

Nebraska Landscape Analysis

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We believe based on our landscape analysis that **Omaha and Lincoln can succeed if they recast the effort as a generational one and treat it as an urgent re-positioning based on the State's core strengths.** To do this, will require courage and will likely need to be led by private citizens and corporations – not exclusively government or traditional non-profit sources. ”

Introduction –

#1

In late June 2019, Chapman and Company was hired by Mike Cassling and the Aksarben Foundation to do a landscape analysis regarding the information technology workforce in Nebraska. This is intended to provide a true view of the landscape. Our general reaction is that Nebraska, Omaha and Lincoln in particular, are **slightly behind peer communities** when it comes to IT jobs and **moderately behind the nation at large.**

This landscape analysis will do a couple of things:

- 1 Using Bureau of Labor Statistics, the report will describe the basic technology jobs landscape in Omaha and Lincoln. In short, Omaha and Lincoln trail national averages on IT job growth and wage growth. The two communities are about average against peer communities.
- 2 The report outlines net inflow and outflow migration using U.S. Census bureau statistics. Omaha, generally, gets its people from smaller communities and internationally. Lincoln, generally, has inflow migration from Omaha, rural communities, and other similarly sized communities. Both communities lose people to Kansas City and similarly sized communities. And, both communities have modest gains from very large cities such as Chicago, Los Angeles, and New York.
- 3 The report attempts to identify the programs at the city and state level used by communities to recruit talent and increase the production of talent. The most general of these is the university system. In general, Nebraska produces a relatively high proportion of IT graduates amongst its overall college graduates. And, Nebraska is a slight net importer of college attending talent through programs such as MHEC.
- 4 Throughout the report, there are running comparisons with peer communities and programming. The fourth section attempts to encapsulate other communities' efforts into small competitive capsules. Three communities stick out as having tremendous growth – Fayetteville, Arkansas, Madison, Wisconsin, and Columbus, Ohio. Each is the home to a large, public four-year university, but beyond that each has grown through a combination of efforts that includes many of those targeted by the Aksarben Foundation.
- 5 The fifth section is a description of risks and warnings that we contemplated when examining the data. The three biggest risks can be summarized as: 1) desertification of rural population, 2) risks associated with wage inflation, 3) trying the same old thing.
- 6 The report has some recommendations regarding programming and the future efforts of the Aksarben Foundation. These recommendations are premised on data and analysis, but they are also part of the general strategic understanding of community building which is the backbone of Chapman and Company.

I. Basic Information about Jobs Market —

The Nebraska communities measured – Omaha and Lincoln - are significantly below the national average salary for technology workers. The national average wage for BLS OES Code 15-0000, the general All Math + IT workers section, is \$91,530. This national average wage is \$11,230 more than Omaha in 2018 and \$22,690 more than Lincoln. Some of this can be attributed to cost of living, but the data suggests that even within peer cities with similar costs of living, Lincoln, in particular, has particularly low salaries for information technology workers.

Against peer communities, Omaha's wages are more than peer communities for all IT positions – by approximately \$2640 per year, but Lincoln's are still significantly below the peer communities by approximately \$8820. In fact, of the twenty-seven communities that were measured, Lincoln finished 25th or 3rd lowest for Software Developer, Applications wages and 2nd lowest for All Math + IT wages. The only city that finished below Lincoln is Sioux Falls, which has seen growth rates on wages of nearly 6% suggesting that next year, Lincoln will be the lowest.

“ In addition, to slightly below average wages, Omaha and Lincoln also are slightly below average regarding wage growth. ”

When we compare the specific job category of Software Developers, Applications, the story is also negative. While Omaha is almost exactly average – less than \$1000 from the average peer city wage. Lincoln remains more than \$13,000 less than the average peer city wage of \$90,795. The national average for Software Developers, Applications is \$108,080 which is \$31,360 more than Lincoln's average wage for a comparable position. However, all but Boulder and Columbus, Ohio, are below the national average. Thus, within the peer communities Lincoln has low wages.

Having extremely low wages is probably on net negative for a community. Specifically, while low wages may make it easier to start a business or relocate one to a community, low wages also mean that many technology workers would make more money if they lived elsewhere. In particular, technology workers are transient and can often work remotely – meaning that unusually low wages is probably on net slightly negative.

In addition, to slightly below average wages, Omaha and Lincoln also are slightly below average regarding wage growth. This means that over the last eighteen years, average technology wage growth has been average to slightly below average in the two communities. Lincoln's wage growth rate has been at average for the nation but below average within the peer group. Omaha's wage growth rate has lagged both peer group and the national average for all Math + IT employment.

The data (which is included on the next page) suggests a number of things. First, the national average growth rate for wages is significant 3-3.2% - but its growth rate regarding new jobs is extraordinary. Since 2000, the national growth rate for SDA is over 7.5% - meaning that the country has created nearly 530,000 SDA jobs in the

last eighteen years. During that time, Omaha and Lincoln have created approximately 1500 or just .3% of the total new jobs in this category.

Other communities have dramatically increased their total of SDA jobs during that same time period. For example, Madison, Wisconsin has added 7000 jobs alone in this category – for a job growth rate of nearly 60% per year in this desired category. During that time, wages have grown by 2.41% - well below the peer and national averages. However, it is not just Madison. Communities such as Des Moines, Eugene, Chattanooga, Columbus, San Antonio, and Wichita all have growth rates of more than 20%. These communities all outstrip Omaha and Lincoln dramatically. In fact, if current growth rates continue for the next eighteen years, Omaha will fall from 4th in 2000 regarding All Math + IT jobs to 17th amongst the peer communities.

#3

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Wage Comparison City	State	Growth Rate	Software Developers, Applications				All Math & IT				Highest Wages	
			2000	2018	Total GR	Annual GR	2000	2018	Total GR	Annual GR	SDA	All Math + IT
Sioux Falls	South Dakota	16.38%	\$ 46,090	\$ 77,870	69%	3.83%	\$ 32,830	\$ 67,650	106%	5.89%	24	27
San Antonio, TX	Texas	17.53%	\$ 54,770	\$ 102,410	87%	4.83%	\$ 43,300	\$ 84,790	96%	5.32%	4	4
Salt Lake City, UT	Utah	12.38%	\$ 69,490	\$ 101,680	46%	2.57%	\$ 44,420	\$ 81,910	84%	4.69%	5	7
Tucson, AZ	Arizona	6.00%	\$ 66,700	\$ 85,010	27%	1.53%	\$ 45,990	\$ 81,980	78%	4.35%	20	6
Oklahoma City, OK	Oklahoma	11.45%	\$ 61,050	\$ 88,860	46%	2.53%	\$ 41,910	\$ 74,140	77%	4.27%	15	17
Chattanooga	Tennessee	6.68%	\$ 50,820	\$ 90,710	78%	4.36%	\$ 45,170	\$ 79,450	76%	4.22%	12	11
Huntsville, AL	Alabama	10.80%	\$ 62,760	\$ 104,190	66%	3.67%	\$ 56,470	\$ 97,430	73%	4.03%	3	1
Eugene	Oregon	7.93%	\$ 54,980	\$ 82,550	50%	2.79%	\$ 41,410	\$ 70,920	71%	3.96%	23	21
Columbus, OH	Ohio	10.76%	\$ 66,810	\$ 110,050	65%	3.60%	\$ 54,870	\$ 92,440	68%	3.80%	2	2
Champaign	Illinois	3.34%	\$ 58,290	\$ 83,180	43%	2.37%	\$ 46,570	\$ 76,930	65%	3.62%	22	15
Fayetteville	Arkansas	18.55%	\$ 61,050	\$ 90,510	48%	2.68%	\$ 45,410	\$ 72,710	60%	3.34%	13	18
Des Moines, IA	Iowa	15.06%	\$ 67,260	\$ 91,950	37%	2.04%	\$ 52,550	\$ 83,820	60%	3.31%	10	5
Little Rock, AR	Arkansas	5.91%	\$ 61,050	\$ 85,180	40%	2.20%	\$ 43,900	\$ 69,770	59%	3.27%	19	24
Madison, WI	Wisconsin	9.08%	\$ 60,920	\$ 87,330	43%	2.41%	\$ 51,290	\$ 81,370	59%	3.26%	16	8
Lincoln	Nebraska	10.73%	\$ 46,780	\$ 76,720	64%	3.56%	\$ 43,510	\$ 68,840	58%	3.23%	25	26
Ann Arbor	Michigan	7.59%	\$ 55,650	\$ 97,840	76%	4.21%	\$ 49,630	\$ 77,950	57%	3.17%	8	14
Omaha, NE	Nebraska	8.88%	\$ 59,710	\$ 89,940	51%	2.81%	\$ 52,450	\$ 80,300	53%	2.95%	14	9
Fort Collins	Colorado	17.58%	\$ 66,460	\$ 100,440	51%	2.84%	\$ 56,690	\$ 85,990	52%	2.87%	6	3
Milwaukee, WI	Wisconsin	1.30%	\$ 60,240	\$ 91,570	52%	2.89%	\$ 52,520	\$ 79,330	51%	2.84%	11	12
Fargo	North Dakota	17.58%	\$ 61,050	\$ 75,770	24%	1.34%	\$ 46,930	\$ 70,660	51%	2.81%	27	22
Kansas City, MO	Missouri	6.68%	\$ 57,940	\$ 87,330	51%	2.82%	\$ 53,760	\$ 78,670	46%	2.57%	17	13
Albuquerque, NM	New Mexico	3.25%	\$ 63,850	\$ 76,430	20%	1.09%	\$ 54,960	\$ 79,600	45%	2.49%	26	10
Tulsa, OK	Oklahoma	6.01%	\$ 62,140	\$ 86,110	39%	2.14%	\$ 48,730	\$ 70,220	44%	2.45%	18	23
Boise, ID	Idaho	18.47%	\$ 63,260	\$ 84,950	34%	1.90%	\$ 53,600	\$ 76,930	44%	2.42%	21	16
Lexington	Kentucky	9.45%	\$ 70,690	\$ 98,180	39%	2.16%	\$ 54,040	\$ 71,450	32%	1.79%	7	20
Wichita, KS	Kansas	2.24%	\$ 61,050	\$ 94,200	54%	3.02%	\$ 54,220	\$ 69,180	28%	1.53%	9	25
Boulder	Colorado	10.70%	\$ 77,510	\$ 110,510	43%	2.37%	\$ 65,950	\$ 72,450	10%	0.55%	1	19
Peer Community Average		10.09%	\$61,050.74	\$ 90,795.19	49.70%	2.76%	\$ 49,373.33	\$ 77,662.22	59.34%	3.30%	14	17
National Average			\$70,300.00	\$ 108,080.00	54.00%	2.99%	\$ 58,050.00	\$ 91,530.00	58.00%	3.20%		

Italics are average wages for 2000 in SDA as not all communities had full reporting

II. Location Quotients –

A different way to think about jobs and jobs markets is as a function of total population – or density. The typical econometric tool for measuring density is called a location quotient or LQ. An LQ is the ratio of jobs in a specific area, in our case MSA, versus an average, in our case the national average. In this way, we can better understand how dense a place is versus other places that have different levels of population. In our comparison, we used two different measurements of location quotients. The first measurement is that of all STEM jobs. We defined this as including ONLY the three major BLS OES codes for Math + IT, Architecture + Engineering, and Life Sciences.¹



“
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¹Those codes are 15-0000, 17-0000, 19-0000. We did not include other smaller codes because not every peer community has a large enough population that every code would be measured. Moreover, we did not attempt to weight Lincoln or Omaha’s LQs by adding dense, though outside the scope of the definition jobs. In many cases, this is a way that landscape reports provide padding to make the report tell a specific story. Our process starts with the data and reports what we find. Our intent is not to effectuate a certain outcome based on the data.

Omaha Comparison

The location quotient data suggests that Omaha has a moderately dense IT community with an LQ of 1.49 – and an above average STEM jobs community with a 1.2. However, neither is particularly dense. As an example, Omaha’s Math + Tech LQ (15-0000) is approximately 30th in the country. However, Omaha has a significant gap between the top communities and itself. For example, for Omaha to have reached the top 10 during 2018, Omaha would have needed to have approximately 58 Math + IT jobs per 1000 or roughly 7800 more than it had in 2018, approximately 29,000 jobs. This aligns with the goal of adding 10,000 technology workers within the next five years. However, we believe that the better metric would be to have an LQ of 2.0 because it aligns with current thinking but also keeps pace with the significant growth of technology workers in the overall population. Moreover, because BLS data is timely and comes out every March for the previous May – the LQ data is a relatively transparent, timely measurement.

Rank	City	LQ	Avg Wage
1	San Jose-Sunnyvale-Santa Clara	4.16	\$127,040
2	California-Lexington Park, MD	4.11	\$101,060
3	Boulder, CO	2.56	\$101,220
4	Washington-Arlington-Alexandria,	2.45	\$107,760
5	Seattle-Tacoma-Bellevue, WA	2.32	\$113,750
6	Huntsville, AL	2.23	\$ 97,340
7	Durham-Chapel Hill, NC	2.10	\$ 91,740
8	Madison, WI	2.06	\$ 81,370
9	San Francisco-Oakland-Hayward	2.00	\$120,730
10	Austin-Round Rock, TX	1.97	\$ 91,970

Omaha currently is above most of the peer cities regarding the density of its Math + IT workforce. However, communities such as Huntsville, Alabama and Madison, Wisconsin perform in the Top 10 nationally. We believe that Huntsville’s success is due to the Jet Propulsion Lab and other space related jobs located in Huntsville. Madison’s seems to be based on a combination of the University of Wisconsin, a burgeoning startup scene, and the relocation of offices from large companies, such as Google which has about 400 technologists in Madison.

MSA Community	Percentage of Population	Location Quotient - STEM	Location Quotient - Math & Tech
Huntsville, AL	7.59%	2.90	2.24
Des Moines-West Des Moines, IA	3.55%	1.36	1.69
Kansas City, MO-KS	3.41%	1.30	1.46
Columbus, OH	3.39%	1.30	1.42
Omaha-Council Bluffs, NE-IA	3.16%	1.21	1.49
Milwaukee-Waukesha-West Allis, WI	3.04%	1.16	1.16
Salt Lake City, UT	3.02%	1.15	1.65
Boise City, ID	2.70%	1.03	0.82
Albuquerque, NM	2.68%	1.03	0.64
Tucson, AZ	2.43%	0.93	0.81
Oklahoma City, OK	2.38%	0.91	0.73
Little Rock-North Little Rock-Conway, AR	2.23%	0.85	0.89
Wichita, KS	2.13%	0.81	0.58
Tulsa, OK	2.10%	0.80	0.63
San Antonio-New Braunfels, TX	1.91%	0.73	0.73

Lincoln Comparison

Lincoln finishes almost exactly in the middle of the pack when it comes to location quotient for Math + IT jobs. This functionally means that for the comparison group, Lincoln is not the most dense, nor the least. And compared to Omaha, Lincoln is less dense in Math + Tech jobs and virtually exactly as dense in total STEM jobs.

In the national comparison, Lincoln is 64th overall on Math + IT. For Lincoln to move into the Top 10 for Math + IT, it would require an increase of approximately 4500 new math and information technology workers at this time.

Boulder, Colorado and Ann Arbor, Michigan are the two outliers within the Lincoln comparison group. Both have extreme density in total STEM jobs, and Boulder is one of the densest IT clusters in the country with a 4.72 LQ in the SDA category compared above. In other words, it is not realistic for Lincoln to target competing with Boulder exclusively in SDA, but it may be realistic for Lincoln and Omaha to add 12-15k Math + IT jobs to dramatically improve the two communities' standing in the near term.

MSA Community	Percentage of Population	Location Quotient - STEM	Location Quotient - Math & Tech
Boulder, CO	8.67%	3.31	2.94
Ann Arbor, MI	5.71%	2.18	1.51
Fargo, ND-MN	3.36%	1.29	1.33
Sioux Falls, SD	2.74%	1.05	1.29
Lincoln, NE	3.20%	1.22	1.19
Fayetteville-Springdale-Rogers, AR-MO	2.17%	0.83	1.03
Champaign-Urbana, IL	2.70%	1.03	0.98
Fort Collins, CO	3.85%	1.47	0.87
Eugene, OR	1.80%	0.69	0.63
Lexington-Fayette, KY	2.17%	0.83	0.59
Chattanooga, TN-GA	1.64%	0.63	0.57

Conclusion

To conclude this section, Omaha and Lincoln are competitive from a density perspective when it comes to information technology employment. However, the current employment is growing more slowly than the peer averages and are close to national averages. Thus, unless Omaha and Lincoln dramatically improve their growth rates for Math + IT and STEM, in general, it is likely that the communities will fall behind peer communities, much less the country.

The Aksarben stated goal of adding 10,000 workers seems reasonable as a goal. However, Chapco would suggest targeting not just raw growth – but actual improvement versus peers and the national averages. By targeting an LQ improvement to 1.9-2.0, the communities would need

to add more than 10,000 jobs but also would be in a more competitive position regarding relative ranking rather than just raw numbers. The reality is that every community in the country is attempting to increase technologists, and thus, relative improvement is important not just raw increases in numbers.

For this reason and based on the peer/comparative data, Chapman and Company would suggest that Omaha should be targeting an improvement of approximately 8-10k alone – to increase to an LQ of 1.97. And, Lincoln should be targeting an improvement by 4.5-5.5k to increase to a similar LQ. These goals will be more difficult but would achieve a more substantial relative gain than a goal based on a raw number of new technology workers.

III. Inflow/Outflow —

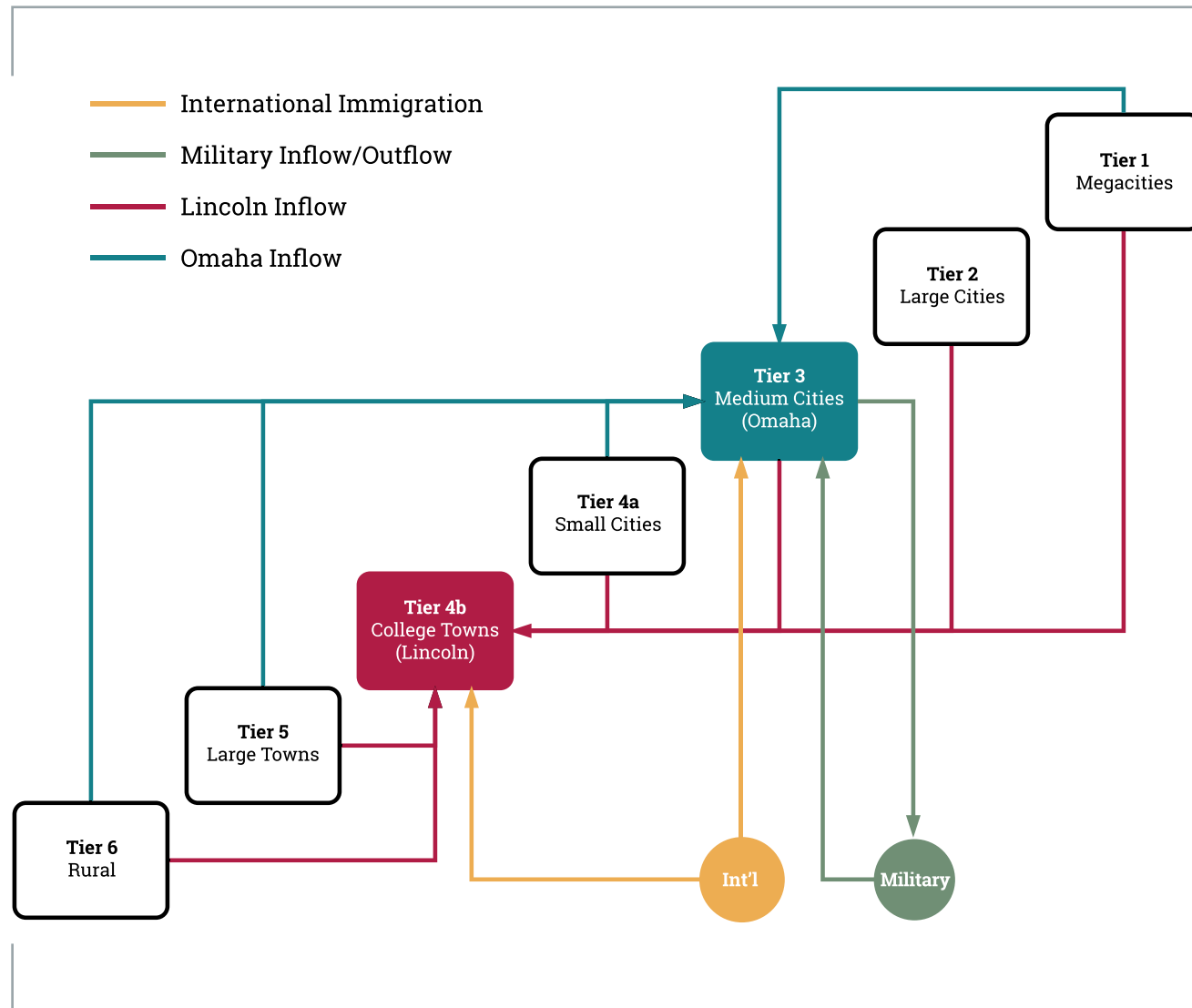
#7

Chapco examined the inflow/outflow patterns of Omaha and Lincoln. We also compared those inflow/outflow patterns to the peer group to see if patterns emerged. This research and analysis revealed several striking findings.

For the purpose of this research, it is helpful to think about the communities in a tiering system.

Basically, rather than treating each city separately – think of them as peers of Omaha or Lincoln from a size perspective.

CITY TIER SYSTEM	
TIER 1 Megacities	Tier 4b College Towns (<i>Lincoln</i>)
TIER 2 Large Cities	Tier 5 Micropolitans and Large Towns
TIER 3 Medium Cities (<i>Omaha</i>)	Tier 6 Rural
Tier 4a Small Cities	



The communities in the peer group consistently followed certain types of patterns. The first pattern was that when we reviewed marketing materials, videos, and other efforts, they were targeted at communities one step larger. So, for example, Omaha targets Denver, Detroit, Kansas City, and St. Louis. Boise targets Portland and Seattle. However, these communities were consistently net takers from smaller communities.

Just as, Omaha is a net taker from Peoria, Sioux City, and Tier 4, 5, and 6 communities. Omaha's largest net import of people was from rural areas and international. This is not exactly the case with every peer community to Omaha – but it is a consistent feature of the inflow/outflow research that we did. In other words, most peer

communities to Omaha are making similar misjudgments regarding how and whom to recruit. Specifically, Omaha sized communities are targeting bigger cities rather than smaller cities. Moreover, these cities do boomerang people – but it does not appear that is driven by recruitment, but by family and other ties.

College towns and small cities (Tier 4) looked dissimilar from each other. College towns were net importers from larger regional places. For example, Lincoln's inflow from Omaha is about 100 per year. There is a netting effect and we cannot make the judgment from the data that this is tied to education, but we surmise that having the University of Nebraska – Lincoln is a likely factor for this net inflow.

Moreover, Lincoln exported to many of Tier 2 and 3 cities – Dallas, Denver, Des Moines, Kansas City, and Washington DC.

This suggests the continuation of the pattern that we mentioned above but with a twist. Towns such as Madison, Lincoln, Champaign, and other similar college towns import from their in-state cities at an incredibly high rate. So, for example, Madison's largest net import is Milwaukee. But, they export to most other cities in similar and larger classes in nearby states.

However, we believe that both Omaha and Lincoln would benefit from recruiting cities and towns that are from 5000 people to 500,000 people – particularly using some specific advantages. One advantage is that states like Louisiana, Missouri, and Illinois significantly underperform in public education. Whereas, Nebraska significantly overperforms. This leads many parents to choose private education. But, it also creates a fairly substantial cost gap because private schools in these regions are often expensive. This is not the case in Nebraska where both public and private schools are excellent – and relatively inexpensive. For example, Lincoln Pius' tuition is substantially below other Catholic schools in the region and the country at \$1500. Targeting families in areas with poor public education and expensive private education that also have high median incomes and more than three children in communities that fit our targets may be a potential strategy.

For example, Baton Rouge, Louisiana is a place that has a public university – Louisiana State University – poor public schools and expensive private schools. Within Baton Rouge, Zip Code 70817 is the zip code with the largest median household income (\$86,968). That zip code has 31,192 people and has 1075 households of five people or more. It has 118 households of seven people or more. By microtargeting a specific positive attribute of Nebraska (schools), rather than generally talking about schools or quality of life, discerning a select, small group to attract is possible. Media and marketing may be focused on a select group in a single community – but one that can be targeted in forty or fifty communities for relatively inexpensive fees – using Facebook Ads, social media, and other targeted efforts (Direct mail, etc.). This data is relatively easy to scrub using zip code and census track data.

Moreover, using it as a way to also recruit students to UNL where they receive in-state tuition through the MHEC consortium may be a mechanism to start building deep recruiting bridges to places that currently have limited efforts being targeted at them.

More importantly, this is not a strategy that is being used by any other community that we researched. For the most part, conventional wisdom is to recruit communities slightly larger. We believe that this may be tied to an expectation of boomeranging or even based on community pride that the community's feel as if they are the "equal" to slightly larger communities. So, for example, Omaha loses a significant population to Kansas City annually – but Omaha positions itself as if KC and Omaha are similarly situated communities.

Simply put, we are not. KC is nearly 2.5 times the size of Omaha. We have many common attributes tied to geography, such as weather, industries, etc., but the actual city attributes are more similar to cities that are roughly similar in population, such as Des Moines and Omaha.

The Midwest Higher Education Compact ("MHEC") program has only one Big 10 school included – Nebraska – which means if you are in Rockford, Illinois or Green Bay, Wisconsin and you fail to get into your flagship university (which is challenging in both states), you will likely not have a Big 10 experience. If you desire it, you can receive instate or reduced tuition to Nebraska through the MHEC. We believe that this is potentially a huge, untapped recruitment mechanism for both the school and the region to attract talent and families. Currently, Nebraska is a net importer through the program of approximately 300 students per year. We believe that it is possible that this could be significantly increased – particularly in Illinois, Michigan, Minnesota, and Wisconsin, where it is difficult to receive acceptance to each state's flagship Big 10 school(s).

In short, we would recommend using tools of this type to find unique, untapped ways (with limited other competition) to build Nebraska's brand and recruit talent in places that already send talent to Nebraska in small quantities – but that could be regular sources of talent that are currently untapped and are generally not in places where other communities are targeting. Thus, we recommend taking aggressive steps to micro-target smaller cities, large towns, and rural areas with recruitment to both come live and work in Omaha and Lincoln, but also to study at the University of Nebraska, particularly the flagship campus in Lincoln.

Omaha

#11

First, Omaha’s inflow pattern was different than anticipated. Based on long-term efforts to attract new talent from cities that were larger than Omaha, the team expected to see that Omaha had a net positive with some cities in the larger category. Omaha and similar cities do have a net positive from megacities, such as New York City, Chicago, and Los Angeles. This was consistent across all cities. It is hard to build causal explanations – but we surmise that this is boomeranging and targeted recruitment to corporations. However, we do not have the data to back up those claims.

We do not believe that this is caused by broad marketing by communities. Part of the reason that we do not think this is the case is that it appears across all communities in the peer group – not just the ones that are recruiting their local or semi-local megacity.

Another key takeaway from Omaha’s data is the amount of churn between military cities. This led us to a conclusion that we explain later in this paper. But, it is unique to communities in our survey to those that are military cities.

Thus, there is a substantial exchange of people between communities like San Antonio and Omaha. Again, we suspect this is based on military transfers and deployments. However, again we cannot prove this based on causality.

Finally, most northern cities see a general transfer of people to the southern part of the country. For example, Omaha has exports to Phoenix, San Antonio, and Dallas. We suspect that some of this is due to people seeking better weather, but that most of this is retirement or people moving later in life to a warmer climate.

Omaha’s inflow is interesting because it has such a strong tie to military communities, smaller cities, and megacities. Cities that we would recommend targeting without strong military ties include Sioux City, Winchester, VA, Wichita, Rapid City, Dubuque, Eau Claire, Springfield (MO), and Des Moines. These are places that fall within the Top 30 current net exporters to Omaha.

What we found more fascinating was where Omaha exported talent to. Omaha loses nearly 400 people per year more to the following ten cities than it gets from its Top 11 imported communities – including all Tier 6 communities.

Omaha loses to KC, Phoenix, Lincoln, San Antonio (military), Dallas, St. Louis, Providence (we suspect this is tied to First Comp’s relocation in 2012-13), Nashville, and Seattle. When we looked at peer cities, this was a common refrain. Large cities gain by getting people from medium and small cities. This was consistent and counter to what we expected to see.

INFLOW TO OMAHA	RANK	CATEGORY
Rural	1	Tier 6: Rural
Los Angeles-Long Beach-Anaheim, CA Metro Area	2	Tier 1: Megacity
Sioux City, IA-NE-SD Metro Area	3	Tier 4a: Small City
Provo-Orem, UT Metro Area	4	Military
Chicago-Naperville-Elgin, IL-IN-WI Metro Area	5	Tier 1: Megacity
Stockton, CA	6	Military
San Luis Obispo, CA	7	Military
Norwich-New London, CT	8	Military
New York-Newark-Jersey City, NY-NJ-PA Metro Area	9	Tier 1: Megacity
Winchester, VA	10	Tier 4a: Small City
Wichita, KS Metro Area	11	Tier 3: Medium City



Lincoln

Lincoln's import/export data is a little harder to interpret as is the data from its peer cities – particularly those that have large universities. Three things are relatively clear. Lincoln receives significantly more rural residents than Omaha – probably to attend university. Lincoln gets roughly 5x as many people from rural places as Omaha. Moreover, Omaha exports people to Grand Island (very small number), Lincoln's largest single import city is Grand Island. Thus, we surmise that Lincoln is pulling in much of rural Nebraska's 18-22-year-old population to attend university. These people are then retained or sent elsewhere, not necessarily back to rural Nebraska. To be clear, this is not a value judgment on whether this is good or bad. This is simply a reflection of what we see in the data.

Second, Lincoln is much more likely to be a net importer of talent from a large city than Omaha. For example,

Lincoln has positive immigration from Boston, Philadelphia, Seattle, Baltimore, and San Diego. We believe that this is tied to the university also – but it is much more difficult to interpret this information as it is consistent with college towns, but not strongly correlated based on specific traffic patterns. In other words, there are numerous large city imports to college towns – such as Tucson having large inflows from San Francisco, Boston, and Seattle, but the cities had no natural affinities, other than general geography. In other words, Boston exports people to college towns but not all college towns and not based solely on proximity. Thus, suggesting a strong recruitment effort to these large communities appears to be a poor strategy. Instead, we would recommend specific recruitment by individual institutions, such as the University of Nebraska system, as the means to continue this inflow.

Third, across the dataset, the most consistent imported group of people was from international sources. Lincoln and Omaha both benefit significantly from a population perspective on international emigration to Nebraska. Only one community that we studied appeared to be specifically targeting international immigration – Des Moines – with a concerted effort. We believe that making this a part of an effort by Aksarben makes sense. However, in today's political climate, we are not sure what specific strategy to recommend as immigration laws seem more variable and enforcement on high tech visas potentially more tenuous. Thus, while we see that international immigration is a source of community growth, we believe that targeting a specific recruitment effort may be difficult. Instead, we would recommend focusing on what to do with immigrants when they arrive – ensuring community programming and engagement so that international immigrants feel welcome and can establish natural, permanent ties to Omaha and Lincoln.

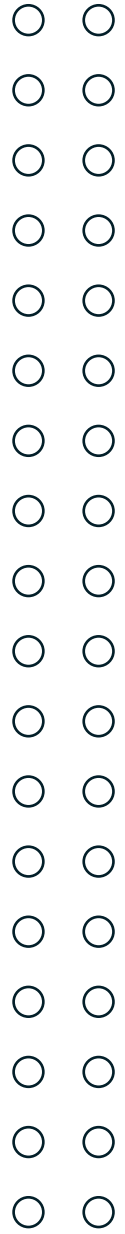
In recommendation on how to proceed, we would recommend that Lincoln and Omaha focus on recruiting medium cities, small cities, large towns, and rural areas – such as Sioux City, Peoria, and Wichita – as they appear on both lists. When we compare other similarly situated peer cities, these cities also show similar net imports from small cities and rural areas. Thus, the goal should be to extend the catchment area for Nebraska's two largest cities – from rural Nebraska and Western Iowa – to all of the contiguous states plus Illinois, Minnesota, Wisconsin. So, as an example, targeting communities of 250,000 or fewer within 500 miles with recruitment efforts to UNL would be one such mechanism. This attraction and recruitment program would be much more in line with the actual movement of people rather than targeting only the large cities.

INFLOW TO LINCOLN	RANK	CATEGORY
Outside Metro Area within U.S. or Puerto Rico	1	Tier 6: Rural
Grand Island, NE Metro Area	2	Tier 5: Large Town
Omaha-Council Bluffs, NE-IA Metro Area	3	Tier 3: Medium City
Los Angeles-Long Beach-Anaheim, CA Metro Area	4	Tier 1: Megacity
Boston-Cambridge-Newton, MA-NH Metro Area	5	Tier 2: Large City
Peoria, IL Metro Area	6	Tier 4a: Small City
Sioux Falls, SD Metro Area	7	Tier 4a: Small City
Chicago-Naperville-Elgin, IL-IN-WI Metro Area	8	Tier 1: Megacity
Sioux City, IA-NE-SD Metro Area	9	Tier 4a: Small City
Seattle-Tacoma-Bellevue, WA Metro Area	10	Tier 2: Large City
San Diego-Carlsbad, CA Metro Area	11	Tier 2: Large City



IV. Comparison to Other Markets —





Boise, Idaho

Summary:

Boise, Idaho sells its outdoors lifestyle and the ability to spend time with family or doing things that you enjoy. It specifically recruits young professionals and families based on a lifestyle play. They focus on time savings and the ability to access all of the neat features of Boise, including Boise State athletics.

State Programs:

Customized Job Training

Recruitment Inflow Targets:

Seattle, Portland

Top Net Migration State(s):

California (big differential)

Migration Inflow:

Rural, Los Angeles, Riverside, Pocatello, San Diego, Denver

Migration Outflow (to):

Seattle, Portland, Phoenix, Salt Lake City, Grand Junction

Recruitment Competitors:

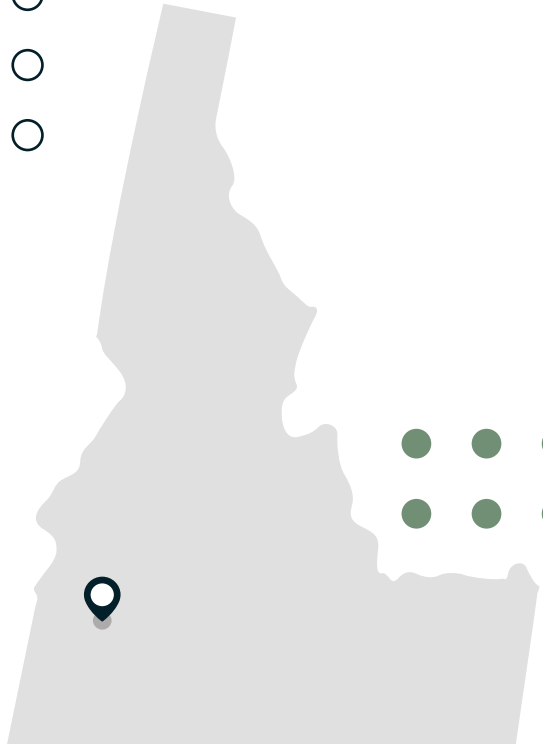
Idaho competes with Nevada, Washington, and Oregon

Recruitment Personas:

Young Professionals and Young Families

Code Schools/Bootcamps:

2, CodeWorks



San Antonio, Texas

#17

Summary:

San Antonio feels like is behind other communities because it has a low density of STEM jobs. They have created at Chief Recruitment and Talent Officer (CTRO) through a \$300k grant to TechBloc. Tech Bloc is a website/movement intended to dramatically improve the technology ecosystem in San Antonio.

Nice Feature:

A local (left-leaning) news blog publishes a weekly piece that talks about where people live – neighborhoods and amenities are featured. It does a good job of providing a welcoming insight into SA.

State Programs:

Grants through Wagner-Peyser Funds for outstanding programs,

Targets:

Military, Texas cities,

Inflow Migration From:

Texas Cities (Rural, McAllen, Laredo, Houston), California, Arizona, New York, Georgia, Florida

Outflow Migration to:

Texas Cities (Austin, College Station, Lubbock, Dallas) Chattanooga, Nashville

Recruitment Competition from:

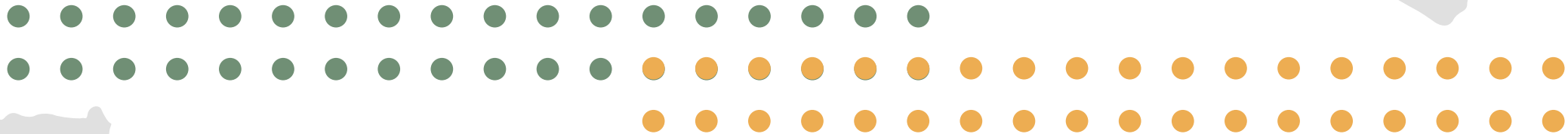
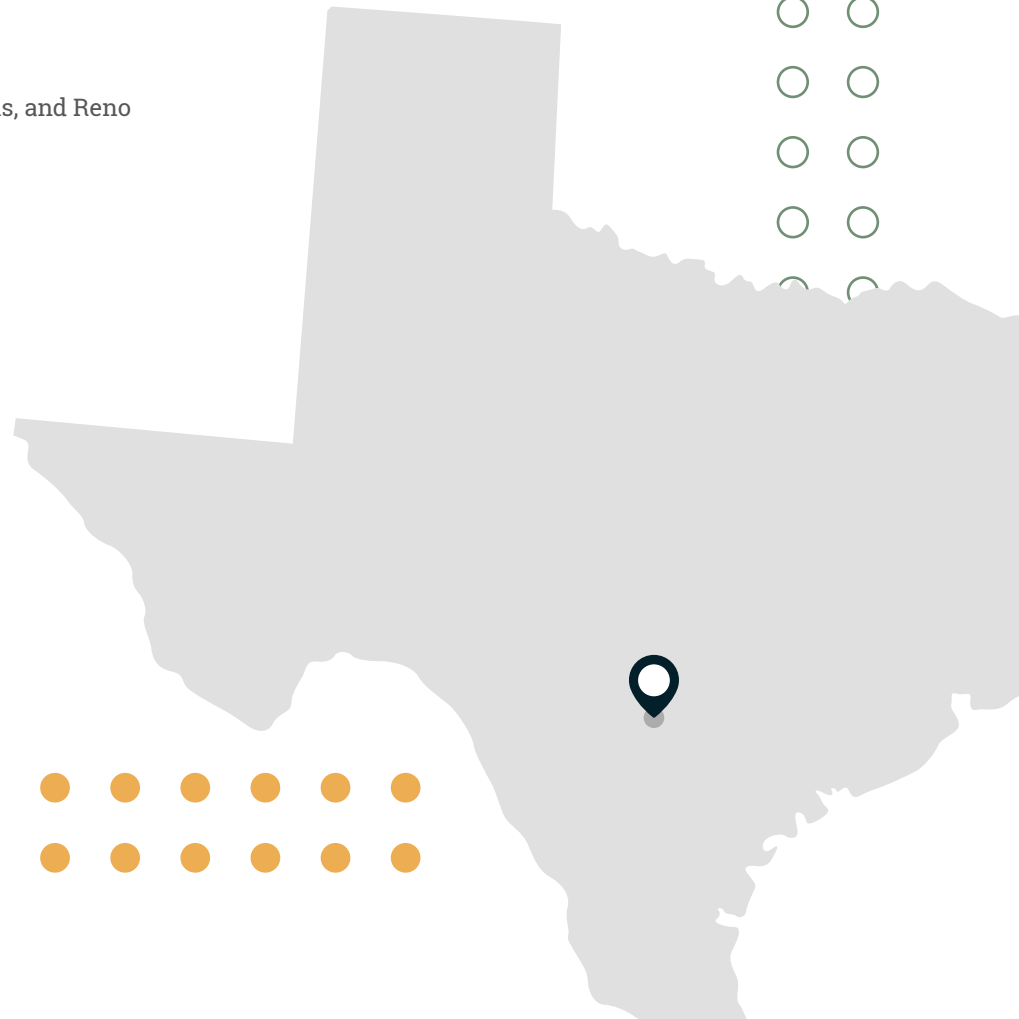
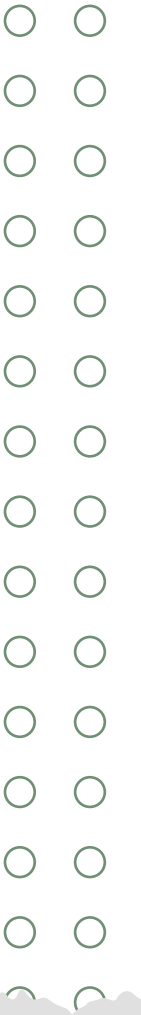
OKC, Omaha, KC, St. Louis, New Orleans, and Reno

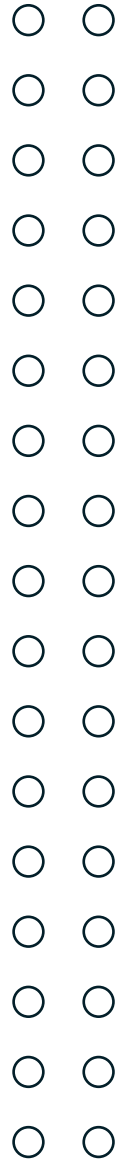
Recruitment Personas:

Geeks

Code Schools/Bootcamps:

6, Digital Creative Institute, Code Up





Wichita, Kansas

Summary:

Wichita created a talent recruitment strategy in August 2018 (https://greaterwchitapartnership.org/about_us/recruit_and_retain_talent&view=print)². This strategy specifically targets certain markets for recruitment efforts: Dallas, KC, Los Angeles, and Oklahoma City. The city plan will use: 1) engagement with local employers and influencers, 2) talent marketing collateral, 3) talent attraction website, 4) social media, 5) paid media, 6) student marketing, 7) ambassadors program, 8) public relations.

State Programs:

Targets:

Boomerangs and target industry market talent.

Inflow Migration from:

Los Angeles, New York, Rural Areas, Jacksonville (NC), Miami, Texarkana

Outflow Migration to:

Nashville, San Antonio, Lawrence, Savannah (GA), Tulsa, Small Kansas Cities

Recruitment Competition from:

San Antonio, Dallas, KC

Recruitment Personas:

Boomerangs, Aerospace

Code Schools/Bootcamps:

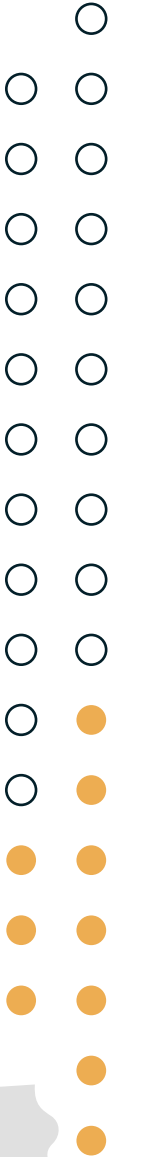
1, Wichita State

²The budget for the DCI effort and report was reported at \$80k.



Des Moines, Iowa

#19



Summary:

Des Moines' tech talent initiative, CarpeDM, was launched in 2014 and it targets technology talent specifically. The actual program of recruitment seems fairly broad with a focus on inclusion and young people. There was not a specific target strategic document available – but it appears that DSM is focused on being more friendly to people from international origins.

Interesting Note:

Des Moines has an entire page on the GDMP website that is specifically targeted at international recruits. <https://www.dsmpartnership.com/growing-business-here/business-resources/talent-development-resources/global-talent>.

State Programs:

The Technology Association of Iowa

Targets:

Military, Texas cities,

Inflow Migration From:

Rural areas, Small Iowa Cities, St. Louis, Milwaukee

Outflow Migration to:

Ames, Minneapolis, Phoenix, Portland (ME)

Recruitment Competition from:

Kansas City, Omaha

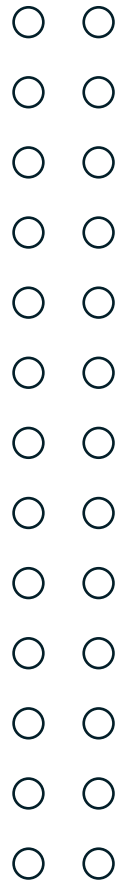
Recruitment Personas:

Boomerangs (from Iowa), International

Code Schools/Bootcamps:

2, Delta V Code School





Salt Lake City, Utah

Summary:

Salt Lake City appears to rely primarily on private sector efforts directly – rather than formal coalitions or economic development organizations. These groups of people tend to push towards recruitment efforts in key technology centers by advertising multiple companies offering jobs in similar segments. They appear to target Silicon Valley hard.

Interesting Note:

In reading about Utah and Salt Lake City, it appears that the actual recruitment is done almost 100% by corporations without much non-profit input or help. <https://venturebeat.com/2018/03/30/how-utahs-startups-are-attracting-tech-talent-from-other-states/>, <https://www.wsj.com/articles/utah-shows-how-labor-force-growth-fuels-economic-growth-11547809200>

State:

The state has a variety of programs associated with technology pathways that tie programs from K-16 directly to industry and employer. They also have a strategic grant program which appears to be provided to smaller communities.

Target Cities:

San Jose, San Francisco, Silicon Valley, Los Angeles

Inflow Migration from:

Rural Areas, Riverside, Urban Honolulu, Los Angeles, New York, Silicon Valley

Outflow Migration to:

Ogden, Phoenix, St. George (UT), Dallas, Seattle

Code Schools/Bootcamps:

7 – Vschool and Dev Point Labs

Oklahoma City, Oklahoma

#21



Summary:

Forward OKC is the primary economic development initiative. They have a workforce development strategy that starts and ends with improving current efforts – by training more technology workers through colleges and community colleges. It is a very traditional model.

Interesting Note:

When Chapman & Company worked in OKC, the schools were only in session for four days a week because of a lack of state funding. Teachers went on strike during the Spring of 2018.

State Programs:

Much of Oklahoma City's and the State of Oklahoma's dialogue around talent is to refocus efforts on improving K-16 education. Oklahoma Works is an example of one such program.

Targets:

Tulsa, Wichita, Dallas

Inflow Migration From:

Tulsa, Small OK Cities, Rural, Sioux City, New York, Dallas, KC, San Diego

Outflow Migration to:

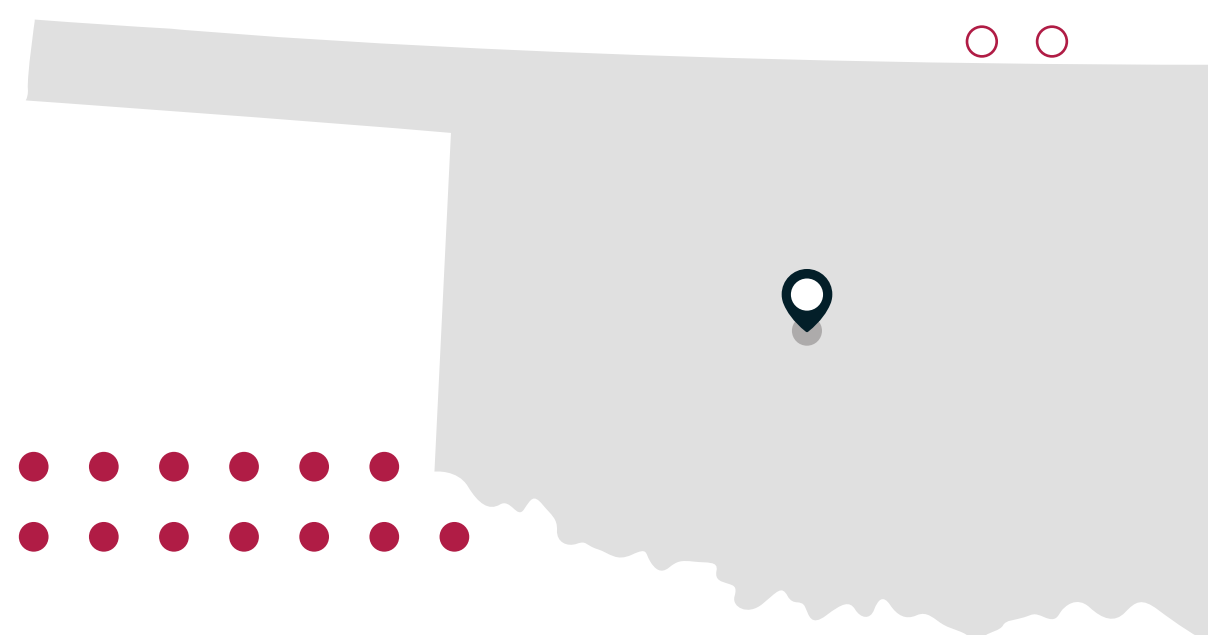
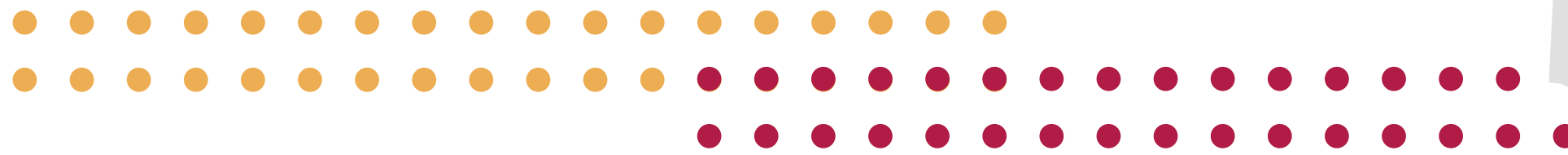
Prescott, Savannah, Denver, Baton Rouge, Midland, Phoenix, Minneapolis

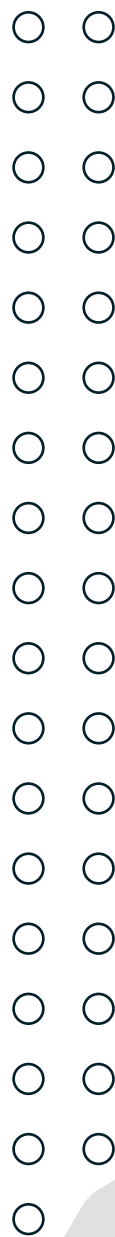
Recruitment Competition from:

Kansas City, Omaha

Code Schools/Bootcamps:

1, OK Coders





Madison, Wisconsin

Summary:

Madison, Wisconsin benefits by having a top recruiting university in the city. The city boasts a very well-educated workforce compared to Omaha and Lincoln. So, it is no surprise that the efforts described in various articles and on websites suggest that a significant number of their efforts are targeted at rural Wisconsin or in retaining young professionals.

Interesting Note:

The State of Wisconsin has a Fablabs program that provides funding for K-12 schools to have fabrication laboratories so that all Wisconsinites have access to learning new age manufacturing technologies.

State:

The state does have a talent initiative that is premised on Think – Make – Happen and is integrated with the state’s strong support of the YP programs in various communities. The State does have \$1mm set aside for customized job training in 2020.

Targets:

Wisconsin cities

Outflow Migration to:

Tampa, Silicon Valley, Eau Claire, Denver, Duluth, Seattle, Austin

Inflow Migration From:

Milwaukee, Chicago, Green Bay, Appleton, Cedar Rapids, Rockford, Minneapolis

Code Schools/Bootcamps:

1, devCodeCamp



Kansas City, Missouri

#25

Summary:

Kansas City straddles Missouri and Kansas. This means that it can offer an array of programming for individuals and companies. Much of the effort appears to be targeted at support of private employers, rather than a specific non-profit effort. There are specific customized job training programs, but they appear to be at the State levels.

Interesting Note:

TeamKC, part of the KC Area Development Corporation, is a support organization that provides resources and support to private entity recruiters – both internal to corporations and external headhunters.

State:

The State of Missouri has created a Talent for Tomorrow initiative run by the Department of Labor. This attempts to re-align education with talent needs of employers. This initiative puts apprenticeships forward as a core piece of the effort – but it is unclear how the incentives or funding would benefit those employers. The State of Kansas has some programs that specifically provide incentive dollars for customized training and customized retraining.

Targets:

Omaha and other Midwest cities, including Missouri smaller cities

Inflow Migration from:

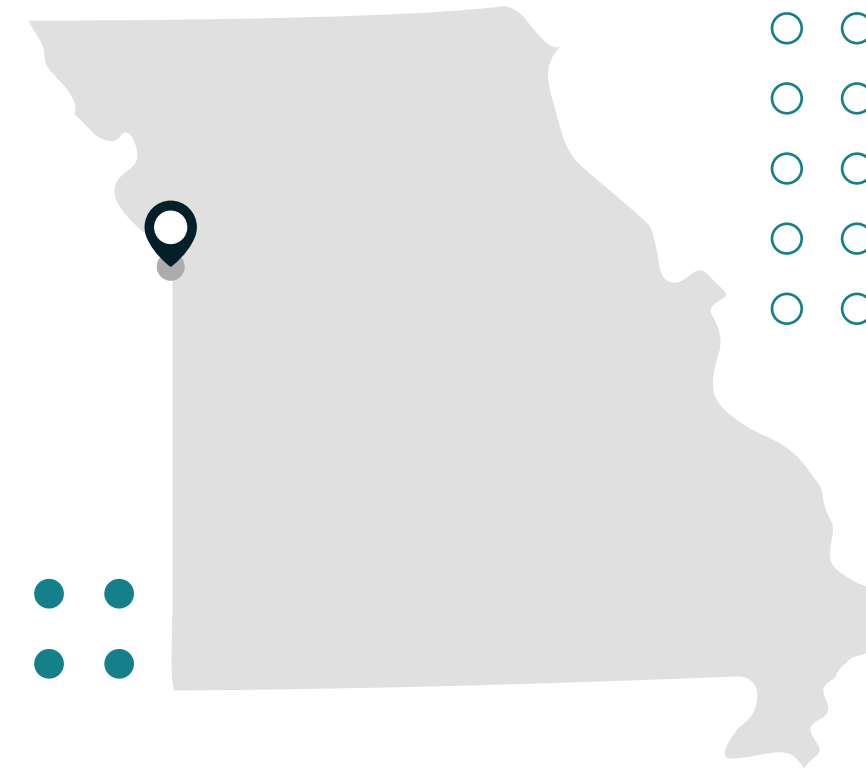
Omaha, Topeka, New York, Las Vegas, Phoenix, Springfield

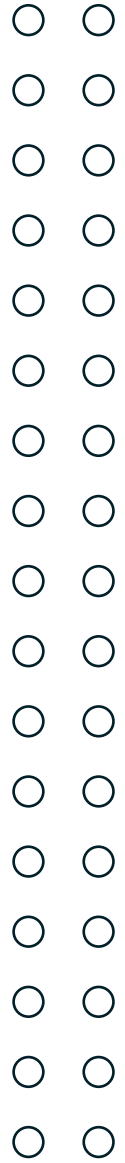
Outflow Migration to:

Rural Areas, St. Joseph, Dallas, Lawrence, Manhattan, Tampa

Code Schools/Bootcamps:

6, Centriq, LaunchCode





Little Rock, Arkansas

Summary:

Talent is a key part of the local EDC's strategy. However, the programming targets improving schools and recruitment as key components. There are a couple of customized job training programs at the State level that target advanced skills – technology, robotics, data science. But, these appear to be statewide, not just LR.

Interesting Note:

A significant amount of the state's focus is on manufacturing, but like Nebraska, broadband access appears to be a significant talking point in rural Arkansas.

State:

Arkansas has a variety of incentives that are tied to increasing employment, but many of the workforce training programs are targeted at manufacturing, not technology.

Targets:

Memphis, Northwest Arkansas

Inflow Migration From:

Pine Bluff (AR), Atlanta, Chicago, Fayetteville (NC), Hot Springs, DC

Outflow Migration To:

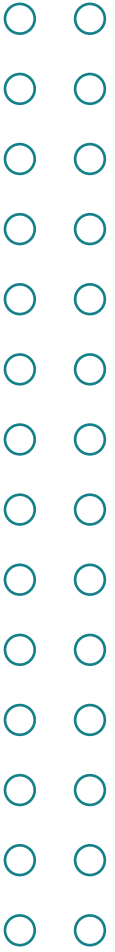
Fayetteville, Rural, Dallas, Memphis, San Antonio, Austin, Fort Smith

Code Schools/Bootcamps:

1, Arkansas Coding Academy



#29



Albuquerque, New Mexico

Summary:

Albuquerque boasts on its website that it has strong technology talent – including 60,000 college students in the area. However, it seems lacking in organized recruiting or even talent development strategies. Most of the efforts revolve around apprenticeship or statewide programming. An example of a program that could be applied in Omaha or Lincoln is Talent ABQ.

Interesting Note:

New Mexico recently adopted a \$1000 incentive to a business when it hires a recently discharged veteran.

State:

The state provides a variety of incentives, training tools, and other run-of-the-mill technology and workforce development programs. However, when you dig into them, much of the programming is tied to federal dollars or finding jobs for low-income clients.

Targets:

Rural NM and El Paso

Inflow Migration From:

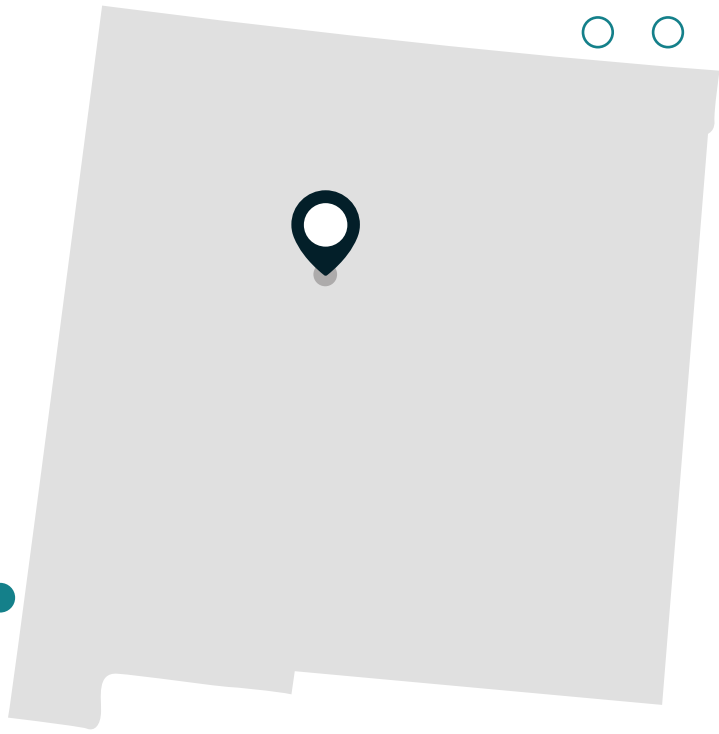
Rural, El Paso, Small NM Cities, Crestview (FL), Kansas City, Colorado Springs

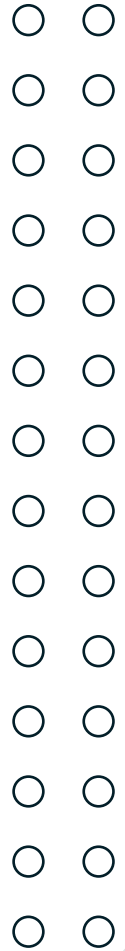
Outflow Migration To:

Phoenix, Houston, Las Vegas, Riverside, Lake Havasu City, New York, San Francisco

Code Schools/Bootcamps:

2, Cultivating Coders





Milwaukee, Wisconsin

Summary:

Milwaukee has just launched a variety of talent recruitment initiatives by M7, the EDC, and by the corporations, called Tech Hub. These efforts primarily focus on recruitment of Chicago and other Rust Belt cities with some focus on building a better means for local talent to find jobs.

Interesting Note:

Tech Hub is a local effort led by Northwestern Mutual and very similar to the effort described by Aksarben.

State:

The State of Wisconsin has a number of workforce development programs with Milwaukee and other manufacturing cities as the targets. In particular, Milwaukee has used their YP week to target recruitment and networking.

Targets:

Inflow Migration From:

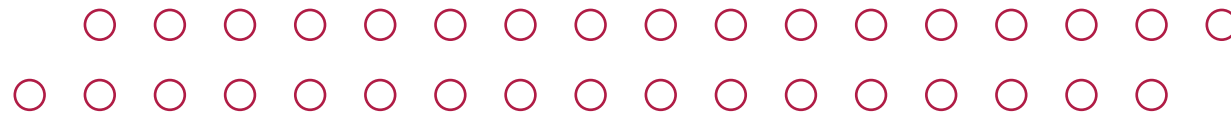
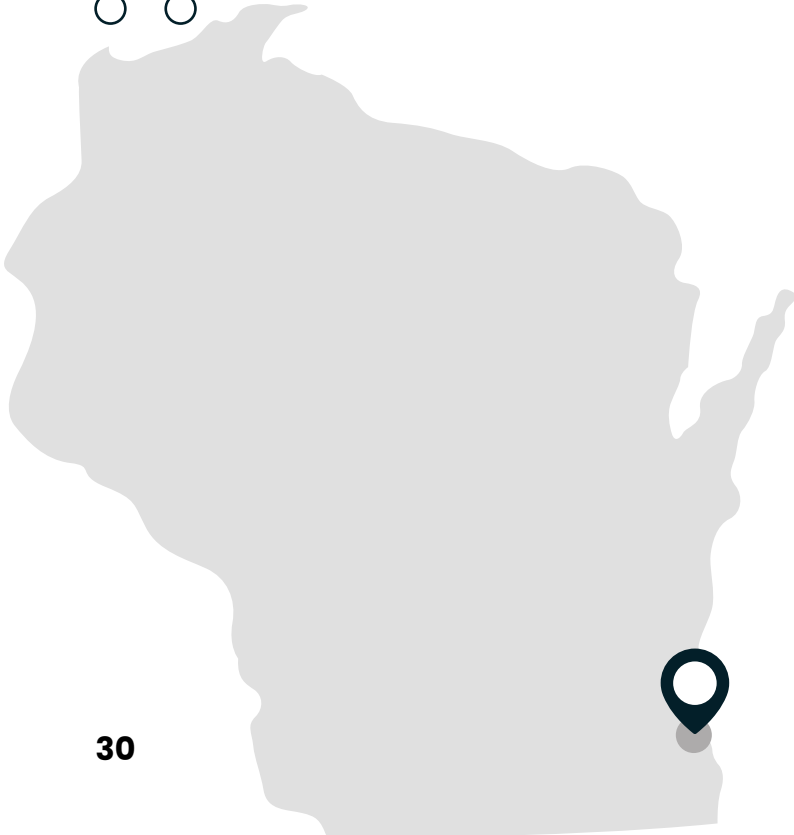
Chicago, Fond du Lac, Sheboygan, Champaign, Davenport (IA), Winston-Salem, Philadelphia

Outflow Migration To:

Madison, Rural, Phoenix, Oshkosh, Atlanta, Dallas, Denver

Code Schools/Bootcamps:

3, devCodeCamp



Fort Collins, Colorado

Summary:

Ft. Collins conducted a comprehensive talent initiative study in 2017 that identified three general challenges to the community: 1. More Jobs than workers. 2. More demand in the coming years than the labor market can handle. 3. Workers are getting older and retiring. These are common problems across all the communities we have investigated.

Interesting Note:

One of the main undertakings was to improve the interstate system into Ft Collins by securing grant dollars from state and federal funding.

State:

<https://pivottocolorado.com> <https://fortcollinschamber.com>

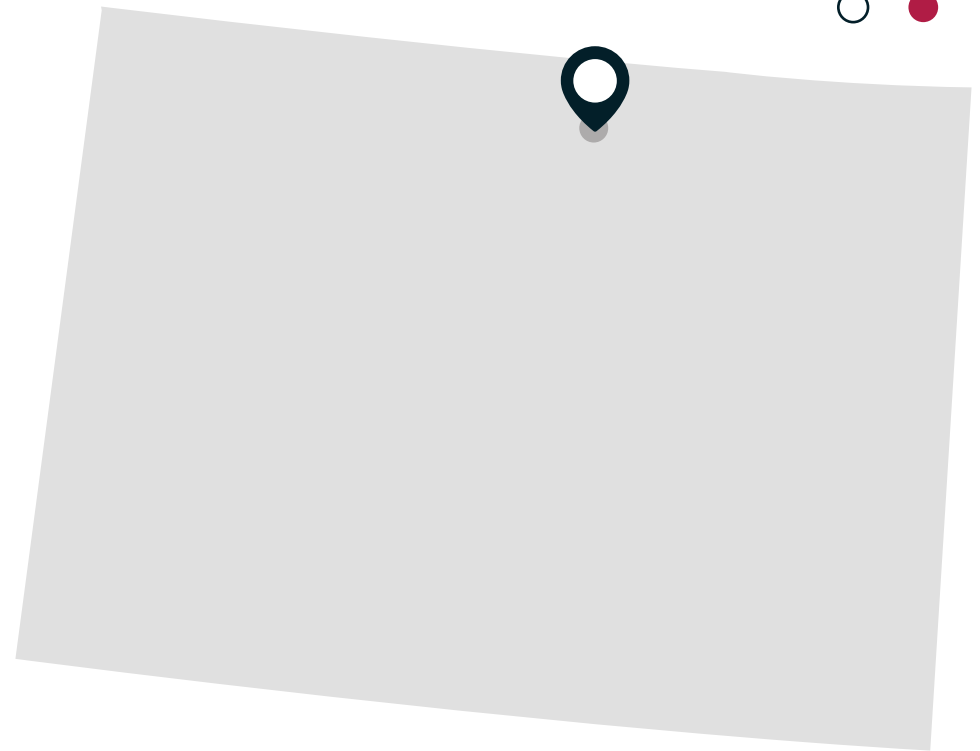
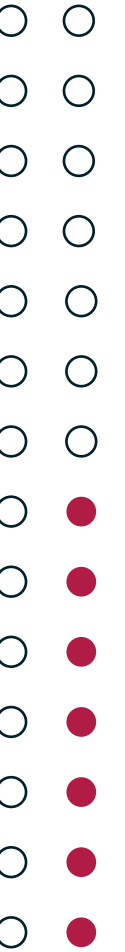
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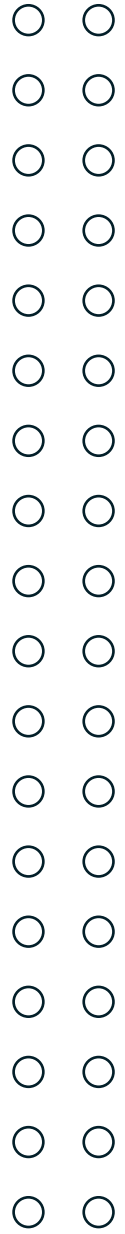
Colorado Springs, Denver, Castle Rock CO, Abilene TX

Outflow Migration To:

Phoenix, Asheville NC, Laramie WY, Rural Co

#31





Fayetteville, Arkansas

Summary:

Fayetteville is home to the University of Arkansas and doesn't really have a current talent initiative underway. Despite this fact, the Fayetteville MSA is growing by approximately 1400 people per year.

Interesting Note:

The university runs a Talent Search program that focus on high school students and getting them ready to attend college. It is a part of a federal program called TRIO. It is directed more towards college readiness than specific majors or careers.

Inflow Migration From:

Little Rock, Tulsa OK, Rural AR, Dallas

Outflow Migration To:

Bentonville, Austin, Rural MS, Knoxville TN, Orlando

State:

<https://www.arkansasedc.com> <https://talentsearch.uark.edu>

Fargo, North Dakota

Summary:

Fargo is well known for having a strong entrepreneurial ecosystem. Emerging prairie is a non-profit based in Fargo that focuses on building stronger community connections. Their focus is on making Fargo the best place for entrepreneurs with a belief that their actions will have spillover effects into the community like making it a more attractive place to live for talented individuals.

Interesting Note:

Fargo has grown by 15% since 2010.

State:

<https://gfmedc.com/about-us/> <https://www.experience.nd.gov> <https://www.emergingprairie.com>

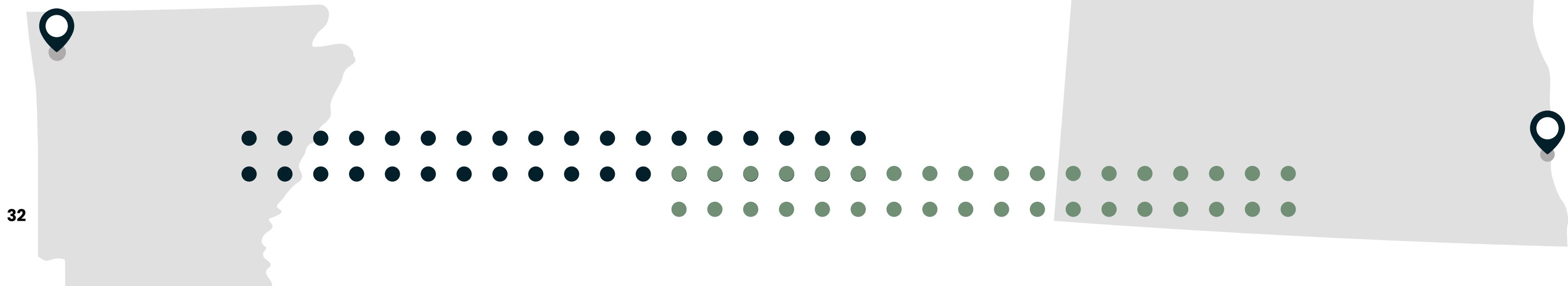
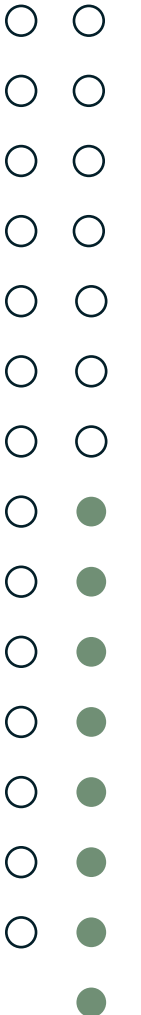
Inflow Migration From:

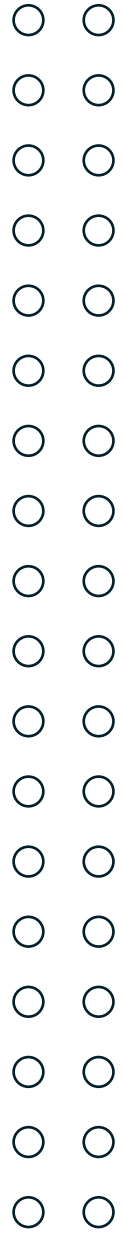
Minneapolis, Rural MN, Rural MO, Rural ND, Puerto Rico

Outflow Migration To:

San Diego, Des Moines, Phoenix, Rural SD

#33





Eugene, Oregon

Summary:

Similar to Lincoln, Eugene is a university town with a small but active tech community within close proximity to a larger tech community. They have coined the phrase “silicon shire” as a moniker for their burgeoning tech community.

Interesting Note:

The LCWP created a job training prioritization list that focuses upskilling workers to high demand/ high wage training. Here is a link to the list from 2018 <https://www.qualityinfo.org/documents/10182/13336/Training+Oregonians+for+the+Right+Jobs?version=1.2>

State:

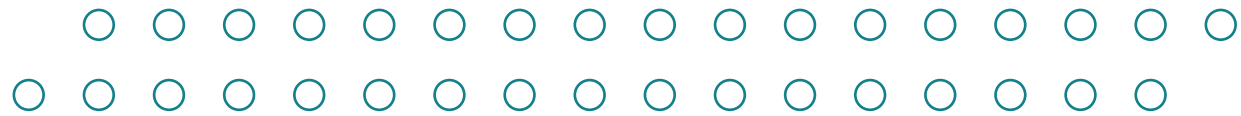
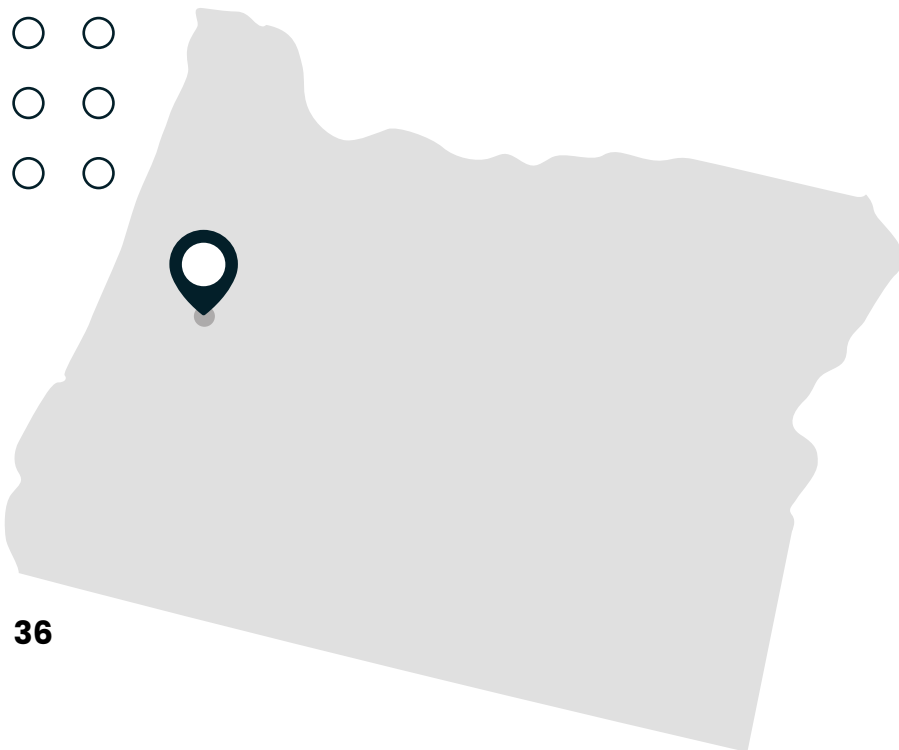
Lane County Workforce Partnership <http://www.laneworkforce.org/about/overview/> <https://siliconshire.org/ambassadors/> <http://raineugene.org/accelerator/>

Inflow Migration From:

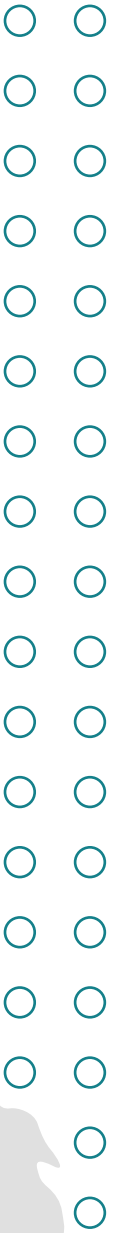
LA, Orange County, Portland, Rural Oregon

Outflow Migration To:

Rural Wyoming, Rural Idaho, Rural Oregon, Rural Washington



#37



Ann Arbor, Michigan

Summary:

Ann Arbor is the home to the University of Michigan and relies upon the university for the majority of its recruiting efforts. UM Research runs six economic engagement entities, none of which are focused directly on talent recruiting.

Interesting Note:

When you google “University of Michigan talent recruiting” the results are links to UM football recruiting websites. Ann Arbor tech talent search directs you to several talent initiative reports conducted by the greater ann arbor regional organization.

State:

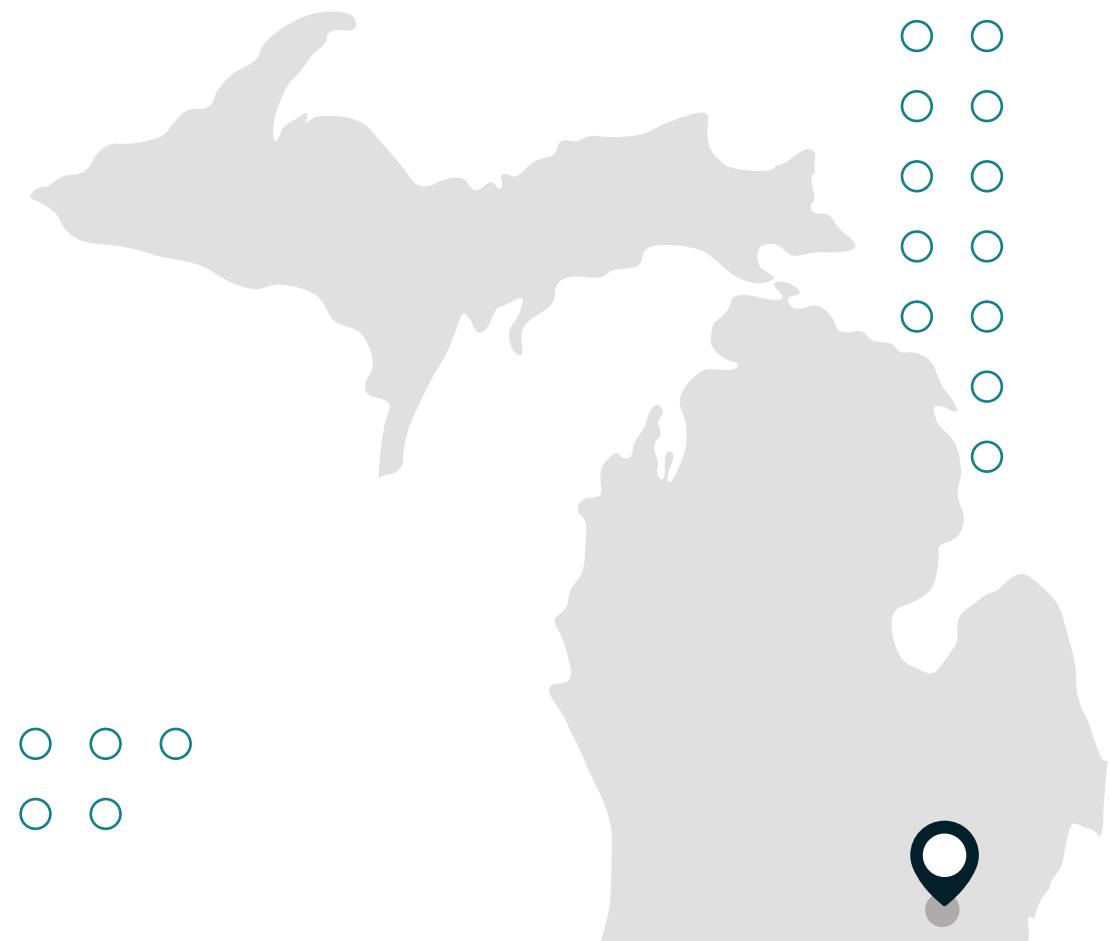
<http://greaterannarborregion.org> <https://research.umich.edu>

Inflow Migration From:

Detroit, Grand Rapids, Rural MI, New Jersey, Anchorage, Chicago

Outflow Migration To:

Rural Georgia, Kalamazoo MI, Seattle, Lansing, Jacksonville FL, LA



V. Comparison to Other Markets' Programming —

To summarize quickly, after looking at twenty-seven communities, virtually all of them are using the same playbook. The most effective ones have simply scrapped the playbook and relied more heavily on personal networks (Salt Lake City) or truly, unique programs (Tulsa Remote). The rest all appear to be re-treaded efforts based on similar systems and processes. We do not think that Omaha nor Lincoln can win if these communities attempt to play the same game.

In general, the peer communities that we evaluated had a variety of efforts targeted at growing or recruiting technology talent. These general efforts fell into three basic areas. First, there were programs that were often statewide targeted at improving education that would then be cast as talent. This was particularly prevalent in the Southeastern United States – Huntsville and Oklahoma City are good examples. We called these growing programs. Second, the programs were targeted at recruiting talent from elsewhere. These, in general, did not align with the actual inflow/outflow migration statistics for most communities. However, they did suggest an aspirant effort to recruit. Third, there were statewide incentives in most peer cities, relatively few of the cities had programs that were specific to and paid for by them or their EDC.

Most of the growing programs were focused on one of three basic goals: 1) improve overall education, particularly K-12, 2) focus on pathways that yield technologists, 3) focus on college and university education to produce technologists. Most of the states that we reviewed had K-12 initiatives that were intended to help build a 21st technologically sophisticated workforce. These efforts looked similar to Nebraska's. Our review would suggest that these programs do not offer much differentiation or uniqueness state to state, including Nebraska's.

Most of the recruitment efforts were built on targeting large cities that have popular reputations as fun, young, tech-heavy cities. Most of the time the targeted cities were based on geography. So, Boise targeted Seattle, Tulsa targeted Dallas, whereas Milwaukee targeted Chicago. While some cities did have non-traditional programs, even those seemed to be based on a single coding school or a single unique program at a university. One program that did receive praise was in Salt Lake City – which appeared to be 100% led and operated by the corporations without much city or state involvement.

Finally, states and cities had a variety of incentives for workforce improvement. But, they were typically tied to one of three hurdles. First, the incentive was provided to the employer – not the individual. Second, the incentive was often re-packaging of a federal program, as opposed to something that was unique to a specific state. Third, the programming fell along regular lines – poor, rural, under-represented, or in a fading field (such as construction or manufacturing). Overall, this effort seemed to have a number of drawbacks, but the largest of which was that while the basic appearance or implementation changed city to city and state to state, they were all fundamentally built on the same basic federal infrastructure.

“
Our review would suggest that these programs do not offer much differentiation or uniqueness state to state, including Nebraska's.”

Risks and Threats

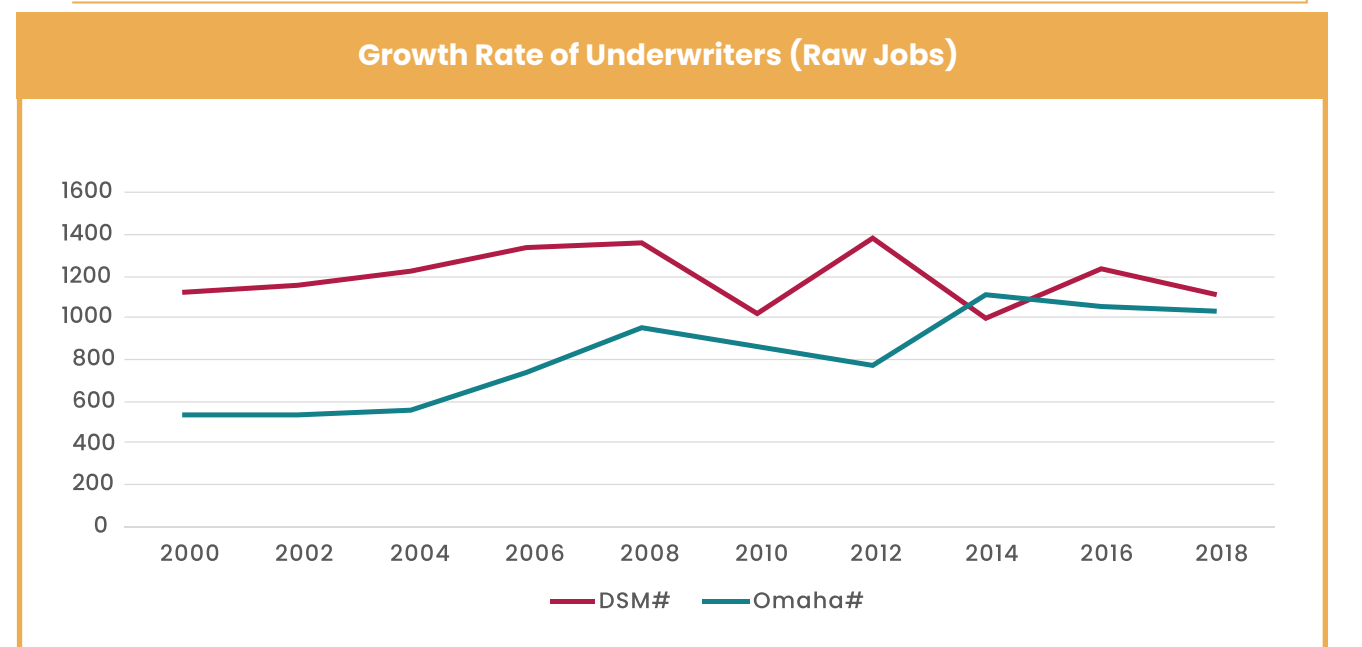
#41

Increasing technologists is a good goal, but it bears mentioning that increasing employees in an area has consequences in some ways. Specifically, the focus nationally is on increasing technologists everywhere. According to the USA Today, "the U.S. Bureau of Labor Statistics predicts that in 2020 there will be 1.4 million more software development jobs than applicants who can fill them."

This shortage reminds us of the shortage of underwriters in Omaha and Des Moines during the last twenty years. These jobs were originally relatively low – paying, around the national average. Today, they are almost 30% above the national average. Omaha and Des Moines have seen incredible pressure on growing their base of underwriters.

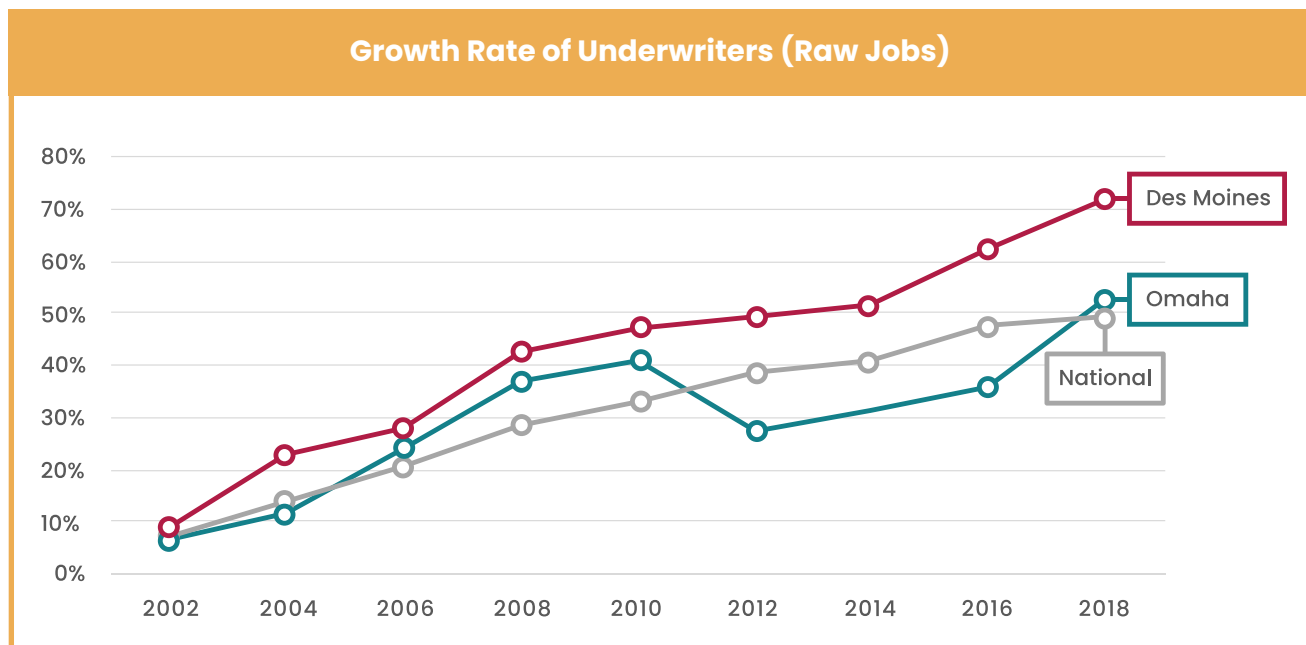
However, since 2000, Des Moines has managed to net a negative 10 underwriters while increasing wages by nearly 5.7% per year. This is more than two times the national average – meaning that in 2000 an underwriter made approximately \$38k, and in the May 2018 OES data set a Des Moines based underwriter now makes close to \$76k. This increase dramatically outstrips the national average growth in wages for other industries and jobs.

Conversely, Omaha has doubled its underwriting workforce to approximately the same size as Des Moines – while wages have grown almost exactly at the national average for underwriters (3.7% per year) but still significantly about the national average for all wages.



Software developers and other information technology workers are nationally in incredible demand with wages escalating over the same time period by approximately 3%, which is less than the inflation of underwriters wages. And more importantly, the national average growth in software developers for applications is 7.77% nationally since 2000. In Nebraska the growth rate is only 2.57%.

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The risk of over-focusing recruitment efforts on a narrow group is that you may have success – Des Moines for underwriters. But, that success will come with a price – wages will escalate. Instead, we would recommend that the goal be a twenty-year effort to become significantly denser than the national average – an LQ of a 1.8+ in information technology. That allows for steady, regular growth and significant population and workforce impacts. Focusing too closely on the short-term will make success ephemeral at best – and most likely lead to a change in strategy.

What does this mean? It means that while the number of software developer jobs is skyrocketing nationally and wages are increasing, Omaha and Lincoln are behind the

curve regarding both wage growth and job growth. To attempt to be transformative in five years is likely to fail because the goals are too extreme from current efforts. Instead, slow and steady increases and progress will require significant efforts. However, these efforts can be maintained and sustained. Focusing on those types of efforts is more likely to be successful if the ultimate goal is to re-position Omaha as a technology talent hub. In our opinion, this goal would require a successful, sustainable talent pipeline that creates a vibrant city with a strong reputation that self-propagates technologists and young professionals without additional state and local incentives, similar to what we witnessed in Salt Lake City and other burgeoning technology ecosystems.

Recommendations

We have four primary recommendations when it comes to attracting and growing the technology workforce in Nebraska. First, we believe that most of the growth must come from within. Expecting to recruit our way out of our technology gap is simply not realistic. Every community that we looked at has a recruitment program. But, the simple math tells us that there simply is not enough technology worker supply for the corporate demand for communities to win via recruiting. So, finding ways to upskill, retrain, and grow from within is critical. Examples of ways to do this include:

- 1 Internal on the job training for existing corporations,
- 2 Recruiting local liberal arts graduates to training programs, straight from school,
- 3 Identifying critical tracks and building short-session programs for key needs, and
- 4 A strong external program of recruiting interns who will ultimately join the ranks in key technical roles.

There are additional ways to execute on this strategy, but there are entire programs of work within each of these bullets that are being discussed in various committees. So, rather than put together details associated with these strategies, we will focus on three other key ingredients for growing the technical community in Nebraska.

The basic understanding is that in order to grow our technical community, Nebraska must increase its overall population. The two are intimately related – the correlation (based on a simple regression) of technical growth and population growth against the peer city network is above .99. This suggests causality, but I would say that it simply reflects the idea that disproportionately recruiting or growing technologists simply does not happen because they bring with them additional individuals that create significant population growth. This might be in the form of family members or other people, or it may simply be that they are a canary for proving that a place is a good place to live. It is unclear why – only that it is true that technologist growth mirrors heavily population growth. Thus, the goal must include overall population growth, not just technologist growth.

There are three markets that we believe are available for Omaha and Lincoln to recruit. First, in our research, Nebraska did have a net gain from Chicago...as did almost every other city that we examined. There are nice gains from megacities, such as Los Angeles, New York, and Chicago. However, Omaha and Lincoln lose when it comes to other major league cities that are a step or two above them regarding population. Denver, Kansas City, and St. Louis are key locations that grow from Nebraskans moving there. Rather than trying to recruit boomerangs, Nebraska should focus on recruiting rural (less than 10k), micropolitan (10k-50k), and small metros (less than 200k). These areas have consistently been the locations that push populations to Eastern Nebraska. Cities like Peoria, Illinois and Sioux City, Iowa are keystones for a recruitment effort. Based on our research, we would focus on access to amenities, better paying jobs, more variety in potential careers, and other similar functions.

We think that there are three key time periods for recruitment. First, the University of Nebraska offers in-state tuition to its three main campuses to residents in Illinois, Minnesota, Michigan, Missouri, and Wisconsin.

We believe that the allure of a Big 10 school may be attractive to individual students who are not admitted to their own home state's Big 10 schools (SEC in the case of Missouri). Nebraska as a member of the MHEC is the only Big 10 school that participates. So, it is uniquely positioned to benefit from this type of recruitment effort. [The persona for this group is Aidan or Ava.]

Second, as students complete their second year, they will look for internships. Actively recruiting interns from non-Big 10 schools in these core states might be a mechanism for grabbing talented students from the region that are attending schools outside of core metropolitan areas. In particular, attracting students who went to Class C equivalent and smaller schools in larger states who may not want to move to the big city, should be a critical target. [The persona for this group is Colby or Cara.]

Third, at around twenty-seven when individuals have transitioned into their first career and are looking for more opportunity. Many small communities simply do not have the variety that Omaha or Lincoln can offer. Thus, targeting individuals at that time may create more traction. [The persona for this group is Evan or Evelyn.]

Second, we believe that recruiting largish families is viable. Specifically, we would recommend microtargeting families with 3+ children in markets with poor public schools and expensive private schools. In particular, Lincoln has a significant price advantage for many Catholic schools, but both Omaha and Lincoln offer dramatically better public schools than most of the country. We would recommend targeting specific markets based on the two factors and then micro-targeting larger families. The state provides relatively inexpensive housing, activities, and other things critical to a larger family. Markets that seem to be particularly appealing for this strategy include Baton Rouge, Little Rock, St. Louis, Milwaukee, Chicago. There is a swath of states through the Rust Belt and South that have poor school performance, expensive housing, and other factors. We would suggest targeting families with parents approxi-

mately age 29-36. In our research, families that already have three children by age 30 are much more likely to be concerned with housing prices and schools – two areas where Nebraska truly excels.

There are a couple of key challenges that face Nebraska when recruiting new individuals. We talked to a variety of people that did not grow up in Nebraska. We asked them about the challenges that they faced when they moved to Omaha or Lincoln. One critical thing was mentioned regularly regarding moving to Nebraska. It was difficult to find a group of people outside of work. For many new Nebraskans, there no longer exists a logical place to build a social network – a church, a social club, etc. Thus, Nebraska should be intentional about creating stronger neighborhood associations, welcoming committees, and other ways for people who are newly arrived to integrate.

Some of this can be done through technical improvement – online calendars, groups, and meetups. This group has examined the creation of a technology association. We would recommend that this happen. But further, we would recommend more intentional support of community run efforts – such as Tech Omaha, technology user groups, etc. One primary challenge that non-profits face is that they suck dollars and air out of grass roots organizations. Thus, as a technology association is created, many existing smaller grass roots groups will fade. It is critical that this not happen. Instead, there should be an intentionality to building a group of people that run user groups, hack-a-thons, etc. This means that the technology association should do training on leadership, fundraising, and other key elements of this type of work. It also means that the technology association should have approximately \$5-10k to give in small grants to organizations seeking to try something new or execute a local program, such as the Tech Omaha parties. This type of funding helps validate to corporations or other funders, but does not replace their dollars. Helping to facilitate the network and introductions is one way that the overall community can get stronger.



Nebraska generally should be actively building a more attractive environment for military veterans and active duty. ”

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However, the cities do need to make intentional changes regarding their culture of welcoming. Specifically, there are a number of consistent roadblocks or cul-de-sacs for newcomers. For example, many conversations start with questions, such as “Where did you go to high school?” or “Do you know John Smith?” These types of questions are unintentionally alienating to people who are not from Nebraska. Instead, the communities and their Chambers of Commerce can focus more on creating environments that are intentionally targeting people who are seeking to join the community. These could be people from here but poorly connected, but more often they can target people who are from outside of Nebraska. These events can target different new members of the communities. Thus, Evans and Evelyns have specific events and Aidans and Avas have different events. In this way, doing regular networking functions for newly arrived Omahans or Lincolnites may be a critical component of any recruitment, if the goal is to integrate and retain people for life. However, the ultimate goal is to build a deeper community network across age group. Thus, we would suggest helping schools create alumni network groups in Omaha/Lincoln and facilitating the spread of their communications. Thus, students and alumni from Northern Illinois or the University of Minnesota – Duluth would have a mechanism to meet other people like them locally. We believe that this age based and interest based community engagement strategy would provide more effective tools for communities in making individuals feel welcome.

We would recommend focusing more city programs on local parks and building programming for grade school and high school students in the summer akin to the SunDawg program that did exist in Omaha. The idea of building networks amongst neighbors is one of the critical factors that affect livability. More neighborhoods in Omaha and Lincoln need a sense of place that instills a network effect on the neighborhood. Neighbors know and care for neighbors. For example, Gifford Park in

Omaha has a community garden and community bike shop. This has been a critical element in strengthening this neighborhood, which sits adjacent to Creighton, Midtown Crossing, and North Omaha. Liveby, a Lincoln startup, should be included in conversations about how to make public places and spaces more attractive. There entire business is premised on neighborhoods driving value for their residents regarding home prices, quality of schools, etc.

Finally, we believe that Omaha, in particular, but Nebraska generally should be actively building a more attractive environment for military veterans and active duty.

The military represents a unique opportunity for Nebraska. Nebraska has a good reputation within veterans through their experiences with Nebraskan born military personnel and assignments at Offutt AFB. Building on this existing positive relationship is possible and targets a group that is already transient and transitioning. Every year, roughly 2 Million military veterans leave active duty. While some of these individuals move “home”, many do not have a centered place to return to. Instead, they seek out and move to a place that they discovered along their journey – some place in-network. Why? They have limited local networks that are non-military. In addition, veterans often struggle to transition into the civilian workforce because the experience and the skill sets amassed in military programs do not transfer out. In many cases, they have significant technical skills, but no college credits which becomes a significant hurdle to overcome. Nebraska should build a program to recruit these people to locate and, in many instances, return to Nebraska - the best place for veterans and their families. It should entail six different elements.

First, the recruitment effort should be focused on building and creating relationships with active duty military at Offutt AFB.

A focus on active military creates an opportunity to build lasting relationships with people who come through Offutt AFB before they retire from service. In this way, a later pitch to return to Nebraska will be beneficial. The effort also builds momentum via word of mouth within the military about Omaha's efforts and the efforts of the State of Nebraska to reintegrate and provide mechanisms for smoother re-entry. Thus, it is critical that Nebraska establish a mechanism for relationship building with veterans just as they leave the service.

Second, the effort should focus on the whole family.

Nebraska is winning at recruiting people from smaller communities to move to Omaha in part for economic opportunity and jobs. Another significant part of this also appears to be targeted at building and supporting a family. Veterans and active military currently receive the majority of these world class benefits. These programs are designed to attract individuals into the military and retain them. Free healthcare, college tuition, mortgage programs, military pension, and trade school reimbursement are just a few examples, but these benefits typically do not extend to a spouse or children. This is an opportunity for Nebraska. Recruiting families is Nebraska's best mechanism for growing its overall

population and recruiting military families typically includes added benefits. The State needs to go further to be welcoming to people not from the region. Specifically, Omaha and Lincoln should establish support networks for military spouses of active duty and recent veterans. This helps lessen the isolation that people who move to a new place face.

Third, the re-entry should manage transition of military awards and training to academic credit.

Basically, the State or cities or even private foundations should establish an office that is specifically built to help former military document their training and translate that training into college credits. Bellevue University has an existing program for this type of translation, but the entire region should improve its capability to do the same – particularly UNL, UNO, and UNK. By creating a more efficient "credit for experience" management process between institutions Nebraska would correspondingly increase its ability to upskill the current workforce.

In 2018, 6260 students used the GI Bill in Nebraska across all educational institutions. Listed below are the top 7 schools by GI student enrollment.

Increasing this number of students using the GI Bill also increases the number of federal dollars coming into the state. One mechanism for doing this might include offering in-state tuition for GI BILL Students or expanding online degree programs allow active duty students to complete classwork remotely if they become transferred or deployed.

INSTITUTION	CITY	GI BILL STUDENTS	DOLLAR AMOUNT
Bellevue University	Bellevue	1130	\$ 7,357,971.52
University of Nebraska at Omaha	Omaha	612	\$ 3,755,821.66
Metropolitan Community College	Omaha	492	\$ 743,548.57
University of Nebraska at Lincoln	Lincoln	361	\$ 2,389,968.58
Creighton University	Omaha	205	\$ 2,071,021.97
Southeast Community College	Lincoln	139	\$ 226,138.83
University of Nebraska at Kearney	Kearney	92	\$ 412,734.10
TOTAL		3031	\$ 16,957,205.23



Fourth, the re-entry should help build a transition plan for both veterans and their families.

Offering in-state college tuition for the children of veterans is another mechanism to aid veteran families. Nebraska has such a program on the books for the families of deceased or disabled veterans residing in the state. Expanding the program to include children of living non-disabled veterans that graduated from Bellevue, UNO, UNK, Creighton, or UNL would increase the appeal for their families to stay or return to Nebraska.

More than just free tuition, the goal should be full re-entry so having a Nebraska military transition office could do a variety of things – including housing assistance, daycare discovery, entrepreneurial assistance, etc. One way that philanthropic players can contribute is potentially free or heavily discounted access to community assets – such as the Henry Doorley Zoo, the Lincoln Children's Museum, or the SAC Museum. Establishing the memberships and special networking days for families may be an essential way of connecting new residents to the region, local networks, and local businesses.

Fifth, the State and region should consider tax incentives or financial payments to the individuals.

In Oklahoma, Tulsa Remote paid a scholarship to remote workers to locate in Tulsa for two years. These remote workers received \$10k cash for moving. Vermont implemented a similar program in Jan of 2019. At last count 170 workers and their families have taken advantage of the opportunity. Other programs like tax incentives that discount or eliminate state tax on military pensions or other military payments should be enacted. There was a move to do this about ten years ago – but it ultimately fell apart because it had a revenue impact at the State

that was considered too severe. This should at worst be re-examined and at best changed immediately. But, additional incentives around reduced state tax payments during the transition period of two to five years also should be considered. For example, if I leave military service and relocate to Nebraska I do not pay state income taxes for 5 years. States like Florida, South Dakota, and Texas do not have state income tax or tax on military pensions. For some families that is enough of a reason.

Sixth, the State and the communities also need to plan for some potential downside to military re-entry.

Many suffer from psychological challenges based on their service, but it isn't just the veteran that suffers. Families and communities are also affected. Currently, the State of Nebraska's psychiatric and psychological services for veterans are relatively weak. This is a common theme across the country. Creating a thriving support structure for mental health, particularly veterans adds to curb appeal and the overall health of a community. Thus, strengthening the support structure for anxiety or even PTSD is a necessary component that does strengthen the overall fabric of the community but is an essential part of this strategy. Other risks and costs to this strategy probably exist around key traits that the military over-represents – divorce, one parent households, etc. Figuring this out in the context of the military program provides political cover to strengthen many of the State's social programs around people at risk. But, they are not inexpensive and require intentionality.

In conclusion, targeting the military rather than a community is a strong, unique strategy. If what is outlined above were implemented, it would be expensive. But, it would also be unique. Other states are recruiting the same communities, but no state is actively targeting military veterans with the types of programs that we have outlined above.

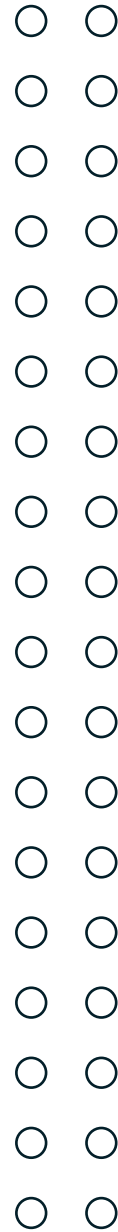


Conclusion —

Chapman and Company has reviewed the technology talent landscape of Omaha and Lincoln. In doing so, we did comparisons to numerous peer cities across the United States. For the most part, there is a conventional playbook being deployed in this country that includes state and city incentives, K-16 education, and additional workforce training. This program has resulted in a nationwide shortage of technology talent (a nearly 40% deficit against needs) – including most of the cities to which we compared Nebraska communities.

We believe that Omaha and Lincoln need a different path that does not depend on only traditional sources of talent. We believe that Omaha and Lincoln need to identify highly targeted individuals, rather than broad advertising campaigns, and recruit them like valued football recruits. We believe that Omaha and Lincoln should understand their core advantages – such as inexpensive private school tuition and quality public education – and not rely exclusively on generalizations – such as quality of life. We believe that Omaha and Lincoln will need a full generation to reposition themselves as technology hubs.

Thus, we believe based on our landscape analysis that Omaha and Lincoln can succeed if they recast the effort as a generational one and treat it as an urgent re-positioning based on the State's core strengths. To do this, will require courage and will likely need to be led by private citizens and corporations – not exclusively government or traditional non-profit sources.





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