INSIGHTS FOR ACTION

How the MSP region is addressing the growing talent crisis with analysis of real-time labor market data

September 2018
In the last few years, a range of online analytical tools has enabled a clear view of our dynamic and constantly changing labor market. For the first time, this data is available to job counselors and planners not just as information for reflection, but as a real-time action tool to direct jobseekers to the best opportunities. This report outlines our approach to taking the first step in addressing this crisis: documenting the labor shortage and skills gap, identifying the impact that our programs and initiatives could have on closing those gaps, and building a strategy for a more systematic and employer-led long-term solution.

We believe workforce development must now be based on a real-time feedback loop. Without a clear line of sight into the current labor market realities, it is impossible to advise job-seekers effectively, meet employer talent needs, or plan effective educational systems. We have learned that in a program-rich, systems-poor environment, context in real data and short-term outcomes can help move out of the spin-cycle of planning and into systems change.

However, a strong report alone will not lead to systematic change, better programs, or improved outcomes without engaging the necessary leaders to take the next step. Even after reviewing the wealth of LMI, job postings, and educational data at our disposal, it is still essential to get out in the field and talk to employers, training program managers, and postsecondary directors get their take on the accuracy and relevancy of the data and your conclusions from it.

Real Time Talent and MSPWin will continue to promote and expand demand-driven solutions that are grounded in the realities of talent supply limitations and opportunities. We hope that this implementation guide is an important step toward building the next generation of cross-sector, employer-led education and workforce collaboratives to address the workforce challenges of our time.
Minnesota will soon face a significant labor shortage. In some industries, the shortage is already occurring. If unemployment rates hold constant, we can expect only an average 0.35% annual growth in employment between 2016 and 2022 due in large part to:

> Increasing retirement rate of the baby boomer generation
> Decreasing labor force participation of youth, particularly between the ages of 16-21

This graphic offers a simplified 6-year outlook at the impact of several challenging, yet important goals for the future employment of Minnesotans.

### Targets and Impacts

- **Maintain International Migration** (IMPACT: +6,000 employed)
  Maintain current annual increase in international migration, rather than letting it slow.

- **Increase Domestic Migration** (IMPACT: +11,000 employed)
  Increase net domestic migration to a net positive of 5,000 people per year.

- **Eliminate Disparities in Employment** (IMPACT: +20,000 employed above and beyond impacts of the four initiatives below, leading to 57,500 total additional minorities employed)
  Labor force participation and employment rates of all racial and ethnic groups match (or exceed) that of native born whites.

- **Extend Retirement** (IMPACT: +1,000 employed)
  Raise the Median Eligibility Age gradually by 1 year by 2035.

- **Reduce Dislocated Workers** (IMPACT: +6,750 employed)
  Reduce the number of dislocated workers by half (at least 85% minority).

- **Reduce Long-Term Unemployment** (IMPACT: +10,000 employed)
  Reduce the number of long-term unemployed by half (at least 85% minority).

- **Maintain Youth Employment** (IMPACT: +26,250 employed)
  Maintain current rate of 16-24 year old labor force participation and employment (at least 85% minority).

Sources: US Census Bureau Population Estimates Program, 2015; IPUMS US Census Bureau American Community Survey 5-Year Estimates, 2015; MN Demographic Center Population Projections; Committee for a Responsible Federal Budget. Each target and impact listed above is contingent on the others. Where projections do not exist, the most recent ACS data on employment and demographics are used to develop scenarios. Advising on data sources provided by the Minnesota Population Center and Wilder Research.
In order to develop a comprehensive strategy for addressing Minnesota’s labor shortage, it was necessary to quantify the specific components of our state’s talent pool and expected talent pipeline. First, we analyzed the current and projected macro-level labor market shortages based on official population projections and alternate forecasts of continued employer demand matching historic trends.

Then, we estimated a best-case scenario: if our state were not facing this severe shortage of workers, and economic growth could continue in line with historic rates of growth, we would actually need approximately 278,000 additional workers in our state by 2022 than our current talent pipeline can supply.

In order to keep pace with changes in the economy and positioning of the workforce, these estimates are updated internally every 6 months. As of the most recent estimates in February 2018, we found that the 2022 shortage had been reduced to about 239,000 workers due to a slowing rate of GDP growth statewide.

The most important step in this process is identifying the critical populations of talent, scope of existing workforce initiatives, and how these relate to the baseline assumptions of official labor market forecasts. In the Building Minnesota’s Workforce report, first published in October 2016 and updated in March 2017, we emphasize the possible growth in our employed workforce by addressing employment, migration, and productivity challenges. Additional analysis in late 2017 and early 2018 highlighted where the largest talent shortages are expected to occur sector by sector.

**KEY FINDINGS**

Employment initiatives alone could add about 64,000 workers to Minnesota businesses. The additional shortage of 175,000 workers would need to be addressed through improved attraction and retention of talent (adding up to 17,000 workers by 2022, indicated in orange), along with encouraging opportunities for employers to innovate and automate for increased per capita productivity.

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Having identified the critical intervention pathways at the statewide level, we shifted focus to a regional sector-based model aligned with metro initiatives. The Governor’s Workforce Development Board identified 6 sectors that are critical to Minnesota’s economic future; our analysis highlights critical workforce shortages expected in each.

The Regional Forecast Overview highlights the short-term 7-county labor shortage through the end of 2020, which was estimated in January of 2018 as approximately 62,250 workers. This is the additional number of people that the 7-county metro area (Hennepin, Ramsey, Washington, Carver, Dakota, Scott, and Anoka counties) would need to add into the workforce above and beyond the number of workers projected by the MN Demographic Center if the region hopes to keep pace with historic rates of GDP growth. This approach takes into account retirements, other separations, and job transfers. We expect some of the largest shortages in Healthcare, Information Technology, and Construction occupations, but it’s likely that all sectors will feel significantly short-staffed given the dramatic labor shortage that we face (see the column above labeled “2020 Shortage Based on Continued GDP Growth”)

The regional reports use a slightly different approach from the statewide model, taking a more focused look at sector-specific employer demand rather than talent supply demographics. The Quarterly Census of Employment and Wages data for occupations clustered by sector give a picture of the current state of employment. Online job posting data shows the immediate needs that employers have and the skill, certification, and educational requirements needed.

An alternate forecast of the additional need above and beyond baseline forecasts from the BLS Employment Outlook helps to estimate how employers perceive the worker shortage. Sorting new employment and educational data by sector, then analyzing it again by race/ethnicity (left) helps to highlight the bottlenecks to fostering a more steady and diverse talent pipeline.
THE SECTOR MODEL
APPROACH

First, we analyzed the current and projected macro-level labor market shortages based on official population projections and alternate forecasts of continued employer demand matching historic trends. Then, we estimated a best-case scenario.

Minneapolis’s Forecasted Employment & Shortage

<table>
<thead>
<tr>
<th>Sectors</th>
<th>2012 Employment</th>
<th>2017 Employment</th>
<th>2022 Employment Forecast</th>
<th>2022 Estimated 5-Year Retraining Need (Separation + Growth Demand)</th>
<th>2022 Labor Mismatch Gap (or surplus)**</th>
<th>Q3 2017 Sector Job Postings</th>
<th>% Increase from Prior Year (or decline)</th>
<th>2022 Employment Based on Continued GDP Growth</th>
<th>GDP Growth</th>
<th>2022 Additional Employment Growth Based on Continued GDP Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employment - Baseline QCEW*</td>
<td>2,945,088</td>
<td>3,075,630</td>
<td>3,158,313</td>
<td>1,780,647</td>
<td>-</td>
<td>391,468</td>
<td>-8%</td>
<td>3,326,902</td>
<td>1.6%</td>
<td>168,589</td>
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<tr>
<td>Information Technology</td>
<td>95,733</td>
<td>103,505</td>
<td>109,155</td>
<td>41,310</td>
<td>15,325</td>
<td>33,577</td>
<td>-15%</td>
<td>113,919</td>
<td>1.9%</td>
<td>4,764</td>
</tr>
<tr>
<td>Healthcare</td>
<td>329,434</td>
<td>366,965</td>
<td>396,591</td>
<td>201,967</td>
<td>11,775</td>
<td>65,816</td>
<td>-12%</td>
<td>410,159</td>
<td>2.2%</td>
<td>31,568</td>
</tr>
<tr>
<td>Construction</td>
<td>144,817</td>
<td>167,020</td>
<td>174,751</td>
<td>94,048</td>
<td>3,370</td>
<td>6,533</td>
<td>5%</td>
<td>180,571</td>
<td>1.6%</td>
<td>5,821</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>326,258</td>
<td>347,280</td>
<td>343,623</td>
<td>182,579</td>
<td>(8,500)</td>
<td>16,778</td>
<td>17%</td>
<td>358,209</td>
<td>0.6%</td>
<td>16,176</td>
</tr>
<tr>
<td>Finance</td>
<td>258,847</td>
<td>320,398</td>
<td>326,762</td>
<td>187,428</td>
<td>(4,695)</td>
<td>26,471</td>
<td>-13%</td>
<td>340,718</td>
<td>1.2%</td>
<td>14,006</td>
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<tr>
<td>All Other</td>
<td>1,049,959</td>
<td>1,170,442</td>
<td>1,807,021</td>
<td>1,147,457</td>
<td>(33,760)</td>
<td>242,293</td>
<td>-5%</td>
<td>1,903,275</td>
<td>1.4%</td>
<td>96,254</td>
</tr>
<tr>
<td>Government (EMPLOYER-BASED, cross-sector pathways)</td>
<td>108,002</td>
<td>113,802</td>
<td>113,755</td>
<td>52,587</td>
<td>-</td>
<td>10,638</td>
<td>53%</td>
<td>138,941</td>
<td>Federal 1.5%,</td>
<td>25,186</td>
</tr>
<tr>
<td>Agriculture, Food, and Natural Resources (INDUSTRY-BASED, cross-sector pathways)</td>
<td>313,448</td>
<td>338,079</td>
<td>335,805</td>
<td>189,527</td>
<td>-</td>
<td>16,534</td>
<td>42%</td>
<td>351,325</td>
<td>0.8%</td>
<td>13,520</td>
</tr>
</tbody>
</table>

*Sectors were identified as groups of occupations that have similar skills, content, and industry alignment. This allowed for more appropriate mapping of career pathways within and between sectors and facilitated scaling of the analysis to statewide, regional, and local geographies. Labor mismatch, or gaps, were determined through an analysis of key talent supply indicators against the dominant demand indicators (see below).

Key Indicators of DEMAND

- Job posting data (TalentNeuron Recruit)
- Monthly survey of job vacancies overall (JVS, DEED)
- Official 10-year forecasts of job growth by occupation (EO, DEED)
- Modified employment forecasts based on alternate scenarios (JobsEQ)
- Employer insights by sector surveys, focus groups, and association feedback

Key Indicators of SUPPLY

- Online candidate profiles (EMSI)
- Educational outcome data (IPEDS)
- Educational employment outcome data (SLEDS)
- Educational program insights from educators, administrators, and training partners through surveys or focus groups
- Student career interest surveys
Using the top three high-demand, living-wage, entry-level occupations as the starting point for analysis, we summarized the current state and future outlook of employment, unemployment, and the talent pipeline. Taking into account the baseline expected employment given the labor shortage (EO), the modified forecast of employment based on GDP growth (estimated with JobsEQ), job vacancies and postings (JVS and TNR), and the trajectory of educational completions (IPEDS), we were able to estimate the additional number of local certificate or associate-level graduates that would be needed annually to meet the needs of local businesses. This number is used in engaging colleges and universities around program enrollment.

A critical component of assessing the talent pipeline is analyzing the education and training process. The second page of this report highlights graduate outcomes for each occupation, including related programs, schools, number of local graduates, and breakdown by race and ethnicity (IPEDS). This is valuable information for designing interventions that are particular to each specific school, whether they face enrollment challenges, difficulty attracting or retaining students of color, or other barriers.

The table at the base of the report is unique to each sector, outlining number of graduates from training, certificate, apprenticeship, or dual training programs for a similar purpose.
HEALTHCARE: Needs by Employer Type

The Healthcare sector has the most positive workforce system results in terms of employer engagement and job-seeker outcomes, but not all types of employers have benefitted equally. This report highlighted the pathways in an emergency state and estimated forecasted need by employer type.

### PARTNERS | Lead: Julie Brekke, HIRED

- Core Metro Sector Skills Academy Leadership Team: HIRED, International Institute of MN, Comunidades Latinas Unidas en Servicio (CLUES), DEED Regional Business Consultant, NorthPoint Health and Wellness Center, HealthForce, Washington County Community Development Agency
- Other Key Partners Engaged: City of Minneapolis, Central Corridor Anchor Partnership (Minneapolis College, Metropolitan State, Saint Paul College, Bethel University, St. Catherine University, Augsburg University, University of St. Thomas, Smith Partners, Regions Hospital, Fairview/HealthEast, Hennepin Healthcare, Allina Health), PPL, CareProviders of MN, Leading Age

### KEY FINDINGS

- Critical health occupations are expecting large labor force shortages in just three years; in the metro, we will likely fall short at least 1,250 Registered Nurses needed to fill openings by 2020—particularly in specialty areas.
- Realities that hospitals, clinics, long-term care, and home care organizations face are unique, but are in many of the same types of occupations; custom-tailored solutions are needed for sub-sectors and engage employers in the sub-sector groups that resonate with their particular needs.
- Educational pathways to a Bachelor’s of Science in Nursing (BSN) are not stacked and may be a barrier to diverse candidates with training as a Nursing Assistant, Medical Assistant, or Home Health Aide but who wish to advance their careers.

### ACTIONS & RECOMMENDATIONS

- Build on and expand the Central Corridor Anchor Partnership employer-led workforce planning approach.
- Build clear career pathways into high-demand, high-wage, high-shortage occupations as identified through analysis of data: Registered Nurses (with focus on hospital specialty needs and long-term care); Licensed Practical Nurses; Medical Assistants; Medical Secretaries; Medical/Clinical Lab Technicians; Personal Care Aides; Home Health Aides; Surgical Technicians; Pharmacy Technicians; Radiologic Technicians; Emergency Medical Technicians.
- Promote, increase enrollment, and align training and education programs that have strong positive outcomes, including successful job shadowing and internship models.
MANUFACTURING: Targeted Interventions by Pathway

APPROACH

There is an urgent need to repair the career paths through entry-level positions into advanced careers in Manufacturing. Employers face shortages across their workforce and must upskill their talent and automate to stay competitive.

The Q4 2017 approach to sector analysis, looking at Quarter 1 data from 2017, classified all manufacturing occupations into four different occupation types: Entry, Accessible, Skilled, or Advanced. Further, each occupation was classified as general, technical, process, or engineering focused. These classifications help us to further understand the talent pipeline needs of area employers in a language that resonates with them.

The second page of the report highlights the region’s graduate output from the certificate to postgraduate levels for all manufacturing-related programs. Focusing on graduate output and diversity by school rather than specific program at this stage of the planning process facilitates organizing the sector strategy through champions with the largest graduate outputs or capacity.

In the Q1 2018 publication, we focused on the critical target occupations and relevant attraction, development, and retention strategies for each.

Given the importance of credentials for CNC lathe, milling, machining, and metalforming positions, we highlighted the local NIMS credentials issued and training program graduates over the past 3 years.

KEY FINDINGS

- High training need across most occupations due to retirements and job transitions.
- Troubling workforce shortages are expected for Industrial/Mechanical/Electrical Engineers, Supervisors of Mechanics/Repairers, and Industrial Machinery Mechanics that need to be addressed through advanced educational pathways.
- Shortages are also expected in entry-level and technical occupations that could be built into dual training models, including welders, sheet metal workers, machinists, electrical engineering technicians, and industrial engineering technicians.

PARTNERS | Lead: Michael Slezak, City of Minneapolis

- Core Metro Sector Skills Academy Leadership Team: City of Minneapolis, Pillsbury United Communities, Vadnais Heights Economic Development Corporation, Anoka Technical College, Hennepin Technical College, Anoka County Workforce Center
- Other Key Partners Engaged: HIRED, Emerge, Avivo, Hennepin County, DEED Business Development, DLI PIPELINE Program, Dakota County Technical College, GreaterMSP WIB, Minnesota Precision Manufacturing Association, National Association of Manufacturers, MN Chamber Manufacturer’s Alliance, Medical Alley Association, Anoka Chamber of Commerce, North Hennepin Chamber of Commerce Manufacturing Consortium, Saint Paul Area Chamber of Commerce

ACTIONS & RECOMMENDATIONS

1. Attract and Upskill: Develop clear pathways for high school graduates to enter into an “earn and learn” model (about 900 high school graduates statewide enter the Manufacturing industry annually), expand dual training models, such as the PIPELINE Program (provided career advancement training to 162 metro manufacturing employers in 2016 and 2017), improve graduate job placement of DEED P2P, Dislocated Worker, and MFIP participants.

2. Develop and Educate: Create a one-year certificate program in machining including job training and internship rotations; link PIPELINE Program to educational opportunities that advance careers into management, mechanics, or engineering; develop an effective academic pathway from AA/AS to BA/BS in engineering.
FINANCE: Pathway Identification

APPROACH

The Finance sector is one of the least developed in terms of workforce system programming infrastructure and employer engagement. With the metro being a critical hub for Minnesota’s finance industry and automation hitting key entrypoints into the mid-level and senior finance roles, it is vital to plan systematically to fill mid-level and senior finance roles.

The Q4 2017 report repeated the approach of the Q3 initial scan of the sector, emphasizing the top occupations in demand in the region and highlighting those positions that expect to have the greatest 3-year supply gap. Key regional statistics to highlight include job posting volume, minimum education level advertised, employment and unemployment rates, and the estimated annual growth rate.

Mapping both current employment and live job postings in finance help to focus employer mobilization efforts by geography. Hennepin County is core to any Finance strategy.

The report begins with a high-level introduction to critical sector needs, emphasizing increasing talent mismatch, need for coordinated diversity strategies, and a focus on improved internal employee development and advancement programs.

The Q4 2017 report closes with a summary of all degrees related to finance or insurance in the region and the estimated annual graduates of entry-level credential programs. Accurate counts of talent pipeline output support clearer enrollment campaigns and internship program strategies.

KEY FINDINGS

- Mid-level Financial Managers, Accountants, Auditors, Insurance Sales Agents, and Financial Analysts are expecting some of the largest shortages over the next three years.
- Educational interventions to increase diversity of finance BA graduates are priority.
- Finance positions are important across multiple industries, but this fact needs to be communicated more effectively.
- Financial institutions are not highly engaged and have limited capacity to organize.

PARTNERS | Lead: Mike Christenson, Hennepin County

- Core Metro Sector Skills Academy Leadership Team: Hennepin County, Ramsey County, Goodwill-Easter Seals Minnesota, Hmong American Partnership, Minneapolis Urban League, Center for Economic Inclusion
- Other Key Partners Engaged: GreaterMSP, Project for Pride in Living, DEED Business Development, City of St. Paul, Minneapolis College (C3 Fellows), University of St. Thomas, Hennepin Workforce Leadership Council

ACTIONS & RECOMMENDATIONS

1. Identify key pathways to develop and corresponding training and internship programs that exist, build out their enrollment (with focus on diversity).  
2. Grow and promote college internships in Finance (opportunity to improve and expand the C3 Fellows program regionally).
   a. Leverage the C3 Fellows program at Minneapolis College as an opportunity to diversify the talent pipeline.
   b. Recruit non-profit partners to help expand college internships.
3. Recruit sector leadership and core team members across the region.

Including lists of employers advertising the highest volumes of positions, top job titles, posted soft skills, and hard skills in demand ground the data in real-life context.
CONSTRUCTION: Sub-Sectors in Commercial Trades

**APPROACH**

The industry is made up of over 30 different occupational trades that specialize in specific tasks. Each apprenticeship program varies in skill and time requirement and are typically 3-5 years (measured in hours, not days) in length.

The report begins with a high-level introduction to critical sector needs, highlighting the total volume of job openings expected in the sector over the coming 3 year period and describing some of the key need for specialized skills.

Nine of the key trades expect talent shortages over the next 3 years and beyond. The table on the second page of the Q4 2017 report highlights the needs of these trades from a talent perspective, indicating the average length of time it takes to complete the necessary training and education, the level of complexity of training, how close the existing workforce is to retirement, the unemployment rate by occupation, and mean wage within the region.

A cluster chart helps to visualize the current employment volume and forecasted demand for new workers expected for key sectors. In construction, forecasted growth outpaces all other critical sectors in the region except for healthcare.

**KEY FINDINGS**

- Depending on the economy, season and current projects the industry is constantly fluctuating and estimating workforce needs, resulting in a surplus or shortage in certain trades at a given moment. Given this tendency to rapid market changes, the industry requires a more systematic response to handling these fluxuations.
- There is a need to more systematically monitor talent pipeline development for these key trades through the impending workforce shortage.
- Diversity of the industry by race, ethnicity, and gender is improving, but still requires additional targeted efforts that track to shared outcomes.

**PARTNERS**

- Lead: John O’Phelan, Ramsey County
  - Core Metro Sector Skills Academy Leadership Team: Ramsey County, Mechanical Contractors Association, National Electrical Association, Minneapolis Building Trades Association, Tribal Partnership Program of the Cement Masons Apprenticeship Training Center, MN Pipe Trades Association, North Hennepin Community College
  - Other Key Partners Engaged: Building Minnesota Apprenticeship, MCIWA, City Academy, CLUES, Conservation Corps, Avivo, Goodwill Easter Seals, Project For Pride in Living, Takoda Institute, Trading Up!, Tree Trust, HHH Job Corps, Hmong American Partnership, Le Gen Leaders, Merrick, Minneapolis Urban League, MN Trades Academy

**ACTIONS & RECOMMENDATIONS**

1. Focus workforce planning strategies on sub-sectors in Commercial Trades.
2. Amplify existing apprenticeship programs and more systematically track employer need to influence apprenticeship enrollment targets.
3. Continue to market awareness of construction careers with youth through programs like Construct Tomorrow and Construction Careers Pathways (CCP).
GOVERNMENT: Targeted Career Pathways

With state and local government employing approximately 178,494 in the 7-county Minneapolis-Saint Paul region (10% of the entire employed workforce), government serves as the largest local employer. Healthcare and education occupations account for the government jobs with the greatest expected shortages and warrant their own targeted initiatives with the private sector.

The high-level overview provides a snapshot of the sheer volume of people employed in government jobs.

A deeper analysis of the talent supply feeding into these top career clusters revealed 10 technical and professional gateway opportunities requiring limited training and education, 7 AA/AS or moderate experience opportunities, and 4 core BA/BS or high experience occupations with high demand and expected shortages. This career lattice shows the median hourly wage, anticipated additional talent needed to be trained, and the typical education or training requirements from employers. Existing participant enrollment numbers were also included for 2018 Hennepin County Pathways participants.

The most critical component of the demand-side analysis includes a breakdown of the top occupations in demand expecting shortages over the next 3 years, focused into action areas and prioritized by volume of labor shortage. The career clusters include 1) public affairs and government operations, 2) transportation, infrastructure, and public works, and 3) public safety, emergency response, and policing.

Additional graphs illustrate data from online profiles of government employees, indicating where government employees have worked, educational programs completed by government employees, and the top schools that government employees attended.

KEY FINDINGS

- An estimated 53,882 people will need to be trained by 2020 to fill expected job openings in state and local government. Government jobs represent about 10% of the Metro’s total employment. Critical sub-sector areas include Public Safety, Public Works, Public Administration, and Education.
- Already-existing government career pathways are aligned with some of the occupations with significant expected talent shortages.
- Legacy hiring practices may be too restrictive and may be introducing unintended bias into the talent recruitment process.

PARTNERS | Lead: John Thorson, Hennepin County

- Core Metro Sector Skills Academy Leadership Team: Hennepin County, Ramsey County, City of St. Paul, Future Services Institute, Office of Governor Mark Dayton
- Other Key Partners Engaged: DEED, Governor’s Office/State Recruiters (DHS, DNR, MMB), Vadnais Heights Economic Development Council, Minneapolis College, Hennepin Workforce Leadership Council, Minneapolis Public Schools, HIRED, Project for Pride in Living, Goodwill Easter Seals

ACTIONS & RECOMMENDATIONS

1. Develop employer and/or industry recognized credentials for a “public sector pathway”
2. Focus on existing pathways and high demand ladder occupations in State and Local Government.
3. Partner more closely with training providers on key pathways/establish training partnerships.
4. Align the delivery of public services with the goal of building a more diverse workforce, being a more inclusive workplace.
5. Remove barriers from legacy hiring practices (i.e. revisit and standardize minimum requirements for key occupations).
INFORMATION TECHNOLOGY: Skill Area Clusters

APPROACH

Demand for occupations in IT cross every industry, with healthcare and business leading the way in job vacancies in the sector. Just under 80,000 people are employed in IT in the 7-county Minneapolis-Saint Paul metro, with the majority requiring some credential beyond a high school diploma.

The high-level overview indicates the growing importance of IT roles across multiple industries.

IT jobs are rapidly changing, and most of the job titles used by employers do not align well with the occupation codes used in LMI. To address this problem, we classified groups of occupations into clusters by skill areas and career paths, using CTE and MN Department of Labor frameworks: Network Systems Pathway, Web and Digital Communications Pathway, Information Support and Services Pathway, Programming and Software Development Pathway.

The demand side of the Q4 2017 report focused on a variety of training and education options for IT. Although 98% of job postings required an associate's degree or higher, there is also a vibrant local certification landscape in IT. The first table indicates the core instructional programs at colleges and universities in the region whose graduates went on to be employed in Minnesota within 2 years after graduation. 30% of all graduates of IT programs were people of color.

IT completions by occupation for a dual training program through MN Department of Labor and Industry illustrate another method that employers are using to upskill and credential their existing workforce.

KEY FINDINGS

- The majority of employers post job descriptions with a BA as a minimum qualification (89% of job postings in Q3 2017 and Q1 2018), but based on surveys, hire based on skill rather than educational credentials.
- Employers’ ability to find enough skilled IT workers has been cited as a primary concern when considering locating or keeping their business in the region.
- Existing labor pool of IT professionals is nearly fully employed, with extremely low unemployment rates in occupations at all experience levels.
- Need to agree on how to talk about clustered occupations/skills relevant to the industry (combination of CTE, DLI, and other clustering approaches, i.e. Network Systems, Web & Digital Communications, Information Support & Services, Programming & Software Development).

PARTNERS | Lead: Tammy Dickinson, City of Minneapolis

- Core Metro Sector Skills Academy Leadership Team: City of Minneapolis, MHTA (SciTechSperience Internship Program), Summit Academy, UpNet Technologies, Creating IT Futures, City of St. Paul
- Other Key Partners Engaged: DEED Regional Analysis, Minneapolis Urban League, Genesys Works, Jewish Family and Children’s Services, Project for Pride in Living, IT Center of Excellence, DLI PIPELINE Program, Hennepin County, Global Knowledge, HDP, other MSP TechHire Training Partners

ACTIONS & RECOMMENDATIONS

1. Regionalize a true sector partnership of training providers, employers, and workforce development (now grown from Minneapolis to include St. Paul - Over 430 employers have hired MSP TechHire graduates).
2. Change the way employers hire for IT talent from degree-based to skill/certification-based.
3. Work with MN State to identify ways to increase the output of degree IT graduates.
4. Align sector work to support and grow IT/STEM internships with MHTA SciTechSperience and apprenticeship with DLI and MHTA.
In order for a truly comprehensive picture of the state and local labor market to come into focus, it is critical to make use of a wide variety of datasets, resources, and professional perspectives. Broadening the data sources creates a reliable and authoritative source of information on the status of the state’s talent ecosystem. Potential data sources for sector labor analysis should be assessed according to the following criteria: credibility and validity of the data, statewide scope and potential to provide regional and local-level detail, ability to provide subgroup and equity-related analyses, timeliness, and availability and consistency of the data over time and across sources. All findings should be validated by a diverse group of community experts.
LESSONS LEARNED

- Sector-specific approaches are necessary to arrive at consensus around each sector’s unique challenges and path forward.
- Short-term timelines keep issues grounded in manageable, reasonable action steps.
- Regionally-based analysis helps to move more quickly from data into action.
- Having a trusted outside party develop all sector reports and facilitate discussion allows for a simultaneously standardized and customized approach that moves beyond the typical program-based discussions into system-level strategy work.
- Strong leadership from within each sector keeps action plans moving forward and flow of communication moving smoothly.
- Equity and diversity must be integrated into every step in the process of workforce planning and development, starting from the data collection stage and moving through implementation and tracking to outcomes.
- A common foundation in similar data points helps to lift up sector-agnostic challenges, potential solutions, and universal shared outcomes.
- Sector-specific work must be able to connect into a larger, sector-agnostic plan for regional economic and workforce development with influential and diverse champions leading the effort.

FEEDBACK

Laying a strong foundation in sector-based occupational needs and talent pipeline planning is the necessary first step in developing a workforce plan. However, a strong report alone will not lead to systematic change, better programs, or improved outcomes without engaging the necessary leaders to take the next step. Even after reviewing the wealth of LMI, job postings, and educational data at our disposal, it is still essential to get out in the field and talk to employers, training program managers, and postsecondary directors get their take on the accuracy and relevancy of the data and your conclusions from it. Combining the qualitative and quantitative data available will result in more well-rounded solutions from the systems level to the program level. There is a whole range of training program outcome tools we highly recommend using to get a sense of how well training programs are working, or to evaluate individual programs or processes.

As we continue to drive forward sector-specific regional initiatives in workforce planning and development, we will continue to evaluate and modify our approach to collecting necessary data for decision-making. If you have thoughts about additional data that should be considered or included as sector plans are developed in our region or beyond, please contact us. We are invested in the long-haul for solutions that meet the needs of employers and the job-seekers of today and tomorrow for a better, more prosperous Minnesota.

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