

Southwest Minnesota
Asset Mapping Report

January 2018

PATHWAYS | A Jobs for the Future and
TO PROSPERITY | Harvard Graduate School
of Education Initiative



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PATHWAYS TO PROSPERITY

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The Pathways to Prosperity Network, a collaboration of states and regions, Jobs for the Future, and the Harvard Graduate School of Education, seeks to ensure that many more young people complete high school and attain postsecondary credentials with currency in the labor market. Each participating Network member is engaging educators and employers in building a system of grades 9-14 career pathways, combining high school and community college, that launch young people into initial careers while leaving open the prospect of further education.

www.PtoPNetwork.org

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- AGCO
- Avera Worthington
- Bedford Technology
- City of Windom
- Fast Global Solutions
- HitchDoc
- Jackson Area Chamber of Commerce
- Jackson County Central School District
- JBS
- Minnesota West Community and Technical College
- Prime Pork
- Sanford Windom
- Sanford Worthington
- Southwest Minnesota Private Industry Council
- Southwest West Central Service Cooperative
- Windom School District
- Worthington Regional Economic Development Corporation
- Worthington School District

INTRODUCTION

The Pathways to Prosperity (PtoP) Network—a collaboration of states and regions, Jobs for the Future, and the Harvard Graduate School of Education—seeks to ensure that many more youth complete high school, attain postsecondary credentials with currency in the labor market, and launch careers while leaving open the prospect of further education. State and regional stakeholders from across education, business, and government lead the work in each Pathways to Prosperity state and region, with the long-term goal of creating statewide systems of grade 9-14 college and career pathways that serve most students. Key sectors for building pathways aligned with labor-market demand include STEM fields such as information technology, health care, and advanced manufacturing.

This asset mapping report focuses on Southwest Minnesota. The goal of the asset mapping report is to gather baseline data that will serve as a foundation for the planning and design of college and career pathways aligned with the regional labor market. The Pathways to Prosperity team carried out an asset mapping site visit in the region in September 2017. This report highlights themes from the visit and provides recommendations intended to guide the next phase of this work.

Overall, Southwest Minnesota is well positioned for success in building college and career pathways linked to local labor market needs. Many of the key building blocks for this work are already in place, including supportive state policies, committed leaders in secondary education, and postsecondary institutions that are working to create programs of study aligned with labor-market demand. In addition, the stakeholders who were interviewed by the asset-mapping team repeatedly voiced tremendous enthusiasm for the work and a willingness to contribute to it. However, substantial work remains to be done to design and implement pathways and ensure that all young people in Southwest Minnesota are prepared for college and careers.

SUMMARY OF RECOMMENDATIONS

- **Regional Leadership and Intermediaries.** Stakeholders in Southwest Minnesota are deeply committed to improving the education and employment prospects of youth, but have not yet developed a systematic, coordinated approach to this work, leading to some duplication of effort. An immediate action is to convene a Pathways working group to determine how the intermediary functions will be filled for the Pathways work. In order to ensure that the various convening and work-based learning functions are fulfilled in the region, a point person, housed in the lead organization, serves the critical role of distributing responsibilities, establishing MOUs between participating entities, assuring follow-through, and holding implementers to collaboratively agreed-upon benchmarks and goals.
- **9-14 Pathways.** Promising approaches to pathways development are emerging in the

region, and education leaders recognize the value of career-focused learning. As the pathways work moves forward, it will be essential to develop a strategy that ensures the alignment of pathways with opportunities in high-wage, high-demand industries and clearly communicates the value of pathways to students and their families. The strength of Minnesota West Community and Technical College will be an asset to this work.

- **Career Information and Advising.** There are a number of promising career development collaborations that serve to enrich the career exploration of high school youth, though middle school experiences are very limited. In many instances, teachers, counselors, and parents are the primary source of career information for students. However, too many students remain unaware of the career options that do not involve a 4-year degree. Educating teachers, parents, and students regarding career pathway options remains a critical area that requires more attention and strategic planning. An immediate step is to develop a strategy for leveraging and aligning existing career exploration opportunities, ensuring that they are clearly connected to classroom learning and defined pathways.
- **Employer Engagement and Work-Based Learning.** Employers in the region are committed to the development of a talent pipeline in Southwest Minnesota and are open to developing deeper partnerships with educational institutions. However, work-based learning opportunities for youth are relatively rare now and should become a top priority. It will be important to develop approaches to work-based learning that benefit both employers and students and to ensure that work-based learning is fully integrated into grades 9-14 pathways.

STRATEGIES FOR SUCCESS: THE PATHWAYS PERSPECTIVE

Educators and employers have a mutual responsibility to grow and sustain robust regional economies. Southwest Minnesota's public education institutions—high schools, community colleges, and public universities—must be responsive to employers' needs. In turn, employers must do their part by opening their enterprises to young people and working closely with educators who design and implement career-focused pathways.

Aligning the skills students learn in school with the requirements of the labor market requires ongoing communication and collaboration between industry and education. The education system must support young people's exploration of potential career options and provide rigorous, relevant instruction that prepares them for college and careers upon graduating from high school. Students must be able to see the real-world applications of what they do in school in order to set and pursue career goals.

Work-based learning, combined with rigorous and relevant in-school curriculum, is the most effective way to help young people acquire the skills necessary for workforce success. It engages students and increases the likelihood of their graduating—and students who cannot connect their learning to future jobs are less likely to complete their degrees.

PATHWAYS TO PROSPERITY FRAMEWORK

Goal: Grade 9-14 Pathways Linked to Local Labor Market Needs

To demonstrate in key regional labor markets that many more young people can complete high school, attain a postsecondary credential with currency in that labor market, and get launched into a career while leaving open the prospect of further education

Levers for Implementation	What the Work Looks Like
9-14 Career pathways	High schools and community colleges create 9-14 career pathways with clear structures, timelines, costs, and requirements linking and integrating high school and postsecondary curriculum and aligning both with labor market requirements.
Career information and advising system	Starting in the middle grades, students are exposed to a wide range of career options, information, and opportunities to learn about high school and postsecondary courses of study leading to careers. Students engage in a 9-14 continuum of work-based learning opportunities in their chosen career areas. Intermediaries, employers, and community-based organizations help young people make informed choices throughout each 9-14 pathway.
Employer engagement	Employers commit to providing a continuum of learning opportunities at the workplace throughout the 9-14 pathway. Employers collaborate with educators and are supported by intermediaries in structuring and managing workplace learning. Employers support students' transitions into the local labor market.
Intermediaries	Local or regional intermediaries serve as conveners, brokers, and technical assistance providers to schools and employers engaged in building and sustaining pathways. Intermediaries recruit business, nonprofit, and public employers and ensure that participating leaders understand and support the vision.
Policy environment	State dual enrollment policies provide access for low-income students. Districts and community colleges have financial incentives and sustainable funding to provide 9-14 programs of study in career and technical education and leading to diplomas, certificates, or Associate's degrees. Accountability systems weight dual enrollment courses as they weight AP and IB. The state provides incentives for employers and unions to provide work experience opportunities.

THE PURPOSE OF ASSET MAPPING

Each new regional engagement in the Pathways to Prosperity states begins with mapping the new region's assets. The purposes of the asset mapping are as follows:

- To assemble baseline data about the region in relation to the five levers to determine a starting point for planning
- Within the limits of a short visit, to bring a helpful “outsider” look to the region from a national perspective
- To serve as the foundation for the 12- to 18-month work plan to be created by stakeholders
- To help to identify regional leaders with the energy and commitment to make and implement the plans with the support of JFF and regional and state leaders.

SOUTHWEST MINNESOTA: OVERVIEW OF DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

Southwest Minnesota is a predominantly rural region that comprises 14 counties: Big Stone, Chippewa, Cottonwood, Jackson, Lac qui Parle, Lincoln, Lyon, Murray, Nobles, Pipestone, Redwood, Rock, Swift, and Yellow Medicine. The total population of the region is 155,834, according to the 2015 American Community Survey. Of the 14 counties in the region, Lyon is the most populous, with 25,699 residents. (See Table 1.) Worthington is the largest city in the region, with a racially and ethnically diverse population of 12,990. Forty percent of the city's residents are Hispanic or Latino—an especially notable figure given that over 90 percent of Southwest Minnesota's residents are white. Immigration has propelled the growth of Worthington's Latino community over the last two decades; the proportion of Hispanic or Latino residents has more than doubled since the 2000 census. As the community's diversity has grown, so has diversity in Worthington's schools; over half of kindergartners in Worthington are English Learners. At the elementary level, 75% of Worthington students are students of color; students of color account for 68% of students in the district overall.

Southwest Minnesota tends to be less wealthy than the state as a whole, despite declines in the regional unemployment rate over the last year. Unemployment rates in the region are generally slightly below Minnesota's statewide unemployment rate of 3.7% (as of September 2017).¹ Yet Southwest Minnesotans earn less than residents of other regions in the state. The region's average per capita income is \$26,852, according to the 2015 American Community Survey, compared to Minnesota's per capita income of \$32,157. Southwest Minnesota's average poverty rate of 12.2% is higher than the rate of 11.3% for Minnesota overall, though Lac Qui Parle, Lincoln, and Murray Counties all have poverty rates lower than that for the state. (See Table 1.)

Table 1
Demographic and Economic Characteristics of 14 Southwest Minnesota Counties

	Big Stone	Chippewa	Cottonwood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipestone	Redwood	Rock	Swift	Yellow Medicine	
Population	5,134	12,154	11,632	10,211	7,023	5,808	25,699	8,529	21,687	9,354	15,723	9,563	9,525	10,092	
Children under 18	21%	23%	24%	22%	21%	23%	26%	21%	26%	25%	25%	26%	22%	23%	
Racial and ethnic composition	White	98.0%	93.9%	90.9%	95.3%	97.0%	97.2%	96.7%	81.0%	93.6%	89.4%	96.6%	95.9%	92.6%	92.6%
	Black or African American	0.2%	0.8%	0.6%	0.2%	0.6%	0.4%	0.4%	4.0%	1.3%	0.7%	0.5%	1.6%	0.5%	0.5%
	American Indian or Alaska Native	0.2%	1.3%	0.5%	0.1%	0.4%	0.7%	0.3%	0.2%	1.3%	5.1%	0.6%	0.4%	3.2%	3.2%
	Asian	0.1%	0.2%	2.7%	2.5%	0.8%	0.2%	0.4%	5.8%	0.4%	3.3%	0.9%	0.2%	0.6%	0.6%
	Native Hawaiian and Other Pacific Islander	0%	1.0%	0%	0%	0%	0%	0.4%	0%	0.2%	0%	0%	0%	0%	0%
	Two or more races	1.4%	1.8%	1.5%	0.6%	1.1%	0.5%	1.1%	1.8%	1.9%	1.1%	1.0%	0.5%	1.8%	1.8%
	Hispanic or Latino of any race	1.1%	5.7%	7.0%	3.2%	1.7%	1.7%	3.2%	25.3%	4.7%	2.7%	2.4%	4.1%	4.1%	4.1%
Per capita income	\$27,426	\$26,372	\$24,978	\$27,494	\$29,541	\$26,910	\$28,010	\$28,976	\$23,515	\$26,842	\$25,716	\$26,065	\$27,202	\$26,885	
Median family income	\$61,168	\$64,179	\$56,956	\$64,663	\$64,738	\$64,429	\$71,173	\$67,090	\$60,127	\$58,051	\$60,872	\$62,885	\$61,404	\$62,639	
Poverty rate	14.4%	12.2%	16.8%	10.8%	8.2%	9.3%	14.1%	9.2%	15.6%	12.9%	11.8%	11.4%	12.5%	11.9%	
Child poverty rate	23.5%	20.2%	23.2%	27.5%	8.7%	7.2%	20.2%	12.5%	21.5%	17.5%	17.2%	14.6%	20.8%	15.9%	
Residents receiving food stamps or SNAP benefits	11.2%	8.1%	13.1%	16.7%	6.6%	4.4%	10.1%	5.9%	11.7%	12.1%	8.2%	7.5%	8.6%	7.9%	

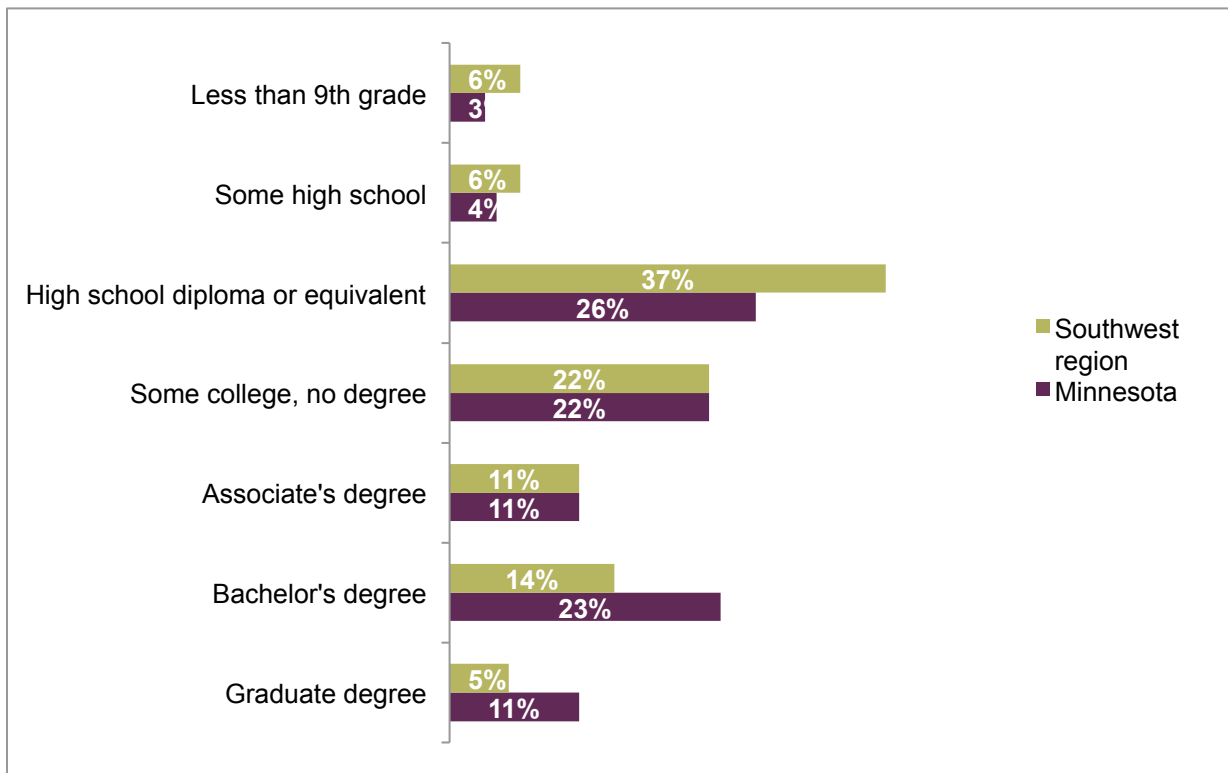
Unemployment rate in July 2016	4.1%	4.9%	12.5%	5.9%	4.8%	3.2%	3.4%	3.9%	4.2%	3.1%	3.9%	2.2%	4.6%	4.0%
Unemployment rate in July 2017	3.5%	3.7%	5.6%	3.2%	3.2%	2.6%	3.1%	3.2%	3.1%	2.9%	3.7%	2.2%	3.8%	3.3%
Over year change in unemployment rate	-0.6%	-1.2%	-6.9%	-2.7%	-1.6%	-0.6%	-0.3%	-0.7%	-0.9%	-0.2%	-0.2%	0%	-0.8%	-0.7%

Sources: 2015 American Community Survey, 5-Year Estimates; U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics

EDUCATIONAL ATTAINMENT IN SOUTHWEST MINNESOTA

Data from the American Community Survey suggests that many residents of Southwest Minnesota lack the educational credentials needed to succeed in the labor market. Of the 11.6 million jobs created nationally since the Great Recession of 2008, 11.5 million have gone to workers with postsecondary credentials. The number of jobs for graduate degree holders increased by 3.8 million, for bachelor's degree holders by 4.6 million, and for associate's degree holders by 3.1 million.ⁱ Projections show that, by 2020, 73% of jobs in Minnesota will require some education beyond high school.ⁱⁱ However, in 2015, only 65% of Minnesotans had at least some college education, and educational attainment rates in Southwest Minnesota are still lower than those for the state as a whole. According to the 2015 American Community Survey, only half of Southwest Minnesota residents have completed at least some postsecondary education. While sub-baccalaureate postsecondary attainment rates are on par with those for Minnesota overall, the region lags behind the rest of the state in terms of the proportion of residents who have completed bachelor's and graduate degrees, which are required for many of the jobs in the region that pay family-sustaining wages. (See Chart 1. Additional information on educational requirements for jobs in the region can be found in the Labor Market Overview section of this report.)

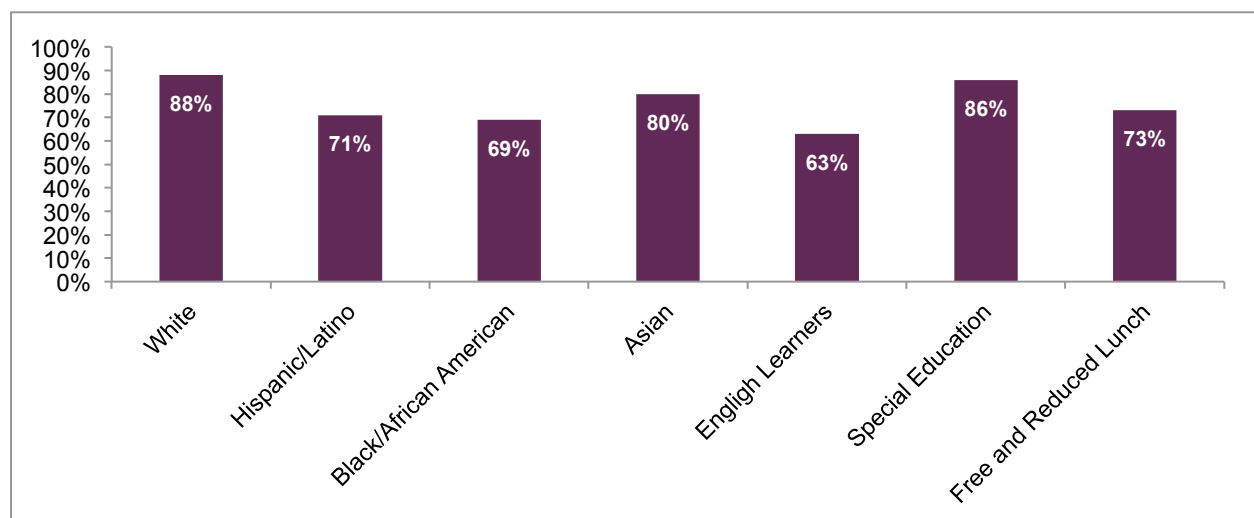
Chart 1: Educational Attainment of the Population Age 25 Years and Over (2015)



Source: 2015 American Community Survey, 5-Year Estimates

High school graduation rates in Jackson County and Windom outpace the rate for the state as a whole. In Minnesota, the 4-year graduation rate in 2016 was 82.2%. It was 96.1% in Jackson County, and 100% in Windom. However, Worthington’s 78.9% graduation rate was lower than the state’s rate. Statewide, 74% of the high school class of 2015 was enrolled in an institution of higher education within 16 months of high school graduation. Seventy-nine percent of Windom’s class of 2015 enrolled in postsecondary education, as did 78% of their peers in Jackson County. However, only 64% of Worthington’s 2015 high school graduates enrolled in postsecondary education.⁴ In addition, while Worthington’s graduation rate for white students was 88% in 2016, the rates for Latino and African American students were 71% and 69%, respectively, and the graduation rate for English learners was only 63%. (See Chart 2.)

Chart 2: Worthington High School Graduation Rate by Racial/Ethnic and Student Groups (2016)



Source: Minnesota Department of Education

LABOR MARKET OVERVIEW

Identifying pathways that can prepare young people for careers in middle-skills occupations that pay family-sustaining wages requires careful consideration of available labor market information. Pathways should prepare young people for careers in industries that offer career ladders on which young people can move up within their chosen fields as they gain additional postsecondary credentials and education. Other considerations in identifying promising industries include family-sustaining wages, strong projections for growth, and/or large numbers of anticipated retirements in the next ten to twenty years. This section of the report explores possible industries for pathways development.

The number of job opportunities in industries other than agriculture is increasing in this predominantly rural region. “Brain drain” is an ongoing problem for the region, as young people who grow up in the region often settle in larger metropolitan areas, including the Twin Cities and

Sioux Falls. Highly trained professionals such as doctors are in short supply, and one strand of economic development efforts in the region has focused on marketing it as a desirable community in which to live and raise a family. Other economic development initiatives, most notably the 60/90 Corridor Initiative, are taking a regional approach to economic development that focuses on creating new opportunities for industry—and accompanying jobs.

Data from Economic Modeling Specialists, Inc. (EMSI) and the Bureau of Labor Statistics (BLS) show that the number of jobs in Southwest Minnesota will grow modestly over the next decade, with the total number of jobs in the region increasing by 5%, from 81,710 to 85,839.⁵ In 2016, the region’s largest industry was government, followed by manufacturing and health care and social assistance. Forecasts show that these will remain the three largest industries in 2026. (See Table 2.) It is likely that a wave of retirements in coming decades will create many job opportunities for young people in the region. Nearly half of the workforce in Southwest Minnesota is 45 or older, and 27% of workers in the region are 55 or older.

A challenge for pathways developers in Southwest Minnesota is that average wages in many industries are not adequate to support a family. According to MIT’s Living Wage Calculator, the average living wage for a single person in Southwest Minnesota is \$20,685 annually, or \$9.95 per hour; those figures increase to \$46,826 annually or \$22.52 per hour for an adult supporting one child.⁶ Average wages in three-quarters of the industries in Southwest Minnesota are below a living wage for one adult supporting one child. Opportunities for pathways development exist even within industries in which average wages are below a family-sustaining wage, but pathways in these industries must be designed carefully to focus on occupations that offer wages above the industry average and to ensure that young people are prepared to climb career ladders within those industries.

Table 2: Industries Sorted by Projected Growth in the Number of Jobs from 2016 to 2026

Industry	2016 Jobs	2026 Jobs	Change	% Change	2016 Location Quotient	Current Wages, Salaries, & Proprietor Earnings*
Health Care and Social Assistance	10,159	12,574	2,415	24%	0.99	\$30,656
Administrative and Support and Waste Management and Remediation Services	1,997	2,523	526	26%	0.39	\$30,042
Retail Trade	8,206	8,689	483	6%	0.97	\$22,621
Finance and Insurance	3,367	3,781	414	12%	1.06	\$55,952
Crop and Animal Production	4,988	5,298	310	6%	4.96	\$32,690
Construction	4,062	4,282	220	5%	0.92	\$42,655
Professional, Scientific, and Technical Services	1,667	1,884	216	13%	0.32	\$45,462
Wholesale Trade	4,066	4,275	209	5%	1.31	\$50,722
Transportation and	2,648	2,798	150	6%	0.94	\$38,681

Warehousing						
Educational Services	961	1,072	111	12%	0.46	\$21,247
Utilities	486	561	75	15%	1.69	\$81,098
Arts, Entertainment, and Recreation	648	700	51	8%	0.47	\$12,587
Other Services (except Public Administration)	3,800	3,829	29	1%	0.97	\$21,284
Information	711	730	19	3%	0.47	\$32,804
Mining, Quarrying, and Oil and Gas Extraction	142	155	14	9%	0.44	\$44,425
Real Estate and Rental and Leasing	511	519	8	2%	0.38	\$24,935
Manufacturing	11,841	11,847	6	0%	1.83	\$47,322
Management of Companies and Enterprises	703	485	(218)	(31%)	0.61	\$78,277
Accommodation and Food Services	4,393	4,035	(358)	(8%)	0.63	\$12,143
Government	16,354	15,801	(553)	(3%)	1.30	\$38,200

*Wages below a living wage for one adult supporting one child appear in red.

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

As one of the largest industries in the region, and one of the few in which average wages are above a family-sustaining wage, manufacturing holds possibilities for pathways development. The industry is also an economic driver for the region. In 2016, the location quotient for manufacturing was 1.83. The location quotient is a comparison of an industry's share of employment in a region with its share of employment across the state. A location quotient above one indicates that an industry is more concentrated in a particular region than in the state as a whole. Industries with high location quotients are generally "export" industries that bring money into a region.⁷ While the number of jobs in the industry is not expected to increase over the next ten years, 23% of the region's overall manufacturing workforce is over the age of 55. There are therefore likely to be substantial numbers of job openings in the industry as older workers retire. Many of the most common jobs in the region's manufacturing industry, however, require few or no formal educational credentials—and pay below a family-sustaining wage. (See Table 3.) A manufacturing pathway should be geared toward occupations that are in demand across the region's varied manufacturing employers and that offer opportunities for advancement.

Table 3: Top 20 Manufacturing Occupations Sorted by Projected Number of Jobs in 2026

Occupation	2016 Jobs	2026 Jobs	Change	% Change	% of Workers Age 55+	Median Hourly Earnings*	Typical Entry-Level Education
Slaughterers and Meat Packers	1,367	1,351	(16)	(1%)	18%	\$14.04	No formal educational credential
Laborers and Freight, Stock, and Material Movers, Hand	982	1,065	83	8%	20%	\$15.74	No formal educational credential

Maintenance and Repair Workers, General	643	670	27	4%	34%	\$17.84	High school diploma or equivalent
Meat, Poultry, and Fish Cutters and Trimmers	555	557	2	0%	18%	\$14.12	No formal educational credential
Welders, Cutters, Solderers, and Brazers	526	545	19	4%	20%	\$20.01	High school diploma or equivalent
Team Assemblers	478	524	46	10%	23%	\$15.91	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	437	450	13	3%	25%	\$25.88	High school diploma or equivalent
Machinists	373	396	23	6%	26%	\$18.98	High school diploma or equivalent
Packaging and Filling Machine Operators and Tenders	304	300	(4)	(1%)	16%	\$18.82	High school diploma or equivalent
Industrial Machinery Mechanics	250	294	44	18%	23%	\$23.69	High school diploma or equivalent
Industrial Truck and Tractor Operators	262	274	12	5%	17%	\$19.58	No formal educational credential
Production Workers, All Other	246	261	15	6%	19%	\$9.95	High school diploma or equivalent
Inspectors, Testers, Sorters, Samplers, and Weighers	239	248	9	4%	28%	\$17.22	High school diploma or equivalent
Assemblers and Fabricators, All Other	219	237	18	8%	19%	\$14.20	High school diploma or equivalent
First-Line Supervisors of Mechanics, Installers, and Repairers	220	234	14	6%	32%	\$27.21	High school diploma or equivalent
Packers and Packagers, Hand	205	226	21	10%	21%	\$10.50	No formal educational credential
Shipping, Receiving, and Traffic Clerks	210	217	7	3%	20%	\$15.31	High school diploma or equivalent
Computer-Controlled Machine Tool Operators, Metal and Plastic	189	216	27	14%	15%	\$17.73	High school diploma or equivalent
Sales Managers	207	213	6	3%	19%	\$37.51	Bachelor's degree

Mechanical Engineers	175	176	1	1%	17%	\$33.85	Bachelor's degree
*Wages below a living wage for one adult supporting one child appear in red.							

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

Table 4: 20 Largest Manufacturing Industry Subsectors Ranked by Growth in the Number of Jobs from 2016 to 2026

Subsector	2016 Jobs	2026 Jobs	Change	% Change	2016 Location Quotient	Current Wages, Salaries, & Proprietor Earnings*
Other Miscellaneous Manufacturing	462	643	181	39%	2.82	\$39,405
Basic Chemical Manufacturing	297	370	73	25%	3.87	\$61,271
Medical Equipment and Supplies Manufacturing	109	158	48	45%	0.67	\$37,458
Animal Food Manufacturing	295	326	31	11%	9.69	\$52,091
Coating, Engraving, Heat Treating, and Allied Activities	136	165	30	21%	1.93	\$42,185
Motor Vehicle Body and Trailer Manufacturing	103	131	28	27%	1.31	\$60,396
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	401	423	22	5%	2.95	\$36,363
Plastics Product Manufacturing	295	311	17	5%	1.00	\$34,956
Other Textile Product Mills	150	147	(3)	(2%)	4.25	\$34,131
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	187	179	(8)	(4%)	0.91	\$55,249
Cement and Concrete Product Manufacturing	90	81	(9)	(10%)	0.91	\$59,453
Pharmaceutical and Medicine Manufacturing	91	78	(13)	(14%)	0.61	\$65,655
Animal Slaughtering and Processing	3,567	3,553	(14)	(0%)	13.93	\$46,059
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	340	316	(23)	(7%)	1.83	\$50,084
Agriculture, Construction, and Mining Machinery Manufacturing	2,102	2,077	(25)	(1%)	19.78	\$50,330
Other Wood Product Manufacturing	791	753	(38)	(5%)	6.45	\$38,856
Printing and Related Support Activities	233	187	(46)	(20%)	0.96	\$48,642

Semiconductor and Other Electronic Component Manufacturing	388	307	(81)	(21%)	2.04	\$34,920
Grain and Oilseed Milling	364	274	(89)	(25%)	11.73	\$59,999
Dairy Product Manufacturing	640	493	(147)	(23%)	8.85	\$66,145

*Wages below a living wage for one adult supporting one child appear in red.

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

The health care industry offers some opportunities for pathways development, particularly in light of its projected growth and its importance in the region’s labor market. However, average wages in the health care industry are less than family-sustaining wages, so career pathways in this industry will require careful planning to target good jobs within the industry. Forecasts indicate that the health care industry in Southwest Minnesota will grow by 24%, adding more than 2,400 jobs, by 2026. (See Table 2.) In addition, 28% of the region’s health care workforce is age 55 or older. However, among the twenty occupations with the largest number of jobs in 2026, only two of the jobs that require sub-B.A. credentials—radiologic technician and dental hygienist—offer average wages sufficient to support a family. (See Table 5.) It will be important to ensure that young people considering careers in health care are knowledgeable about viable career ladders within the industry in order to ensure that they are positioned to earn family-sustaining wages. There are also numerous opportunities in health care for young people who wish to pursue bachelor’s degrees and then go on to medical school; several employers in the health care field noted that there is an acute shortage of doctors in the region.

Table 5: Top 20 Health Care Occupations Sorted by Projected Number of Jobs in 2026

Occupation	2016 Jobs	2026 Jobs	Change	% Change	% of Workers Age 55+	Median Hourly Earnings*	Typical Entry-Level Education
Registered Nurses	1,312	1,464	152	12%	38%	\$28.69	Bachelor's degree
Nursing Assistants	1,379	1,434	55	4%	26%	\$12.01	Postsecondary nondegree award
Home Health Aides	905	1,386	481	53%	22%	\$11.22	No formal educational credential
Licensed Practical and Licensed Vocational Nurses	663	775	112	17%	34%	\$18.31	Postsecondary nondegree award
Emergency Medical Technicians and Paramedics	512	477	(35)	(7%)	9%	\$13.24	Postsecondary nondegree award
Medical Assistants	252	366	114	45%	16%	\$14.16	Postsecondary nondegree award
Pharmacy Technicians	176	179	3	2%	19%	\$14.51	High school diploma or equivalent
Veterinary Technologists and	123	156	33	27%	Insf. Data	\$15.17	Associate's degree

Technicians							
Dental Assistants	123	128	5	4%	15%	\$20.98	Postsecondary nondegree award
Pharmacists	122	119	(3)	(2%)	34%	\$54.03	Doctoral or professional degree
Physical Therapists	88	109	21	24%	15%	\$37.77	Doctoral or professional degree
Family and General Practitioners	80	104	24	30%	44%	\$92.07	Doctoral or professional degree
Medical and Clinical Laboratory Technicians	90	98	8	9%	30%	\$20.81	Associate's degree
Dental Hygienists	93	97	4	4%	20%	\$32.57	Associate's degree
Radiologic Technologists	89	96	7	8%	25%	\$27.72	Associate's degree
Veterinarians	76	91	15	20%	18%	\$30.72	Doctoral or professional degree
Medical Records and Health Information Technicians	73	89	16	22%	32%	\$18.40	Postsecondary nondegree award
Opticians, Dispensing	63	70	7	11%	29%	\$13.65	High school diploma or equivalent
Speech-Language Pathologists	65	70	5	8%	22%	\$26.72	Master's degree
Occupational Therapists	59	68	9	15%	Insf. Data	\$34.30	Master's degree
*Wages below a living wage for one adult supporting one child appear in red.							

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

The development of a business and finance pathway, which would cut across several industries in the region, is an especially promising approach to creating opportunities for young people. The finance and insurance industry, which is projected to grow by 12% by 2026, has a location quotient of 1.06 and average wages are among the highest of all industries in the region. (See Table 2.) Over half of the 20 largest finance and insurance occupations—including several middle-skills occupations—offer family-sustaining wages. (See Table 6.)

Table 6: Top 20 Finance and Insurance Occupations Sorted by Projected Number of Jobs in 2026

Occupation	2016 Jobs	2026 Jobs	Change	% Change	% of Workers Age 55+	Median Hourly Earnings*	Typical Entry-Level Education
Customer Service Representatives	882	1,001	119	13%	23%	\$15.22	High school diploma or equivalent

First-Line Supervisors of Office and Administrative Support Workers	470	553	83	18%	32%	\$23.19	High school diploma or equivalent
Accountants and Auditors	464	492	28	6%	33%	\$25.97	Bachelor's degree
Tellers	440	464	24	5%	27%	\$12.98	High school diploma or equivalent
Insurance Sales Agents	402	395	(7)	(2%)	43%	\$27.72	High school diploma or equivalent
Executive Secretaries and Executive Administrative Assistants	387	365	(22)	(6%)	39%	\$19.53	High school diploma or equivalent
Loan Officers	268	328	60	22%	25%	\$29.79	Bachelor's degree
Business Operations Specialists, All Other	239	256	17	7%	29%	\$25.29	Bachelor's degree
Financial Managers	199	224	25	13%	24%	\$43.69	Bachelor's degree
Securities, Commodities, and Financial Services Sales Agents	140	173	33	24%	19%	\$23.16	Bachelor's degree
Market Research Analysts and Marketing Specialists	121	143	22	18%	15%	\$26.16	Bachelor's degree
Loan Interviewers and Clerks	106	137	31	29%	16%	\$17.50	High school diploma or equivalent
New Accounts Clerks	113	116	3	3%	19%	\$16.42	High school diploma or equivalent
Claims Adjusters, Examiners, and Investigators	105	111	6	6%	23%	\$24.69	High school diploma or equivalent
Management Analysts	85	103	18	21%	32%	\$33.90	Bachelor's degree
Personal Financial Advisors	69	92	23	33%	28%	\$33.24	Bachelor's degree
Credit Analysts	75	83	8	11%	16%	\$28.81	Bachelor's degree
Insurance Claims and Policy Processing Clerks	78	83	5	6%	27%	\$19.25	High school diploma or equivalent
Training and Development Specialists	69	78	9	13%	22%	\$24.05	Bachelor's degree

Bill and Account Collectors	53	67	14	26%	Insf. Data	\$13.80	High school diploma or equivalent
*Wages below a living wage for one adult supporting one child appear in red.							

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

A business and finance pathway could also encompass jobs in wholesale trade, another key regional industry, with a location quotient of 1.31 and average annual wages of over \$50,000. Key wholesale trade sectors in Southwest Minnesota include machinery, equipment, and supplies and farm product raw material. (See Table 7.) Occupations in the wholesale trade industry encompass jobs such as sales representatives (a middle-skills job that pays an hourly wage of \$27.83) and market research analysts (a highly skilled job that pays \$26.16 per hour). Other occupations that are in demand in the wholesale trade industry, such as industrial machinery mechanics (middle-skills job with an average wage of \$23,69/hour) and mobile heavy equipment mechanics (middle-skills job with an average wage of \$24.90/hour), overlap with promising occupations in manufacturing, so students who completed pathways that prepared them for these jobs would be well prepared to work in a range of key regional industries.

Table 7: Wholesale Trade Industry Subsectors Ranked by Growth in the Number of Jobs from 2016 to 2026

Subsector	2016 Jobs	2026 Jobs	Change	% Change	2016 Location Quotient	Current Wages, Salaries, & Proprietor Earnings*
Machinery, Equipment, and Supplies Merchant Wholesalers	1,137	1,257	120	11%	3.28	\$54,302
Farm Product Raw Material Merchant Wholesalers	1,230	1,270	40	3%	31.61	\$52,585
Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	63	95	32	51%	0.62	\$32,979
Lumber and Other Construction Materials Merchant Wholesalers	83	110	27	33%	0.73	\$53,329
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	28	39	11	39%	0.17	\$47,778
Chemical and Allied Products Merchant Wholesalers	12	21	8	75%	0.18	\$79,805
Petroleum and Petroleum Products Merchant Wholesalers	145	151	6	4%	2.89	\$57,806
Metal and Mineral (except Petroleum) Merchant Wholesalers	10	16	6	60%	0.16	\$40,793
Wholesale Electronic	58	61	3	5%	0.12	\$56,184

Markets and Agents and Brokers						
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	31	34	3	10%	0.24	\$44,487
Miscellaneous Nondurable Goods Merchant Wholesalers	790	791	2	0%	4.55	\$45,916
Professional and Commercial Equipment and Supplies Merchant Wholesalers	26	26	1	0%	0.08	\$40,805
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	134	131	(3)	(2%)	0.76	\$41,465
Miscellaneous Durable Goods Merchant Wholesalers	46	42	(4)	(9%)	0.28	\$36,529
Grocery and Related Product Merchant Wholesalers	264	215	(48)	(19%)	0.66	\$48,106
*Wages below a living wage for one adult supporting one child appear in red.						

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

Information technology is not an industry, but a set of cross-cutting occupations valued in many of the region’s most important industries, including government and health care. The number of IT jobs in the region—527 jobs in 2016—is limited, but IT skills are critical to success in many occupations. In addition, numerous telecommuting opportunities exist within the IT field, and students who complete IT pathways would be well positioned to compete for those jobs. Educational requirements for IT occupations are quite high; all but three require a bachelor’s degree. (See Table 8.)

Table 8: IT Occupations Sorted by Projected Number of Jobs in 2025

Occupation	2016 Jobs	2025 Jobs	Change	% Change	Median Hourly Earnings*	Typical Entry-Level Education
Computer User Support Specialists	140	151	11	8%	\$20.24	Some college, no degree
Network and Computer Systems Administrators	98	104	6	6%	\$30.93	Bachelor's degree
Computer Systems Analysts	50	62	12	24%	\$35.94	Bachelor's degree
Software Developers, Applications	31	41	10	32%	\$36.28	Bachelor's degree
Software Developers, Systems Software	35	40	5	14%	\$48.10	Bachelor's degree
Web Developers	34	39	5	15%	\$22.20	Associate's degree
Computer Network Support Specialists	34	37	3	9%	\$27.19	Associate's degree

Computer Programmers	36	37	1	3%	\$30.60	Bachelor's degree
Computer Occupations, All Other	29	32	3	10%	\$23.32	Bachelor's degree
Operations Research Analysts	14	19	5	36%	\$31.26	Bachelor's degree
Database Administrators	14	16	2	14%	\$35.19	Bachelor's degree
Computer Network Architects	12	15	3	25%	\$39.64	Bachelor's degree
*Wages below a living wage for one adult supporting one child appear in red.						

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

REGIONAL LEADERSHIP AND INTERMEDIARIES

Strong cross-sector regional leadership is essential to the successful development of regional college and career pathways systems. Regional leadership teams are most effective when they are supported by the staff capacity that intermediary organizations can provide. Within the Pathways to Prosperity framework, an intermediary organization connects key stakeholders, including employers and educational institutions, and creates a body of knowledge and skills to serve the collective goals of the partners. The work of intermediaries includes two broad sets of functions. First, intermediaries hold the vision for the pathways work and convene key stakeholders. Second, intermediaries support the development of work-based learning opportunities by establishing a role for employers that ensures they see a return on their investment in the education of young people and by supporting high schools and colleges in securing, developing, and sustaining sequenced, systemic work-based learning opportunities. A single organization may take on the entire intermediary role, or the intermediary functions may be spread across multiple organizations. For example, a regional steering committee could play the convening role, while an employer association could broker work-based learning opportunities. Identifying organizations that are able to play an intermediary role will be key to advancing pathways work in the region.

The need for a clear regional leadership structure is particularly acute in Southwest Minnesota. Numerous stakeholders in our interviews noted that they participate in—or have been invited to participate in—multiple groups or meetings that bring together stakeholders from across key sectors, including K-12, postsecondary, industry, and workforce development. However, the purposes of these meetings or groups are often overlapping or not clearly defined. The Pathways work offers an opportunity to better align these disparate efforts and to reduce the number of meetings that stakeholders are now attending. Several stakeholders expressed concern that employers, in particular, are being pulled in too many different directions. Concerns about both the number of meetings and the lack of clearly defined meeting goals were raised in multiple asset mapping interviews. If the regional pathways work is to succeed, it must be focused and results-driven, and all stakeholders must have reason to believe that their time is being used efficiently. In order to accomplish this, education and workforce collaboration in the

region must be approached systematically, which will require a regional steering committee or convening intermediary capable of making connections across systems and initiatives.

The Southwest Initiative Foundation (SWIF), as the lead entity for the career academies initiative funded through the Greater Twin Cities United Way, is already carrying out some convening intermediary functions. SWIF is well positioned as a leader in community and economic development that can bring a regional perspective to the work and build connections across systems. SWIF is also well positioned to leverage outside funding to launch the Pathways work.

The Southwest and West Central Service Cooperative (SWWC) is an education service intermediary that works in collaboration with Minnesota West Community and Technical College and with 55 public and private schools within an 18-county service region. SWWC is working with two Perkins consortia on the development of collaborative CTE programs (described in more detail in the 9-14 Pathways section of this report) aligned with labor-market demand. SWWC has formed strong cross-sector partnerships, including with employers who participate in the organization's career expo, and is convening a cross-sector regional advisory committee representing an 18-county region.

The Southwest Minnesota Private Industry Council (SW MN PIC) is also carrying out some intermediary functions related to work-based learning and career pathways development in the region. The SW MN PIC is convening a cross-sector stakeholder group to support the creation and implementation of a regional workforce development plan focused on sector strategies. The SW MN PIC is recruiting employer champions to support this plan and has identified health care and manufacturing as priority industries. In addition, the SW MN PIC operates a number of programs, most of them WIOA-funded, focused on elements of career pathways for youth. SW MN PIC staff are working directly with young people and with area high schools to provide college and career advising, employability skills training, and work-based learning.

Minnesota West Community and Technical College is also well positioned to take on some intermediary functions. While the college does not currently play a formal intermediary role, it has helped connect K-12 and industry partners to support specific activities and programs. Numerous stakeholders in our asset mapping interviews noted that the college is respected throughout the region as a very strong partner with the capacity to play a leading role in pathways development and implementation.

A clearly identified and defined intermediary—or set of intermediaries—that is positioned to coordinate the Pathways work and convene stakeholders from the entire Southwest Minnesota region will be key to a successful regional Pathways approach, including the development of a regional employer engagement strategy. The convening intermediary role includes convening stakeholders, building public support for the Pathways work, establishing metrics, developing and maintaining a vision for the work, and assuring sustainability. Given the need to systematize regional coordination in Southwest Minnesota, it will also be important to ensure that any entity that takes on the convening functions is truly regional in scope and representative of all stakeholders. As the Pathways to Prosperity work moves forward, it will be essential to ensure

that both convening and work-based learning intermediary functions are filled in the region, which may require additional funding for dedicated staff time. The intermediary role may be taken on by a built-for-purpose organization, or it may be housed in an existing organization. If it is housed within an existing organization, it is important to be strategic about selecting an appropriate organization in order to ensure that the intermediary is well respected and perceived as a neutral broker by all stakeholders. Once potential intermediaries have been identified, the next steps will be to evaluate their capacity to carry out the work – or to add staff to carry out the work – and to seek additional funding if it is needed to create the necessary capacity.

9-14 PATHWAYS

Grades 9-14 pathways expand the range of options available to young people by preparing them for success in both college and careers. Ten years of data from early college high schools indicate that taking college-level courses in high school is especially beneficial for underserved students. Student achievement is motivated by the opportunity to take free college courses and to accelerate postsecondary credit attainment, with a 90% high school graduation rate for early college students, as compared to the 78% national average rate. Dual enrollment is also associated with increased rates of postsecondary enrollment, persistence, and credit and degree attainment, as well as higher student GPAs and four-year graduation rates. Pathways through associate's degrees represent a first step on students' career ladders. Students who complete associate's degrees may choose to enter the labor market and/or to pursue further education, including bachelor's and graduate degrees. Grades 9-14 pathways encourage student success in both college and career by equipping students with credentials valued by employers and with the skills needed to succeed in both college and the workplace.

In Southwest Minnesota, education leaders and other stakeholders recognize the value of preparing students for both college and careers and are committed to the Pathways work. However, communities in Southwest Minnesota are in the very early stages of this work, and capacity and resources vary among educational institutions. Creating regular opportunities for peer learning across the region, especially at the secondary level, would enable stakeholders to learn from these diverse contexts and approaches to the work and help ensure continued progress across Southwest Minnesota. Peer learning could be structured through SWWC or another regional intermediary.

Some promising approaches to pathways development are emerging in the region. These include collaborative career and technical education (CTE) programs developed by SWWC. SWWC has identified high-demand sectors—aligned with student interest—for pathways development and is working with dozens of schools organized into two Perkins consortia in order to design and implement pathways. Last year, SWWC launched a health care pathway with 15 students; this year, enrollment has increased to 60 students in three locations, including Windom. SWWC has now launched manufacturing and engineering, IT, and diesel mechanics pathways for the spring 2018 semester. Education leaders across the region have approached SWWC about the possibility of replicating their pathways work, an encouraging sign in light of the fact that interest in CTE has declined in recent decades, and there are currently relatively

few CTE programs in place in schools in the region.

CTE programs that offer students opportunities to develop a wide range of skills are in place in Worthington, Jackson County, and Windom. However, these programs are not always clearly aligned with labor-market demand and promising career opportunities for young people. Facilities and equipment costs for programs such as welding have also constrained the development of CTE programs. In light of the lack of public support for CTE noted by some stakeholders, it is likely that regional leaders will need to dedicate considerable time and attention to educating stakeholders—especially students and their families—about the value of career-focused education.

Several K-12 education leaders noted that a challenge to increasing the availability of career-focused learning is a need for more qualified CTE teachers and for professional development for current teachers. Some districts have found creative solutions to the shortage of CTE teachers, but a challenge is that some CTE teachers are being asked to teach classes outside of their areas of expertise, which may lead to students being unprepared for college-level work in these fields. In addition, both CTE and core content teachers could benefit from professional development opportunities that focus on strategies for integrating academic and career-focused learning to ensure that all students are ready for college **and** careers.

The region benefits from the presence of a strong postsecondary partner in Minnesota West Community and Technical College. The college offers a wide array of transfer courses and technical courses aligned with labor market demand. The college is a widely respected partner to both K-12 educators and employers, with whom it is working to build career pathways. These include pathways, such as the nurse aide program and a welding pathway, that extend back into high school. Minnesota West also worked closely with JBS to develop industrial technology and mechatronics pathways. The college recently completed a strategic planning process through which it affirmed a commitment to remaining closely connected to the communities it serves. College leaders are enthusiastic about the student body's growing diversity and are taking steps to support new students through initiatives such as recruiting bilingual tutors and creating programs to support first-generation students.

A challenge to be addressed is that relatively few students in the region are currently taking advantage of Minnesota's Postsecondary Enrollment Options (PSEO). Stakeholders noted that there are several barriers to increasing PSEO enrollment. While Minnesota West offers high schools priority in enrolling students in technical courses, high schools are not always able to attract enough students to fill the classes. In addition, the availability of concurrent enrollment opportunities is limited by the number of high school teachers who have the credentials required to teach classes in which students earn postsecondary credit. The Minnesota State Colleges and Universities have been working with K-12 educators across the state to help teachers gain needed credentials.

Minnesota West is actively seeking to remove barriers to PSEO enrollment, including exploring the use of multiple measures, rather than ACCUPLACER, to assess college readiness. In addition, the college has launched a college prep class, which it is offering as a contract class,

thus eliminating the requirement that students be in the top third of their class as is the case for PSEO. Some stakeholders expressed concern about equity issues related to PSEO. While PSEO is often especially beneficial for potential first-generation college students—students who, in high school, may not envision themselves pursuing postsecondary education—it is often students who already plan to attend college who access PSEO opportunities. Minnesota West’s college prep class is designed to help address this issue.

While many exciting initiatives and partnerships already exist in Southwest Minnesota, developing a regional pathways strategy that ensures equitable access to these opportunities for all students will be a key issue to address as the Pathways work moves forward. Worthington High School has in place a number of initiatives to support its increasingly diverse student body, but additional supports will be needed as the pathways work in the region moves ahead. Transportation will likely prove to be a challenge that will need to be taken on as part of the Pathways work. Students who lack access to a car or who do not have a drivers’ license generally must depend on family and friends for transportation. However, this is not necessarily a reliable option, and students may miss a class or an event due to transportation issues beyond the student’s control, such as a parent’s changing work schedule. The blended learning model (2 days in person and 3 days blended) developed by Worthington School District and Minnesota West may offer a remedy to the transportation challenge. Nonetheless, the need for additional transportation options is likely to become increasingly acute as the Pathways work moves ahead and growing numbers of students participate in concurrent enrollment and work-based learning.

CAREER INFORMATION AND ADVISING SYSTEMS

Middle and high school students often have little access to information about the world of work, even though they are at an age where their choices may affect their future opportunities. A strong career and advising system is therefore an important component of the Pathways to Prosperity framework. This system should provide students with a continuum of experiences—from awareness to exploration to immersion—that familiarize students with the world of work and the range of career possibilities available to them. Career exploration is valuable not only because it can help young people learn what they want to do, but also what they do not want to do. It is valuable for students to learn early about careers that are not a good match, and pathways should be structured so that they are flexible and permeable, allowing students to easily move from one field of interest to another as students learn more and refine their interests.

Stakeholders in Southwest Minnesota agree that a more systematic approach to providing career information and advising is needed to ensure that young people are able to make informed choices about their futures. The Pathways work presents an opportunity to better align and expand the opportunities currently available to middle and high school students in the region and to ensure that students have access to a clear sequence of career exploration activities.

Students in the region have access to some career information and advising in schools, but many young people rely primarily on family and friends for information because school-based efforts are generally not systematic and do not provide opportunities for in-depth career exploration. More work needs to be done to ensure that students have access to individualized and consistent career advising. Much of this type of advising is currently the responsibility of school counselors. However, Minnesota's student-to-counselor ratio is nearly 800:1, far beyond the 450:1 national average ratio and the 250:1 ratio recommended by the American School Counselors Association. There are only two states with higher student-to-counselor ratios.

With significant time being spent on multiple duties in addition to career guidance, counselors may find it difficult to provide students with personalized guidance. In some districts, interest inventories are a tool for helping students understand career options. Many schools also hold career fairs and host guest speakers. Regional career fairs also engage large numbers of students and employers. In 2016, the Southwest Minnesota Career Expo engaged 2,000 students and 118 employers. However, these one-time events are only a first step in providing students with a full understanding of career opportunities or equipping them with the skills they will need to make important decisions about educational and career options.

Teachers tend to be a key source of career information and advising. Worthington High School has recently launched advisory periods in order to create dedicated time within the school day for advising. However, stakeholders in the asset mapping interviews agreed that many counselors and teachers would benefit from additional information and professional development about the world of work. Further, many in industry expressed concern that due to a limited number of counselors and the overall slow pace of change in the field of education, the ability to partner with schools around career experiences is limited. Districts in the region should consider creating professional development opportunities, including externships, that acquaint teachers and counselors with a variety of industries and prepare them to advise students on a range of career options. Externships allow teachers to spend time learning and developing skills in a particular career pathway while working directly with industry partners. This strategy has been used by the Worthington School District and JBS. By all accounts, the teacher externship experience has enriched the education of local students. Teachers develop a better understanding of what will be required of their students in industry and are better equipped to help students meet those requirements. Unfortunately, this practice is happening on a very limited and small scale. Professional development efforts should also ensure that counselors are familiar with available concurrent enrollment options and are prepared to advise students about these opportunities.

Some schools and districts are engaged in efforts to enrich and strengthen the career exploration options available to students. For example, in Worthington, all incoming 9th graders are required to complete a career exploration class. The purpose of the class is to provide youth with a broad introduction to career options. The idea is that students are allowed to explore a broad menu of career options as freshmen and become progressively more focused in career choice and corresponding skills as they move toward graduation. In addition, students, in collaboration with teachers, develop learning plans. The learning plans are supposed to be

living documents that promote both career thinking and planning for the student. Although the career exploration class and learning plans are considerable assets, stakeholders expressed concern regarding implementation fidelity. That is, the career planning experience of students varies largely depending on the teacher to whom they are assigned. Some teachers integrate the learning plans into their lessons and update the learning plans. Other teachers do not. Worthington High School is actively engaged in the development of a strategy to strengthen student learning plans and ensure that they are truly useful for students.

There are a number of promising career development collaborations at the high-school level. Minnesota West is engaged in multiple collaborations that include secondary schools, nonprofit organizations, and industry. These partnerships are largely geared toward equipping youth (and adults) for careers in in-demand fields such as mechatronics, electrical, and welding. Another successful collaboration involves the Sanford Windom Hospital. The hospital has partnered with approximately five local high schools to provide classes and internship opportunities through which young people can explore clinical and non-clinical careers in a hospital setting. A significant limitation of the system is that these career pathway experiences tend to be limited to 15-20 students.

Stakeholders generally agree that students would benefit from sequenced career exploration activities starting at the middle-school level. Additional interdisciplinary and project-based learning activities, which could be introduced in middle schools and further developed in high schools, would provide students with further opportunities to develop cross-cutting skills.

A key theme in our asset mapping interviews that is consistent with findings from the 2016 Southwest/South Central Minnesota Rural Career Counseling Coordinator Report is the need to better educate parents, teachers, and students about career options that are not connected to a 4-year college degree. Even when students are aware of the range of career preparation options, they are often uninformed about salaries. Consequently, students and those that advise them commit to the idea of attending four-year colleges without a deep understanding of other resource-saving (in terms of both time and money) career pathways. The report suggests that the majority of high school students (64%) in the region are planning to go to a 4 year-college. This decision is largely attributed to a lack of knowledge regarding alternate career pathways and the general belief that a 4 year-college degree is the only route to financial wellbeing. Additional marketing and informational campaigns are needed to ensure that students and those that support their decision-making about careers are fully informed about the options and advantages associated with career pathways.

EMPLOYER ENGAGEMENT AND WORK-BASED LEARNING

Preparing young people to join an educated and skilled workforce requires employer engagement. Pathways must be responsive to labor-market demand if they are to lead young people to satisfying and family-sustaining careers that contribute to regional economic development. Employer engagement in the Pathways work includes collaborating with

educators, providing work-based learning opportunities to students, and supporting young people's transitions into the labor market. A skilled workforce is needed in the region to continue to attract and retain employers in fields such as manufacturing and health care. While employers in Southwest Minnesota are generally supportive of efforts to better prepare young people for careers, and some companies offer a few internships or work-based learning opportunities, the engagement of most employers in such efforts, particularly at the K-12 level, is currently rather limited. Work-based learning opportunities such as internships are not available widely or at scale, and partnerships between employers and educators are often built on personal relationships, which hinders replication and expansion. Developing a framework for employer engagement that systematizes the role of employers in the Pathways work will be useful both in scaling up work-based learning opportunities and in providing employers with a better understanding of how to engage effectively and efficiently.

Southwest Minnesota is home to several employers who are participating in regional efforts to increase postsecondary attainment and to provide young people with exposure to a range of careers. As noted above, a large number of employers in the region are engaged in light-touch career exploration activities such as career fairs. Employers in the region have also provided substantial material support to educational initiatives. Several offer scholarships to students, and companies such as Toro have made valuable equipment donations to local schools, enabling educators to ensure that students are trained in the use of equipment that meets industry standards. AGCO and JBS have both worked with Minnesota West to develop training programs and offer scholarships to students. However, successful pathways development will require employers to commit not only material resources, but time. To date, employers' time commitment has generally been limited to participation in the light-touch career exploration activities described above. Partnership in pathways will require industry partners to dedicate a more significant amount of time to the work, but this investment has the potential to pay off in the development of a skilled talent pipeline.

Many employers are concerned about growing workforce needs, but have struggled to find ways to productively engage with K-12 schools on education and training initiatives. Several employers have participated in existing cross-sector or industry advisory groups, but most have found that these groups are not an effective use of their time, as the groups' purposes are unclear or the groups' conversations rarely seem to translate into action. Employers seeking to engage at the K-12 level have also had difficulty identifying clear points of contact within schools and districts. These are challenges that must be addressed by educators and an identified intermediary organization.

Employers should also help themselves by taking the reins in the development of their own talent pipelines. Employer engagement done in the spirit of corporate social responsibility often weakens commitment, sustainability, and impact, especially in times of economic downturn. Although a primary concern of the region's LMI data surrounds sub-livable wages offered by many sectors and employers throughout the region, this will remain only part of the issue in helping employers develop their own talent pipelines. Leaders across industries expressed enthusiasm about a pathways model and a belief in what it could accomplish for the region, but

the region must prioritize leveraging that enthusiasm and converting it to employer engagement and action to produce results for young people. The key is to engage employers at a level at which they would not otherwise engage, while asking for shared commitments that produce a collaborative impact that far exceeds individual employer capacity. Employer engagement centers around industry both identifying gaps in their ability to find talent and taking the initiative to partner with educational institutions to then develop their own talent pipelines. This could include the development of apprenticeship programs at facilities such as JBS.

Finding ways to bring young people into the world of work will be critical to developing their interest and skills in high-demand fields. Barriers still remain that need to be addressed to scale work-based learning, including identifying employer opportunities for students' *workplace* learning (i.e., internships and apprenticeships) to meet the demand, and more clearly identifying and communicating the value-add that students bring to employers through these experiences. A consistent challenge has been corporate policies and culture that require that workers in fields such as manufacturing and health care be at least 18 years old, a cut-off that excludes most high-school students. Other barriers cited by stakeholders include compensation requirements for entry-level work, businesses' exposure to liability for student accident/injury, and the time and capacity required to manage internship programs. It would likely be beneficial for stakeholders in the region to work with state agencies and local workforce development partners to develop a strategy for overcoming these perceived barriers.

Funding issues related to work-based learning are a challenge. Several employers expressed concern about the feasibility of providing paid internships. The Pathways to Prosperity framework advocates for paid work-based learning experiences for students, in part because students may need to earn money for their own expenses or to contribute to their families. These students may take entry-level jobs in industries such as food services or retail out of necessity, rather than participate in more meaningful, but unpaid, work-based learning opportunities in an area of interest. This is a particular challenge for students at Worthington High School, some of whom enter the labor market prior to graduation, which in some cases interferes with young people's ability to complete high school, as well as to gain experience in a field of interest. In addition, receiving payment for their work encourages students' momentum and motivation, often developing into a shared commitment between employer and intern, which can lead to long-term employment.

Bringing students into workplaces would provide employers with opportunities to take an active role in helping young people develop employability skills, a need identified by many of the stakeholders with whom we spoke. Work-based learning opportunities give students the opportunity to hone existing skills and to further develop as young professionals. Stakeholders mentioned a lack of employability skills in many youth and an inability to meet minimum expectations for job timeliness and effort. These are skills that many youth develop over time when exposed to meaningful work opportunities and increasing responsibility on the job site. Engaging in this work represents an opportunity for regional employers to ensure that young people have the skills needed to create a strong and vibrant talent pipeline.

STATE POLICY ENVIRONMENT

State education, workforce, and economic development policies contribute to the context in which Pathways implementation in Southwest Minnesota will take place. The state has a history of providing strong leadership in career pathways initiatives intended to build connections between the education and workforce development systems and between educators, employers, and state agencies. In addition, Minnesota has several other state-level initiatives that address key components of the Pathways framework, including dual enrollment, work-based learning, and career information and advising. These state-level policies provide a solid foundation for the work of building regional grades 9-14 college and career pathways aligned with labor-market demand.

The Minnesota State Colleges and Universities (Minnesota State) system has extensive experience in developing sector-based approaches that engage employers in career-focused education. Employer engagement and sustaining employer relationships has been a recent focus of Minnesota State's work. In addition, Minnesota State provides support to its system of colleges and universities in the form of technical assistance, facilitation, advocacy, and its influence on state policy. Minnesota State, along with state, business, and nonprofit partners, has developed a platform called Real Time Talent, a vehicle for accessing and using real-time labor market information to support more informed decisions within the Minnesota workforce ecosystem. Minnesota State's Centers of Excellence, launched in 2005, are intended to build connections between employers and institutions of higher education. The Centers work closely with employers to provide work-based learning opportunities and to ensure that curricula and training programs are responsive to labor-market needs. Centers of Excellence are located on campuses throughout the state; each has a focus on one of the following sectors:

- Agriculture
- Energy
- Health care
- Information technology
- Manufacturing and engineering
- Transportation

The Governor's Workforce Development Council (GWDC), the state's workforce investment board, is working to support and align a variety of workforce development, career pathways, and sector strategies initiatives in the state. As required by statute, GWDC includes representatives from business and industry, community-based organizations, education, local government, organized labor, state agencies, and the state legislature. The Council serves as a neutral convener that promotes coordination and collaboration across workforce initiatives and is leading planning and implementation efforts related to the federal Workforce Innovation and Opportunity Act (WIOA) through sector strategies in health care, manufacturing, construction, business and professional services, natural resources, and energy.

Several state initiatives focused on the K-12 system also have the potential to support grades 9-14 pathways development. Minnesota's World's Best Workforce legislation, passed in 2013, seeks to ensure that K-12 education system is preparing young people for college and careers.

Under the law, school districts must develop plans that address five ambitious goals:

- All children are ready for school.
- All third-graders can read at grade level.
- All racial and economic achievement gaps between students are closed.
- All students are ready for career and college.
- All students graduate from high school.

The Minnesota Department of Education (MDE) is charged with providing support to districts in achieving these goals.

In 2016, Minnesota State and MDE jointly developed career pathways guidelines that outline six “career fields” for pathways development across the state:

- Agriculture, Food, and Natural Resources;
- Arts, Communications, and Information Systems;
- Business, Management, and Administration
- Engineering, Manufacturing, and Technology;
- Health Science Technology; and
- Human Services⁸

For the purposes of Perkins funding, the state is divided into 26 consortia, each consisting of at least one secondary and one postsecondary institution. Each consortium offers a minimum of seven career pathways, called programs of study. At least one of the programs of study must meet a set of requirements that includes employer engagement, third-party assessment of technical skills, and input by local industry partners on in-demand skills.

Minnesota offers several ways for high school students to obtain college credit, including Postsecondary Enrollment Options (PSEO), concurrent enrollment, Advanced Placement (AP), and International Baccalaureate (IB).⁹ PSEO targets primarily 11th- and 12th-graders, and allows them to earn postsecondary credit by taking classes on postsecondary campuses and online, while concurrent enrollment classes take place on high school campuses during the regular school day. A more recent provision for PSEO for 10th graders is intended to expand enrollment in CTE programs. The onus is on students to connect with colleges regarding their PSEO course offerings and to navigate their application procedures, which vary across institutions. High school counselors sometimes effectively function as gatekeepers for PSEO, which features GPA- and attendance-related eligibility requirements that can constrain access. The program offers reimbursements for course-related transportation costs, but students must front such costs and then submit paperwork to secure reimbursement. Consequently, stakeholders had the impression that PSEO tended to primarily benefit middle-class students. Minnesota students also have opportunities to earn articulated credit, including credit for CTE classes through the Minnesota Community and Technical College Credit Program.

State leaders have also made efforts to support college and career planning and advising. All students in Minnesota must have in place by grade 9 Personal Learning Plans that include career exploration and work-based learning.¹⁰ These plans have the potential to serve as the

basis for a robust approach to ensuring that students are college and career ready, but much of the plans' potential is currently unrealized due to a lack of counselors in the schools.

In 2016, the Minnesota Department of Employment and Economic Development (DEED) launched the Rural Career Counseling Coordinators program with funding appropriated by the state legislature. DEED selected five organizations across the state to receive funding to support Rural Career Counseling Coordinators, each of whom is charged with working across two workforce development areas to support career information and advising efforts across the education and workforce systems. In Southwest Minnesota, the rural career counseling coordinator asset mapped the region's available resources, creating a very useful inventory that can help guide career pathways development in the region. Overall, there is a clear need for this initiative, and it is encouraging to see state support for it. However, given that there are only five positions throughout the state, the work of the rural career counseling coordinators must be complemented by additional career advisers embedded within schools and workforce agencies.

RECOMMENDATIONS AND KEY QUESTIONS FOR PLANNING

The wide community support for the Pathways work indicates strong potential for successful Pathways implementation. While some work remains to put in place elements of the Pathways levers, it is likely that this can be done, given stakeholders' enthusiasm for the work. There is widespread recognition that a pathways system will both ensure that young people in Southwest Minnesota are prepared for college and careers and promote economic development and strengthen business and industry. The region is therefore well positioned to address important community challenges.

In order to make the most of this potential, the asset-mapping team has developed a series of recommendations and key questions for leaders in the region to address as they develop a Pathways work plan.

FOCUS AND SCALE

- **Recommendations**
 - Identify 2-3 broad industries as starting points for Pathways development. Selection criteria should include projected growth, wages, and the readiness of employers in selected industries to engage in this work.
 - Align Pathways work with related regional initiatives, such as the existing Perkins consortia, to reduce duplication of efforts and consider how stakeholders might build pathways models in Worthington, Jackson County, and Windom that could later be adapted by other districts as part of a regional scaling strategy.
 - Ensure that all pathways promote equity in education and employment opportunities and are accessible to all students.

- **Question for Planning**
 - What performance measures will be used to monitor progress and hold stakeholders accountable?

REGIONAL LEADERSHIP AND INTERMEDIARIES

- **Recommendations**
 - Streamline the number of cross-sector and advisory groups and meetings related to the Pathways work in order to reduce duplication and better systematize the work.
 - Convene a Pathways working group to address the recommendations and planning questions in this report and determine how the intermediary functions will be filled for the Pathways work. This working group should not be an entirely new group, but should build on or fit within one of the existing cross-sector groups already meeting in the region.
 - Adopt a suitable strategy/framework to systematize and manage meetings and corresponding outcomes more efficiently.
- **Questions for Planning**
 - How should intermediary functions be structured or distributed? Given the scale and structure of the region, would it make sense to designate a regional convening intermediary and multiple local work-based learning intermediaries?
 - What organizations could be particularly effective at building public support for the Pathways vision?
 - What other organizations could serve as conveners, brokers, and technical assistance providers?
 - What organization has—or could build—the capacity to take on the logistics and operational work needed to support Pathways?

PATHWAYS DEVELOPMENT

- **Recommendations**
 - Create a regional marketing campaign to inform students and their families about available pathways and associated education and career opportunities, including information about the costs and benefits of 2- and 4-year degrees, as well as industry-recognized credentials.
 - Develop structured opportunities for administrators and organizations to share pathways practices and learning across the region. This would enable

stakeholders to learn from diverse contexts and approaches to the work and help ensure continued progress across Southwest Minnesota.

- Identify opportunities to share CTE resources/equipment across educational institutions in the region to consolidate costs and programming.
- Create a regional taskforce to address strategies and practices to prepare teachers to teach career-focused and CTE courses. The task force could also create career-based professional development opportunities for teachers.
- **Questions for Planning**
 - What existing pathways do stakeholders view as successful, and why? How can stakeholders best replicate the successful elements of those pathways?
 - What are the key barriers or challenges to pathway development or implementation?
 - How can stakeholders ensure that career readiness opportunities are equitably provided across diverse communities?
 - What are the key messages or points that should be communicated in a marketing or informational campaign? How does that message vary by target audience?

CAREER INFORMATION AND ADVISING

- **Recommendations**
 - Create professional development modules for teachers that encourage and model how teachers can integrate career planning into and across the curriculum.
 - Schools and industry should collaborate to develop a cohort model for teacher externships within strategically targeted career tracks. Upon completion of externships, teachers will then train others in their departments.
 - Build capacity to provide high-quality career exploration experiences to a greater number of students beginning at the middle-school level.
 - Review current practices and outcomes to improve outreach to diverse populations.
- **Questions for Planning**
 - What supports and resources would teachers and counselors identify as most needed as they develop career advising strategies?

- Where are there opportunities to leverage the capacity of the system to provide high quality career development experiences for youth (e.g., career education across the curriculum)?
- What existing career exploration opportunities can be scaled to improve student impact or saturation?
- How can stakeholders best address and evaluate equity in efforts and outcomes?

EMPLOYER ENGAGEMENT AND WORK-BASED LEARNING

- **Recommendations**

- Identify and publicize clear points of contact for employers. Ideally, a single point of contact would be housed in an intermediary, but each district should also have a single point of contact for employer partners.
- Leverage the strong relationships that Minnesota West has already developed with employers in order to strengthen employer engagement at the high-school level.
- Develop an employer-facing work-based learning continuum and toolkit to help employers in the region better understand how they can support a range of work-based learning opportunities for young people and how to navigate perceived challenges related to legal and liability issues.

- **Questions for planning**

- What do businesses view as the best and most feasible ways they can engage with high school students? What do businesses perceive as their greatest challenges in taking on and managing interns?
- What are potential funding pools for compensating students participating in on-site internships?
- What organizations or individuals could potentially manage a unified process for employer engagement with schools?
- From a business perspective, what is the ideal timeline for engaging and communicating with schools?
- What strategies to make the best possible use of employers' time can be developed? Would a work-based learning curriculum or other tools for designing work-based learning experiences be helpful?

¹ U.S. Department of Labor. Bureau of Labor Statistics, Local Area Unemployment Statistics. "Over-the-year Change in Unemployment Statistics for States." <http://www.bls.gov/web/laus/laumstch.htm>

² Anthony P. Carnevale, Tamara Jayasundera, and Artem Gulish, *America's Divided Recovery: College Haves and Have-Nots*. (Washington, DC: Georgetown University Center on Education and the Workforce, 2016). <https://cew.georgetown.edu/cew-reports/americas-divided-recovery/>

³ Georgetown University Center on Education and the Workforce, "Minnesota Recovery." <https://cew-7632.kxcdn.com/wp-content/uploads/Minnesota-Recovery.pdf>

⁴ Minnesota Department of Education, Minnesota Report Card. <http://rc.education.state.mn.us/#>

⁵ Labor market information for Southwest Minnesota includes data for the following counties: Big Stone County, Chippewa County, Cottonwood County, Jackson County, Lac qui Parle County, Lincoln County, Lyon County, Murray County, Nobles County, Pipestone County, Redwood County, Rock County, Swift County, and Yellow Medicine County.

⁶ MIT, Living Wage Calculator. <http://livingwage.mit.edu/states/27/locations>

⁷ For more detail, see Economic Modeling Specialists, Inc., "Understanding Location Quotient." http://www.economicmodeling.com/wp-content/uploads/2007/10/emsi_understandinglq.pdf

⁸ Minnesota State, "Minnesota Career Fields, Clusters, and Pathways." <https://careerwise.minnstate.edu/iseek/static/pathways.pdf>

⁹ Minnesota Department of Education, "Rigorous Course Taking: Advanced Placement, International Baccalaureate, Concurrent Enrollment and Postsecondary Enrollment Options Programs," Fiscal Year 2017. <https://www.leg.state.mn.us/docs/2017/mandated/170691.pdf>

¹⁰ Minnesota Department of Education, "College and Career Readiness." <http://education.state.mn.us/mde/stusuc/collreadi/index.html>