of “financial specialists” jobs.

Lastly for the “Improving Access to Capital” driver, our team scoured the internet for details and insights on available financing programs. In particular, we looked for alternative and diverse types of financing to meet the different needs in the entrepreneurial ecosystem. Not all startups and small business fit the traditional, or SBA, financing model. So while it is important to have regional banks that offer loans and lines of credit to small businesses, we are more interested in resources that make financing available on other terms.

We found several programs and resources that appear to meet varying financing needs:

- **NanoLoan** – This is focused on pre-bankable startups with loans up to \$2,500. While the amount may appear small, it is well-known that in the entrepreneurial ecosystem there are often barriers for those very early-stage startups that do not fit traditional financing, that a small amount like \$2,500 is actually a tremendous way to help them take the steps to get their business off the ground.

- <https://www.pappajohncenter.com/entrepreneurs/financing-your-business/nanoloan/>
- **Revolving Loan Fund NIACC John Pappajohn Entrepreneurial Center** – This is one of several revolving loan funds (RLF) in the region. This one focused on small businesses with fewer than 50 employees and less than \$1 million in annual sales. Loan amounts up to \$25,000. RLFs are important financing tools that help small businesses that may not quite meet the requirements of traditional financing, but still have sound opportunities and don't need large sums of capital to grow their businesses.
  - <https://www.pappajohncenter.com/entrepreneurs/financing-your-business/revolving-loan-fund/>
- **Targeted Small Business** – While this is a statewide financing program, the key is that it is promoted through regional efforts from the Pappajohn Entrepreneurial Center. This program is designed to help women, individuals with minority status, service-connected disabled veterans and individuals with disabilities. Loan amounts up to \$50,000. Having a small business loan program focused on supporting entrepreneurs in the women, minority, and service-disabled veterans groups is another critical resource to support a diverse and equitable entrepreneurial ecosystem.
  - <https://www.pappajohncenter.com/entrepreneurs/financing-your-business/targeted-small-business/>
- **Wellmark Venture Capital Fund** – Another program that is statewide, but with promotion by regional Pappajohn Entrepreneurial Center. This is focused more on high-growth potential startups with \$10,000 to \$100,000 convertible debt financing. While many regular startups and small businesses don't qualify for this type of fund, it plays an important role in the entrepreneurial ecosystem development to have specific financial support for high-growth startups. We know the failure rate is high, so the risk is beyond what most traditional financing can take on, but when a startup company does succeed it tends to have an outsized economic impact through job creation.
  - <https://www.pappajohncenter.com/entrepreneurs/financing-your-business/wellmark-venture-capital-fund/>
- **Charles City Area Development Corporation Revolving Loan Fund and Capital Fund Drive** – this is a great example of a financing program focused on the smaller geographical area of Charles City and Floyd County. There appears to be several different funding mechanisms available to meet both startup and existing small business needs.
  - <https://charlescityia.com/financing/>
- **Kossuth County Revolving Loan Funds** – Another locally focused financing program with several different RLFs for multiple cities with loan amounts up to \$50,000
  - <https://kossuth-edc.com/business-development/revolving-loan-fund/>
- **Winn-Worth Revolving Loan Fund** – Another RLF focused on specific areas Winnebago and Worth.
  - <https://www.winn-worthbetco.com/business-center/incentives>

Overall, it doesn't appear that the question or concern should be whether the NIACOG region offers a variety of financing options, but rather ensuring that information about these programs is consistently shared and promoted throughout the region's entrepreneurial ecosystem networks. It is beyond the scope of this report to determine if the right individuals have awareness and knowledge about these financing programs to take advantage of them, but that would be one question for the region to explore through survey's or focus groups.

## PROMOTING AWARENESS AND BUILDING NETWORKS

This approach to entrepreneurial ecosystem development must be grounded in a belief that the region can “**grow our own**”, rather than trying to attract businesses and jobs from elsewhere. This is partially achieved by developing an entrepreneurial culture where local companies and business leaders are celebrated, residents are aware and proud of local businesses, and both public and private entities publicly support entrepreneurial endeavors. Another important aspect is the availability of networks, mentoring, and professional assistance to entrepreneurs and small businesses. Research suggests that financial investments, such as the ones discussed in the “Access to Capital Section”, work best when there is a corresponding investment in support services and human capital (Scruggs, 2010).

It is clear that communities with positive attitudes towards entrepreneurs enjoy more start-ups and faster growing firms (Feld, 2012).

The datasets we use to explore the regional economy, business environment, and entrepreneurial ecosystem don't provide much insight on this driver, unfortunately. Instead, we must look to insights from what activities and resources we can find in the region that are likely to play a positive role in promoting awareness and building networks that benefit the entrepreneurial ecosystem.

We have already seen some of those, including the Youth Entrepreneurial Academy and the TechTalks. Our team also found information about other activities and resources that stand out as strong ways to support the awareness and network driver:

- **The 2022 PappaJohn Entrepreneur Gala** – A celebration event to recognize youth entrepreneurs, innovators, and business of the year. This is a great approach to promoting awareness in the region about its many successful entrepreneurs.
  - <https://www.pappajohncenter.com/programs-events/entrepreneur-gala/>
- **Entrepreneur of the Month Recognition** – A monthly spotlight of a regional entrepreneur/business to highlight achievements and share stories of success.
  - <https://www.niacc.edu/2022/08/19/august-2022-entrepreneur-of-the-month/>
- **Small Business Development Center** – While already mentioned elsewhere, the SBDC program still plays a key role in awareness and networks to support the entrepreneurial ecosystem
  - <https://iowasbdc.org/locations/nia/>

These events and resources are important factors in the region's ability to tell its stories about entrepreneurial successes, and connecting people and organizations within the region to each other. This doesn't mean, however, that other activities and resources shouldn't be tested and added as part of a strategy to ensure all aspiring and existing entrepreneurs are aware of what the region offers and have opportunities to connect with the right people/resources at the right time. Other supporting programs the region may see if they can find funding to add could be a Women's Business Center or a Veterans Business Outreach Center (VBOC). These are just two examples of resource programs that align well with the existing SBDC, so additional support can be added to develop networks of entrepreneurs in specific categories. We also assume that the local SBDC team have some working relationship with these organizations at their offices across the state to ensure connections are made when appropriate. However, the point is that adding or increasing promotion of a resource such as VBOC makes sense when we consider the fact that according to EMSI data, the region has 8,393 veterans which is 1,620 more than what would be expected based on the national average for an area this size.

Beyond exploring if there is a need, and funding, for more resource programs, our team didn't find clear evidence of resources such as co-working spaces, small business peer groups, dedicated mentoring programs for entrepreneurs, etc. Basically, programs designed to be open to entrepreneurs actively looking to connect and learn from each other. This doesn't mean such places or groups don't exist in the region, but rather that they weren't easily found by someone who isn't directly connected with existing resources/people in the region. It also has to be acknowledged that such peer/mentoring groups are often coordinated informally by local business individuals who decided to get together regularly to talk over challenges, opportunities, and share advice. This should not be confused with groups such as BNI, Business Networking International, which are designed primarily around increasing sales for members.

Putting a focus on awareness and networks isn't just important for the sake of supporting regional entrepreneurs, but it is also one of the ways to help increase the odds of people from outside the region looking to NIACOG to start, re-locate, or expand their small businesses into. The effort towards marketing the region's entrepreneurial ecosystem should therefore be done with an attitude of both celebrating within the region and telling the "outside world" about all the reasons to be in business in NIACOG.

Overall, the NIACOG region appears to have several positive activities and resources to help promote awareness and cultivate networks within the entrepreneurial ecosystem. As the region moves forward, the focus may well be placed on increasing these activities and resources to reach even more regional entrepreneurs.

## OPTIMIZING THE REGULATORY ENVIRONMENT

Entrepreneurs and small businesses do not operate in a separate market away from local, state, and federal policy makers. **Entrepreneurial development efforts must ensure that the regulatory burdens placed on small businesses do not adversely affect their ability to compete and grow.** While there must be some requirements related to running a business of any size, small businesses often lack the resources and knowledge to navigate complex tax codes, registration processes, and industry specific requirements. Therefore, it is important to provide the necessary support and transparency regarding regulations affecting small businesses. Local government can take care to ensure that entrepreneurs can easily traverse start-up processes, thereby increasing customer satisfaction and encouraging compliance. First-generation or first-time entrepreneurs are particularly subject to becoming confused or frustrated because they are not familiar with common business processes (Stapleton, 2012).

For this driver, we are also limited in insights from the datasets we have used to explore the regional economy, business environment, and entrepreneurial ecosystem. The challenges that stem from issues from navigating regulatory requirements often vary from county to county, because each one might have different local processes and resources to support their small businesses with.

We can instead look at the bigger picture of how entrepreneurs and small businesses experience the regulatory environment overall in Iowa. To help evaluate conditions in Iowa for how the regulatory environment affects entrepreneurs and small businesses, the Small Business Friendliness Survey is a helpful insight. This is an annual survey administered by Thumbtack, and was originally developed and conducted in collaboration with the Kauffman Foundation. With the survey being statewide, we can only use it to explore how the entrepreneurial ecosystem in NIACOG might also experience regulatory challenges. However, with many regulatory challenges' root causes stemming from the state level, the survey is a good way to explore how the NIACOG region might best assist and support their entrepreneurs and business owners to navigate regulations and other legal requirements.

The survey is also helpful since it has been conducted since 2012 and allows us to get a sense of changing perceptions over time. It's important to keep in mind that a survey like this can best be understood as a reflection on how entrepreneurs and business owners experience and perceive the friendliness of a state's regulatory business environment.

Some measures of "small business friendliness" have also changed from year to year, but in the highlight below (Table 9.1) we've kept the focus on the measures that have been consistent each year (with exception of two that were not asked in 2012, but added in subsequent years).

On the positive end of the survey questions, we find areas such as 'ease of starting a business' and 'ease of hiring a new employee' to be rated B and B- in 2021. Prior years were mixed, but overall grades appear to indicate a reasonably positive experience around starting and hiring.

On the negative end of the survey questions, we find areas such as 'business regulations generally' and 'employment, labor & hiring regulations' to have dropped from positive grades to F and D+ in 2021. While we don't suggest a panic reaction to these drops, they might be considered good indicators for where entrepreneurs and small business owner might benefit from more, better guidance and resources. For example, while it appears easy enough to hire an employee, the survey suggests that some find it challenging to manage the rules around keeping those employees and doing everything required. This might be an opportunity to host workshops on topics such as "managing employee regulations and compliance" or "HR for startups and small businesses".

Perception on the 'tax code' is unsurprisingly also graded low, but somewhat unexpected is that it dropped from As and Bs to an F in 2021.

'Licensing forms, requirements, and fees' appears to be middle of the ground with As, Bs, and Cs for grades. So not necessarily an area to start focusing on solutions for at the moment.

And lastly, on the question of 'Does your state or local government offer helpful training or network programs for small business owners?' the perception scored low with Fs in both 2018 and 2021, indicating that either there truly is a lack of these trainings or business owners have a hard time finding them. Either way, based on the training programs we have identified in the NIACOG region, it is reasonable to start with the assumption that it is not a lack of them, but possibly increasing promotion about them that should be the starting point.

One suggestion to make is for the NIACOG region to conduct their own regional small business friendliness survey to compare results to the state level perceptions. This would provide ongoing insights into how the region is faring as compared to the rest of the state.

	Survey Question	2012	2015	2018	2021
Overall Friendliness	In general, how would you rate your state's support of small business owners?	C+	C+	C+	D
Ease of Starting a Business	How difficult or easy do you think it is to start a business in your state?	C-	D	A	B
Ease of Hiring	How difficult or easy is it to hire a new employee at your business?	N/A	F	C+	B-
Regulations	How unfriendly or friendly is your state and local government with regard to business regulations generally?	A+	A+	B	F
Employment, labor, & hiring	How unfriendly or friendly is your state or local government with regard to employment, labor & hiring regulations?	A+	A+	A	D+
Tax Code	How unfriendly or friendly is your state or local government with regard to tax code and tax-related regulations?	B+	A+	B	F
Licensing	How unfriendly or friendly is your state or local government with regard to licensing forms, requirements and fees?	A+	A+	B-	C-
Training & Networking Programs	Does your state or local government offer helpful training or network programs for small business owners?	N/A	C-	F	F

Source: <https://www.thumbtack.com/survey#/2013/10/states/ia>



## RECOMMENDATIONS FOR NIACOG'S ENTREPRENEURIAL ECOSYSTEM

As we have seen throughout the entrepreneurship assessment, the NIACOG region has a lot of positive things going for it. We've seen a strong foundation of entrepreneurial and small business establishments play a key role in number of new establishments in the region. We've seen a wide variety of business workshops, events, and programs to support entrepreneurs at all ages, stages, and industries. We've seen industry and cluster trends that suggest regional advantages and resources in specific areas. And we've seen financial program that meets the needs of many different entrepreneurial ventures.

The recommendations are intended to help stakeholders in NIACOG identify new, additional approaches to continue fostering the entrepreneurial ecosystem. All the resources, activities, events, and organizations identified in the region that are already doing great things should by all means continue what they're doing. In other words, this should not be taken as recommendations to replace what is already in place, but rather to supplement and build upon those to develop an even stronger and more resilient entrepreneurial ecosystem.

For each recommendation, we have provided a general description and whenever possible links to similar programs/resources for further exploration or partnership opportunities. We also suggest that stakeholders in the region take time to rank the recommendations based on priority. Factors to use in prioritization, but not limited to, include expected cost, existing organization/person that could lead it, potential to integrate into existing programs, size of primary group benefitting, and potential economic impact.

- **Young Adult Focus Group** – The region could benefit from further investigating and understanding the population decline by talking with people who have/are moving away from the region. This should also include exploring why people are not moving to the region. Possibly the most important focus should be on exploring how to retain/attract the next generation of young adults. One way to do this is to host regular, regional focus groups to get input and insights on their perspectives of the region. Focus groups should target three segments of young adults; 1) the 16 to 25 year old's who are still in the region, 2) the 25 to 35 year old's who have stayed in, or moved to, the region, and 3) the 25 to 35 year old's who have moved away from the region. We recognize that it is more practical to get the first two segments to participant in a focus group with some small incentives, but more difficult to find and incentivize the third segment of young adults who are no longer living in the region. However, to fully understand what it might take to retain and attract young adults to the region, it is critical to get input from all three segments.
- **High Growth Business Programs** – With a strong number of establishments in the 2-9 and 10-99 employee ranges, there is a very good chance several of those have high growth potential. Investing in programs that provide direct support to those companies tend to have a high ROI for economic and entrepreneurial growth. While there are many different programs that specialize in helping these types of companies grow, it is important to use a program that helps companies with improving their internal processes for efficiencies, scaling their sales and marketing efforts, and identifying customer leads. These three issues tend to be main barriers for growth for most companies in those stages. Since these programs tend to come with a price tag that some companies may not be able to afford on their own, or be hesitant to invest in solely on their own, it is recommended that the region finds enough financial support to bring one to three companies into the program each year and subsidize the cost. Criteria for companies to participate should include a minimum of three years in business, \$500,000 to \$10,000,000 in revenue, 2 to 99 employees, and they should be able to sell their products/services beyond the regional market. Two established programs that might be good fits for the NIACOG region are:
  - System for Integrated Growth <https://edwardlowe.org/system-for-integrated-growth/>
  - Economic Gardening <https://economicgardening.org>

- **Business Peer Groups** – Entrepreneurs and business owner often find themselves isolated and without a reliable and diverse group of mentors around them. This leaves them with limited insights and perspectives to integrated into their decision making. Having good mentors is of course a recommendation everyone is already aware of, but it doesn't solve the challenge of finding those mentors that can and will provide the more relevant perspectives. That's where peer-groups come into play. The region could develop several peer-groups designed to target entrepreneurs and business owners based on some similar characteristics and some differences to ensure unique perspectives. A good model of effective peer groups is to have between eight and twelve members, have one or two monthly 1-2 hour sessions, provide an experienced facilitator, and signed confidentiality agreements from all participants. One peer group may be exclusively for early-stage startups who have been in business for less than two years. Another might be for those with 5 to 25 employees and have been in business for 2+ years. And yet another could be organized around companies that sell their products/services nationally or internationally. Put simply, the entrepreneurs and business owners who participate should be able to learn from each other, provide advice to each other, and feel connected by a similarity that isn't a competitive force.
- **In-person small business workshops** – While the region already offers business trainings, there could be an advantage in putting more resources behind those by hiring a full-time role to implement weekly small business workshops across the region. These should be hosted within each city or community, partnering with the local Chamber of Commerce and business owners to host and promote. This could include 1-2 hour basic business workshops along with more in-depth training programs. The key is to explore the local, in-person demand for trainings from those entrepreneurs and businesses who gain more from participating and engaging in the traditional format.
- **Industry Focused Workshops** – Along with the above recommendation, there is often a benefit in offering business workshops focused on strong industries such as agriculture and manufacturing. This could include both traditional business topics such as marketing, financial management, strategy, etc. But approaching these workshops with specific examples and discussion around only one key industry to make it more relevant. And, it could include topics such as exporting, lean manufacturing, energy usage reduction, workforce retention, etc. that tend to be more relevant to industries such as agriculture and manufacturing.
- **Coding Programs** – Developing the next generation of tech-skilled workers will be critical for any region, but likely more challenging for smaller, rural regions. However, there are approaches that seem to work well for other regions of similar sizes. The two examples below are from Cape Girardeau, Missouri, where one organization has implemented programs to teach coding to both kids and adults. Taking on an existing program such as the Youth Coding League and adding it to regional schools will help develop the long-term need for tech-skilled workers. Offering an 8-12 week coding bootcamp for adults with help re-skill people that are looking for a new career path. Or for companies that want to upskill their team they can have employees participate in a coding bootcamp.

  - Code Labs – <https://www.codefiworks.com/codelabs/>
  - Youth Coding League – <https://www.codefiworks.com/youthcodingleague/>
- **Startup Competition with \$ prize** – While the region already has some programs that support startups through trainings and pitch competitions, the next step could be to develop a startup competition focused on high-growth potential businesses. These are typically startups that are developing a somewhat new and unproven concept, have done some in-depth customer discovery to identify product-market fit, have develop a low-cost functioning version of their core concept, but are lacking capital to take it to the next level. Therefore, it should also be considered to add a monetary award to the best startup winner(s) each year. Most high-growth startup competitions with a financial prize tend to offer between \$50,000 and \$100,000. One reason to develop this kind of

startup competition is to retain and reward regional entrepreneurs that would otherwise be likely to move their startup to a bigger city with more financial resources. Another reason is that it can help attract startups to the region that would otherwise have looked at bigger cities to move to. Funding for a competition like this may likely come from regional stakeholders with an interest in supporting the next generation of entrepreneurs and job creators. Looking to regional banks, successful companies, and successful entrepreneurs is a good starting point to raise the \$50,000 or more to fund at least one winner annually. While there are many of these startup competitions across the country, we've shared one example from St Louis that have been around for many years.

- Arch Grants – <https://archgrants.org>
- **Startup Pitch Competition for Regional High School Students** – This could be developed as a regionwide startup idea competition to complement opportunities like the Youth Entrepreneurial Academy, which not everyone has the time or money to attend. It should be an online submission where high school students submit a 2-page pitch and short video. This could help reach a wider audience of aspiring young entrepreneurs, in particular in rural schools.
- **Youth Entrepreneurship Mentoring Program** – Tied in with the above-mentioned high school pitch competition, if there is enough momentum among young entrepreneurs, the region could develop a mentoring program that pairs up more experienced business owners with one or two young entrepreneurs to provide regular advice, coaching, and support. For any mentoring program to have a positive impact, it is important to design it with the mentee-mentor relationship in mind. This means some work has to be put into identifying the right mentors, setting expectations for both mentees and mentors, and matching them up appropriately. Considerations should include how often they need to meet, personality traits that match up, connecting the right experience with the right need, and offering enough resources and tools for both mentee and mentor to utilize.
- **Connect Existing Programs and Services** – Work directly with front-line business service providers such as accounting firms, insurance agents, real estate agents, banks, IT providers, etc. to educate them on business support resources available in the region (e.g., the Small Business Development Center). Most entrepreneurs go to these types of business services first, but may be unaware of the many small business support resources the region has. The best way to help the aspiring entrepreneurs to get connected with resources in the entrepreneurial ecosystem is to have those types of businesses tell them about it. But the accounting firms and insurance agents have to be invited into the entrepreneurial ecosystem before they'll know about resources as well.
- **Resource Perception Mapping** – Facilitate regular discussions with all stakeholders to address existing resources and lacking resources at the local level. This can be done by using the five drivers of the entrepreneurial ecosystem we have outlined in this report to help identify which resources actually exist but lack awareness, which resources don't exist, and which resources do exist but aren't working. Three important considerations to get useful insights from doing resource perception mapping is 1) ensure a diverse and balanced group of stakeholders with regular rotation in participants to get maximum level of input, 2) have the sessions regularly enough to track any trends in what stakeholders are seeing as most important or improvements being made, and 3) using a structured approach to discussing resources to avoid any one area become the only focal point.
- **Regional Small Business Friendliness Survey** – Conduct a survey based on the same questions as used in the statewide small business friendliness survey to compare state results with regional perceptions. This could help the region identify overall issues, challenges, and opportunities on an on-going basis, as well as help position the region as an entrepreneurial ecosystem with real advantages and benefits to entrepreneurs across the state.
  - Iowa Survey <https://www.thumbtack.com/survey#/2013/10/states/ia>

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## APPENDIX I - ESTABLISHMENT AND JOBS TRENDS

### ESTABLISHMENTS

NIACOG Establishment Trends						
Establishment Size	2009	2010	2011	2012	2013	2014
Total	7,295	7,768	7,532	8,235	8,498	8,062
Self-employed	1,395	1,549	1,465	1,497	1,450	1,294
2 to 9	4,551	4,833	4,709	5,370	5,650	5,406
10 to 99	1,248	1,288	1,262	1,272	1,300	1,270
100 to 499	92	89	87	87	89	83
500+	9	9	9	9	9	9

Source: youreconomy.org

NIACOG Establishment Trends						
Establishment Size	2015	2016	2017	2018	2019	2020
Total	8,062	7,908	7,846	7,981	8,178	7,494
Self-employed	1,294	1,337	1,342	1,308	1,313	1,487
2 to 9	5,406	5,194	5,104	5,266	5,445	4,631
10 to 99	1,270	1,288	1,313	1,312	1,324	1,289
100 to 499	83	80	79	86	89	79
500+	9	9	8	9	7	8

Source: youreconomy.org

NIACOG Establishment Annual Gains/Losses						
	2009	2010	2011	2012	2013	2014
Gains	299	896	237	1,125	498	471
Losses	494	423	473	422	235	676
Net Change	-195	473	-236	703	263	-205

Source: youreconomy.org

NIACOG Establishment Annual Gains/Losses						
	2015	2016	2017	2018	2019	2020
Gains	668	550	588	1,080	671	685
Losses	899	704	650	945	474	1,369
Net Change	-231	-154	-62	135	197	-684

Source: youreconomy.org

NIACOG Establishment – Starts and Move In's Vs. Closed and Move Out's						
	2009	2010	2011	2012	2013	2014
Starts	282	866	229	1,118	485	455
Move In	17	30	8	7	13	16
Closed	-483	-398	-465	-413	-219	-661
Move Out	-11	-25	-8	-9	-16	-15

Source: youreconomy.org

NIACOG Establishment Gains – Starts Vs. Move Ins						
	2015	2016	2017	2018	2019	2020
Starts	654	543	575	1,065	655	658
Move In	14	7	13	15	16	27
Closed	-882	-694	-636	-928	-455	-1,342
Move Out	-17	-10	-14	-17	-19	-27

Source: youreconomy.org

## JOBS

NIACOG Total Jobs Each Year by Establishment Size						
Establishment Size	2009	2010	2011	2012	2013	2014
Total	76,283	76,359	73,121	75,730	76,635	73,863
Self-employed	1,395	1,549	1,465	1,497	1,450	1,294
2 to 9	17,221	18,154	17,807	19,969	20,639	19,887
10 to 99	30,994	31,767	30,989	31,137	31,263	29,810
100 to 499	15,802	15,463	15,134	15,201	15,357	14,246
500+	10,871	9,426	7,726	7,926	7,926	8,626

Source: youreconomy.org

NIACOG Total Jobs Each Year by Establishment Size						
Establishment Size	2015	2016	2017	2018	2019	2020
Total	73,863	73,562	74,206	77,044	77,395	73,325
Self-employed	1,294	1,337	1,342	1,308	1,313	1,487
2 to 9	19,887	19,086	19,007	19,557	20,163	17,883
10 to 99	29,810	30,627	31,457	30,989	31,350	30,759
100 to 499	14,246	13,886	13,515	14,805	15,383	13,510
500+	8,626	8,626	8,885	10,385	9,186	9,686

Source: youreconomy.org

## APPENDIX II – INDUSTRY CLUSTER PROFILE

We’ve included the top 25 Industry Clusters for the NIACOG region in the table below to provide more detail around their relative cluster scores and jobs.

Industry clusters are groups of similar and related firms in a defined geographic area that share common markets, technologies, worker skill needs, and which are often linked by buyer-seller relationships. The classic example of a successful industry cluster is the “tech industry” in Silicon Valley. Due to that established cluster, tech entrepreneurs have consistently located their startup there. The highest caliber engineers, support resources like lawyers and banks, early-stage and late-stage investors, industry experts and mentors, and tech-focused incubators/accelerators programs are easily found in the area due to the strong cluster formation around the tech industry. Having a strong cluster can help provide companies with competitive advantages compared to companies in areas without the same clusters showing up as strong.

The Harvard Business School, under the leadership of Michael Porter, designed the way to measure the concentration of companies in particular sectors, i.e. “industry clusters”. The Harvard approach breaks industries into 71 unique categories of industry clusters. These industry clusters are ranked on performance by using five key performance metrics and “weighting” each according to importance. The outline below defines each metric and what “weight” we set it at for the NIACOG industry cluster analysis:

1. Earnings (2X) – “How important is it that industries have high earnings per worker”
2. Growth (4X) – “How important is it that industries have high overall job growth”
3. Regional Competitiveness (2X) – “How important is it that regional job growth exceeds the national average job growth for an industry”
4. Regional Specialization (2X) – “How important is it that regional job concentration is higher than the national average job concentration for an industry”
5. GRP (1X) – “How important is it that industries make a high contribution to overall gross regional product”

Put simply, we valued job growth as the most important factor in exploring which industry clusters are strong in the NIACOG region. The rationale for this is that to support the entrepreneurial ecosystem, it helps to consider whether future entrepreneurs in specific industry clusters would be able to draw on a strong, growing pool of experienced employees from companies in the region.

Cluster Identification - NIACOG		
	Score	Jobs
Electric Power Generation and Transmission	61	192
Biopharmaceuticals	57	1,016
Construction Products and Services	57	925
Agricultural Inputs and Services	53	3,466
Production Technology and Heavy Machinery	53	1,591
Upstream Chemical Products	52	349
Oil and Gas Production and Transportation	51	137
Textile Manufacturing	49	240
Livestock Processing	48	1,072
Food Processing and Manufacturing	45	2,106
Financial Services	45	146
Wood Products	45	303
Nonmetal Mining	44	143
Local Industrial Products and Services	43	294

Local Utilities	43	233
Local Commercial Services	41	2,375
State Government Services	41	347
Transportation and Logistics	41	993
Information Technology and Analytical Instruments	40	70
Local Motor Vehicle Products and Services	37	3,289
Distribution and Electronic Commerce	37	1,593
Furniture Manufacturing	37	356
Local Logistical Services	36	1,075
Local Financial Services	36	1,477
Education and Knowledge Creation	34	1,868



## APPENDIX III – OCCUPATION CLUSTERS

The Occupational jobs data comes from Economic Modeling Inc (EMSI).

SOC	Description	2010 Jobs	2022 Jobs	2010 - 2022 Change	2010 - 2022 % Change
11-1000	Top Executives	774	1,673	899	116%
11-2000	Advertising, Marketing, Promotions, Public Relations, and Sales Managers	136	188	52	38%
11-3000	Operations Specialties Managers	570	757	187	33%
11-9000	Other Management Occupations	3,322	3,098	(224)	(7%)
13-1000	Business Operations Specialists	977	1,432	456	47%
13-2000	Financial Specialists	849	832	(17)	(2%)
15-1200	Computer Occupations	567	584	17	3%
15-2000	Mathematical Science Occupations	20	51	31	157%
17-1000	Architects, Surveyors, and Cartographers	36	26	(10)	(28%)
17-2000	Engineers	302	420	118	39%
17-3000	Drafters, Engineering Technicians, and Mapping Technicians	227	209	(18)	(8%)
19-1000	Life Scientists	145	177	32	22%
19-2000	Physical Scientists	83	92	9	11%
19-3000	Social Scientists and Related Workers	69	64	(5)	(7%)
19-4000	Life, Physical, and Social Science Technicians	132	166	34	25%
19-5000	Occupational Health and Safety Specialists and Technicians	14	59	44	312%
21-1000	Counselors, Social Workers, and Other Community and Social Service Specialists	907	839	(68)	(7%)
21-2000	Religious Workers	289	258	(32)	(11%)
23-1000	Lawyers, Judges, and Related Workers	119	151	32	26%
23-2000	Legal Support Workers	120	100	(20)	(16%)
25-1000	Postsecondary Teachers	462	551	89	19%

25-2000	Preschool, Elementary, Middle, Secondary, and Special Education Teachers	2,146	1,860	(286)	(13%)
25-3000	Other Teachers and Instructors	484	374	(111)	(23%)
25-4000	Librarians, Curators, and Archivists	159	156	(3)	(2%)
25-9000	Other Educational Instruction and Library Occupations	786	1,036	250	32%
27-1000	Art and Design Workers	189	225	36	19%
27-2000	Entertainers and Performers, Sports and Related Workers	321	252	(69)	(21%)
27-3000	Media and Communication Workers	218	185	(33)	(15%)
27-4000	Media and Communication Equipment Workers	51	85	33	64%
29-1000	Healthcare Diagnosing or Treating Practitioners	2,012	2,072	60	3%
29-2000	Health Technologists and Technicians	1,001	1,111	110	11%
29-9000	Other Healthcare Practitioners and Technical Occupations	<10	33	Insf. Data	Insf. Data
31-1100	Home Health and Personal Care Aides; and Nursing Assistants, Orderlies, and Psychiatric Aides	2,398	2,265	(133)	(6%)
31-2000	Occupational Therapy and Physical Therapist Assistants and Aides	66	79	12	18%
31-9000	Other Healthcare Support Occupations	478	561	84	18%
33-1000	Supervisors of Protective Service Workers	58	73	15	27%
33-2000	Firefighting and Prevention Workers	30	35	5	16%
33-3000	Law Enforcement Workers	344	314	(31)	(9%)
33-9000	Other Protective Service Workers	230	241	10	5%
35-1000	Supervisors of Food Preparation and Serving Workers	328	459	131	40%
35-2000	Cooks and Food Preparation Workers	1,254	1,388	135	11%
35-3000	Food and Beverage Serving Workers	2,573	2,086	(487)	(19%)
35-9000	Other Food Preparation and Serving Related Workers	363	264	(99)	(27%)
37-1000	Supervisors of Building and Grounds Cleaning and Maintenance Workers	120	120	0	0%
37-2000	Building Cleaning and Pest Control Workers	1,805	1,416	(388)	(22%)
37-3000	Grounds Maintenance Workers	500	421	(79)	(16%)
39-1000	Supervisors of Personal Care and Service Workers	123	87	(36)	(29%)

39-2000	Animal Care and Service Workers	128	161	33	26%
39-3000	Entertainment Attendants and Related Workers	148	197	49	33%
39-4000	Funeral Service Workers	78	50	(28)	(36%)
39-5000	Personal Appearance Workers	383	394	11	3%
39-6000	Baggage Porters, Bellhops, and Concierges	<10	<10	Insf. Data	Insf. Data
39-7000	Tour and Travel Guides	<10	<10	Insf. Data	Insf. Data
39-9000	Other Personal Care and Service Workers	1,355	1,065	(291)	(21%)
41-1000	Supervisors of Sales Workers	865	679	(185)	(21%)
41-2000	Retail Sales Workers	3,910	3,689	(221)	(6%)
41-3000	Sales Representatives, Services	767	667	(100)	(13%)
41-4000	Sales Representatives, Wholesale and Manufacturing	786	683	(104)	(13%)
41-9000	Other Sales and Related Workers	283	251	(32)	(11%)
43-1000	Supervisors of Office and Administrative Support Workers	348	318	(31)	(9%)
43-2000	Communications Equipment Operators	26	<10	Insf. Data	Insf. Data
43-3000	Financial Clerks	1,881	1,306	(575)	(31%)
43-4000	Information and Record Clerks	1,585	1,625	40	3%
43-5000	Material Recording, Scheduling, Dispatching, and Distributing Workers	786	875	89	11%
43-6000	Secretaries and Administrative Assistants	1,618	1,180	(438)	(27%)
43-9000	Other Office and Administrative Support Workers	1,461	1,294	(167)	(11%)
45-1000	Supervisors of Farming, Fishing, and Forestry Workers	67	71	4	5%
45-2000	Agricultural Workers	1,415	1,388	(27)	(2%)
45-3000	Fishing and Hunting Workers	<10	<10	Insf. Data	Insf. Data
45-4000	Forest, Conservation, and Logging Workers	17	12	(5)	(29%)
47-1000	Supervisors of Construction and Extraction Workers	298	363	65	22%
47-2000	Construction Trades Workers	2,749	2,434	(315)	(11%)
47-3000	Helpers, Construction Trades	52	51	(1)	(2%)
47-4000	Other Construction and Related Workers	319	325	5	2%

47-5000	Extraction Workers	60	63	3	6%
49-1000	Supervisors of Installation, Maintenance, and Repair Workers	194	258	64	33%
49-2000	Electrical and Electronic Equipment Mechanics, Installers, and Repairers	191	172	(20)	(10%)
49-3000	Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	1,163	1,277	114	10%
49-9000	Other Installation, Maintenance, and Repair Occupations	1,533	1,554	20	1%
51-1000	Supervisors of Production Workers	464	571	107	23%
51-2000	Assemblers and Fabricators	1,970	1,382	(588)	(30%)
51-3000	Food Processing Workers	608	1,022	414	68%
51-4000	Metal Workers and Plastic Workers	1,607	1,577	(31)	(2%)
51-5100	Printing Workers	171	138	(33)	(19%)
51-6000	Textile, Apparel, and Furnishings Workers	312	216	(96)	(31%)
51-7000	Woodworkers	258	225	(33)	(13%)
51-8000	Plant and System Operators	191	201	10	5%
51-9000	Other Production Occupations	2,137	2,421	284	13%
53-1000	Supervisors of Transportation and Material Moving Workers	172	196	24	14%
53-2000	Air Transportation Workers	34	71	37	109%
53-3000	Motor Vehicle Operators	2,581	2,824	243	9%
53-4000	Rail Transportation Workers	106	88	(18)	(17%)
53-5000	Water Transportation Workers	11	<10	Insf. Data	Insf. Data
53-6000	Other Transportation Workers	82	52	(30)	(36%)
53-7000	Material Moving Workers	2,521	2,684	164	6%
55-9000	Military-only occupations	285	213	(73)	(25%)
99-9000	Unclassified Occupation	0	0	0	0%
		66,166	65,242	(923)	(1%)