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In-Demand Industries and Occupations Report

City of Phoenix

FOR FURTHER INFORMATION:

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ABOUT THIS REPORT

The In-Demand Industry and Occupation Report was created to assist Arizona Local Workforce Development Areas (local areas) in completing their 2020-2024 Local Workforce Development Plans. The information provided in this report is meant to act as a guide for local areas and does not necessarily include an exhaustive list of all considerations or labor market information that could be used in the in-demand industry and occupation selection process. The report is not meant to impede the local workforce board selection of their own in-demand industries and occupations, only to assist in the selection process.

The report identifies key industries and occupations within the local economy using labor market information. The report also includes several recommendations for consideration during the in-demand industry and occupation identification process. The methodology used to identify potential industries and occupations is consistent with the methodology used by the Workforce Arizona Council and is included in the appendix of this report.

ABOUT THE ARIZONA OFFICE OF ECONOMIC OPPORTUNITY

The Office of Economic Opportunity (OEO) was created to strengthen the analytical capabilities of the state's workforce and economic development initiatives. OEO serves as Arizona's workforce planning coordinator, and in this role, provides operational, strategic and research support to the Workforce Arizona Council and other key workforce partners. OEO produces official statewide data for population, employment, and wage estimates including the official Arizona employment and population projections. OEO also functions in an advisory capacity by providing economic expertise to state and local government agencies and officials.

Why In-Demand Selection Matters

Selecting in-demand industries and occupations will (in part) determine:

- The allocation of training resources for WIOA program participants
- Local workforce board membership
- Business service engagement efforts
- The targeted career pathways for WIOA program participants
- The educational program approval for the eligible workforce training providers

Selection Considerations

The methodology used to produce the in-demand industry and occupation rankings provides flexibility that allows local areas to customize and ultimately take ownership of the selection process. Local areas should consider several key decision points when identifying in-demand industries and occupations.

1. **Alignment between local and state in-demand industries (How much overlap with the state in-demand industries should your local area have?)**

Alignment with state-selected in-demand industries will help align strategies and pool resources. Given the unique nature of each local area economy and workforce, it is unlikely that all local area in-demand industries would align with state-selected in-demand industries. However, when feasible, local areas should consider whether an industry aligns with those selected as a state in-demand industry.

OEO recommends that at least 2-3 local area in-demand industries overlap with state local area in-demand industries.

2. **Selecting the best number of in-demand industries (How many industries should be selected for “in-demand” status)**

Every industry within a local area is important to the success of its local economy, which can make it difficult to limit the number of in-demand industries selected. However, if a local workforce board selects too many industries, it could stretch workforce resources too thin, and limit their effectiveness. Local areas should consider the effectiveness of available workforce resources during the in-demand industry selection process.

OEO recommends that in-demand industry employment make up less than 50% of total employment within your local area.

3. **Alignment between in-demand industries and in-demand occupations (Will your in-demand occupations align with in-demand industries?)**

Alignment between job seeker and business services objectives can help streamline processes and leverage existing resources. Ensuring that in-demand occupations align with in-demand industries is one way to help improve alignment strategies. This can be done by only considering occupations that appear within in-demand industries for in-demand occupation status. During the state-selection process, this was the approach to identifying in-demand occupations that was adopted.

OEO recommends that in-demand occupations directly support in-demand industries.

4. Defining in-demand industries using standard industry codes

It is recommended that local areas use the NAICS (North American Industry Classification System) and SOC (Standard Occupational Classification) systems when defining in-demand industries and occupations. Using a defined classification system will allow local areas to track employment outcome metrics easily and compare outcomes with the state and other local areas. The Dept. of Labor uses SOC and NAICS codes to define occupation and industry outcomes and trainings. In addition, many of the federal agencies who produce key labor market information produce estimates by NAICS and SOC codes. By defining in-demand industries and occupations according to these two systems, local workforce areas will ensure that they can measure and communicate workforce results effectively.

5. Employer and workforce partner insights

There are numerous factors to consider during the in-demand industry and occupation selection process. While labor market information can help identify key trends, it cannot capture the complexity of a local area's economy in its entirety. Local businesses and other workforce partners are invaluable resources who can help strengthen the decision-making process.

OEO encourages local workforce areas to use labor market information alongside business and partner insights.

City of Phoenix Workforce Area Industry Rankings

Industry	Overall	Employment Level (2018)		Historical Employment Annual Percent Change (2015-2018)		Projected Employment Numeric Change (2018-2020)		Projected Employment Annual Percent Change (2018-2020)		Average Annual Wage (2018)		Historical Wage Annual Percent Change (2015-2018)		Employment and Wage LQ ¹
		Rank	Estimate	Rank	Estimate	Rank	Estimate	Rank	Estimate	Rank	Estimate	Rank	Estimate	Rank
Construction	1	55,036	6	7.1%	2	5,371	4	4.9%	5	\$64,844	10	3.5%	2	7
Professional and technical services	2	60,953	5	6.1%	3	6,947	2	5.6%	3	\$89,128	5	0.6%	12	12
Transportation and warehousing	3	52,032	7	9.5%	1	6,076	3	5.6%	2	\$51,532	13	-1.3%	18	3
Health care and social assistance	4	118,241	1	2.5%	9	8,326	1	3.3%	6	\$56,212	12	0.1%	16	6
Information technology ²	5	4,842	16	5.7%	4	561	13	5.8%	1	\$94,744	3	6.0%	1	18
Real estate and rental and leasing	6	22,545	11	3.7%	7	1,259	10	2.8%	8	\$60,736	11	2.7%	6	3
Wholesale trade	7	41,334	9	1.4%	13	1,713	7	2.1%	9	\$82,056	6	1.3%	11	5
Finance and insurance	8	71,577	4	0.3%	15	1,728	6	1.2%	13	\$74,828	9	1.5%	10	8
Other services, except public administration	9	25,897	10	2.5%	10	1,357	9	2.0%	10	\$40,612	17	2.8%	4	8
Manufacturing	10	48,362	8	1.5%	12	1,604	8	1.7%	12	\$76,752	7	0.5%	14	8
Mining, quarrying, and oil and gas extraction	11	1,614	18	4.5%	5	59	16	1.9%	11	\$94,848	2	1.7%	9	17
Arts, entertainment, and recreation	12	10,249	15	3.2%	8	1,798	5	5.4%	4	\$46,072	14	-2.8%	19	16
Utilities	13	4,267	17	-0.6%	16	90	14	0.5%	15	\$114,920	1	0.2%	15	1
Administrative and waste services	14	106,438	2	-1.4%	17	-3,865	19	-1.9%	19	\$41,652	16	2.8%	5	2
Agriculture, forestry, fishing and hunting	15	893	19	1.9%	11	74	15	2.9%	7	\$39,676	18	3.3%	3	14
Retail trade	16	78,866	3	-3.0%	19	623	12	0.4%	16	\$35,828	19	2.0%	8	8
Educational services	17	20,704	12	3.8%	6	1,149	11	1.1%	14	\$43,160	15	-0.4%	17	12
Management of companies and enterprises	18	15,116	13	-2.5%	18	-181	18	-0.6%	18	\$90,376	4	0.6%	13	15
Accommodation and food services	*	75,887	*	1.9%	*	3,228	*	2.1%	*	\$23,660	*	3.9%	*	*

NOTE: Industry sectors with an asterisk (*) were excluded from the rankings because of low wages

¹ Employment Location Quotient and Wage Location Quotient were combined into one variable.

² The Information Technology industry combines the following NAICS industry codes: 51121 Software publishers; 51741 Satellite telecommunications; 51791 Other telecommunications; 51821 Data processing, hosting, and related services; and 51913 Internet publishing and broadcasting and web search portals.

Source: Office of Economic Opportunity

The table above ranks local area industries by several employment and wage estimates. OEO developed industry rankings for state and local workforce area selection. Industry rankings were developed accordingly:

- Industries were assigned an overall rank based on each of the employment and wage estimates listed in the table.
- Rankings for each of the employment and wage estimates are also provided in the table for comparison purposes.
- An industry with an asterisk (*) in the rank column was removed from consideration because of low annual wage levels.
- The ranking methodology and variable descriptions are provided in the methodology section of this report.

Summary Statistics for City of Phoenix In-Demand Selection

In Demand Group	Share of Total Area Employment	Employment Level (2018)	Historical Employment Growth (2015 to 2018)	Projected Industry Growth (2018 to 2020)	Industry Average Annual Wage (2018)	Historical Annualized Wage Growth (2015 to 2018)
Top 4	34%	286,262	5.4%	4.5%	\$62,144	0.6%
Top 6	38%	313,649	5.3%	4.4%	\$61,542	0.8%
Top 8	51%	452,457	4.1%	3.6%	\$61,050	1.0%

Source: Office of Economic Opportunity

It can be a useful exercise to review employment and wage estimates for various combinations of industry selections. The table above lists the combined employment and wage estimates for three scenarios:

1. If the top 4 ranked industries were selected:
Construction; Professional and Technical Services; Transportation and Warehousing; and Health Care and Assistance.
2. If the top 6 ranked industries were selected:
Construction; Professional and Technical Services; Transportation and Warehousing; Health Care and Assistance; Information Technology; and Real Estate
3. If the top 8 ranked industries were selected:
Construction; Professional and Technical Services; Transportation and Warehousing; Health Care and Assistance; Information Technology; Real Estate; Wholesale Trade; and Finance and Insurance

Note: It is not necessary to select industries in the order in which they were ranked (Ex. selecting 1st through 4th ranked industries before selecting the 5th ranked industry). If a local area can provide justification, a local area may select a low-ranked industry, while excluding a high-ranked industry. (Ex. Selecting the 1st through 3rd ranked industries and 5th ranked industry, while excluding the 4th ranked industry).

City of Phoenix Workforce Area Employment Level and Share of Total Area Employment

Industry	Rank	Employment Level (2018)	Employment Share (2018)
Construction	1	55,036	6.8%
Professional and technical services	2	60,953	7.5%
Transportation and warehousing	3	52,032	6.4%
Health care and social assistance	4	118,241	14.5%
Information technology ¹	5	4,842	0.6%
Real estate and rental and leasing	6	22,545	2.8%
Wholesale trade	7	41,334	5.1%
Finance and insurance	8	71,577	8.8%
Other services, except public administration	9	25,897	3.2%
Manufacturing	10	48,362	5.9%
Mining, quarrying, and oil and gas extraction	11	1,614	0.2%
Arts, entertainment, and recreation	12	10,249	1.3%
Utilities	13	4,267	0.5%
Administrative and waste services	14	106,438	13.1%
Agriculture, forestry, fishing and hunting	15	893	0.1%
Retail trade	16	78,866	9.7%
Educational services	17	20,704	2.5%
Management of companies and enterprises	18	15,116	1.9%
Accommodation and food services	*	75,887	9.3%

NOTE: Industry sectors with an asterisk (*) were excluded from the rankings because of low wages.

¹The Information Technology industry combines the following NAICS industry codes: 51121 Software publishers; 51741 Satellite telecommunications; 51791 Other telecommunications; 51821 Data processing, hosting, and related services; and 51913 Internet publishing and broadcasting and web search portals.

Source: Office of Economic Opportunity

The table above lists employment levels and each industries share of total area employment. The table is provided to help identify the number of jobs and share of total employment that would be effected by including or excluding each industry.

Top-Ranked Industries - Arizona and City of Phoenix Workforce Area

Arizona		City of Phoenix	
Rank	Industry Title	Rank	Industry Title
1	Construction	1	Construction
2	Health care and social assistance	2	Professional and technical services
3	Professional and technical services	3	Transportation and warehousing
4	Information technology ¹	4	Health care and social assistance
5	Finance and insurance	5	Information technology ¹
6	Manufacturing	6	Real estate and rental and leasing
7	Administrative and waste services	7	Wholesale trade
8	Transportation and warehousing	8	Finance and insurance
9	Real estate and rental and leasing	9	Other services, except public administration
10	Wholesale trade	10	Manufacturing
11	Retail trade	11	Mining, quarrying, and oil and gas extraction
12	Other services, except public administration	12	Arts, entertainment, and recreation
13	Educational services	13	Utilities
14	Arts, entertainment, and recreation	14	Administrative and waste services
15	Mining, quarrying, and oil and gas extraction	15	Agriculture, forestry, fishing and hunting
16	Management of companies and enterprises	16	Retail trade
17	Agriculture, forestry, fishing and hunting	17	Educational services
18	Utilities	18	Management of companies and enterprises
N/A	Accommodation and food services	N/A	Accommodation and food services

¹The Information Technology industry combines the following NAICS industry codes: 51121 Software publishers; 51741 Satellite telecommunications; 51791 Other telecommunications; 51821 Data processing, hosting, and related services; and 51913 Internet publishing and broadcasting and web search portals.

Source: Office of Economic Opportunity

The table above lists industry rankings for the state and your local area, respectively. Here are a few things to consider when reviewing this table:

- During the in-demand industry selection process, the Workforce Arizona Council selected seven industries for in-demand designation. These industries are the top seven ranked industries in the table above (Construction; Healthcare and social assistance; Professional and technical services; Information Technology; Finance and insurance; Manufacturing and Transportation and warehousing
- In total, the seven in-demand industries selected at the state level represent 52% of total state employment.

City of Phoenix Occupation Rankings

In addition to providing local area industry rankings, OEO has also provided occupational ratings. A list of the occupation ratings is available on page 10 of this report. The occupations provided in this report were limited to occupations that are key to the top six ranked industries within the local area. This was done for brevity, as there are nearly 800 unique occupations. If a local area selects an industry category not included in the top six ranked industries, OEO is happy to provide the list of occupations key to that industry as well.

Occupation ratings were developed accordingly:

1. Occupations were assigned a star ranking value ranging from one to five, with five being the highest rating.
2. Star ratings were based on employment level, projected employment growth and average wage level.
3. Occupations were rated by educational requirement, which means occupations were only compared against other occupations with the same education requirement.
4. The top occupations within each education requirement category received a star rating of five, while the bottom occupations received a star rating of one.
5. Only occupations associated with an in-demand industry were considered for “in-demand” status.

The occupations in the ratings table were not limited by star ranking, although OEO recommends that local areas select their own cutoff for occupations. The cutoff can be determined based on the star rating of each occupation or other labor market factors. As an example, the in-demand task force led by the Workforce Arizona Council decided to limit the in-demand occupations list to those occupations with a ranking of 5 to 3 stars.

Summary Statistics for City of Phoenix Workforce Area In-Demand Selection

Star Rating	Number of Occupations	Employment Level (2018)	Projected Employment Growth (2018 to 2020)	Share of Total Area Employment (2018)	Average Annual Wage (2018)
5	49	189,001	3.4%	23%	\$66,393
4 to 5	96	326,862	2.9%	39%	\$65,001
3 to 5	148	463,934	2.5%	56%	\$63,701
2 to 5	205	550,777	2.3%	66%	\$63,132
1 to 5	246	601,081	2.1%	72%	\$61,882

Source: Office of Economic Opportunity

It can be a useful exercise to review employment and wage estimates by star rating categories. This allows local areas to review the number of occupations and total employees being considered for in-demand status. It also allows local areas to understand employment growth and wage level differences between occupations within star rating categories. The table above lists the combined employment and wage estimates for five different selections ranging from selecting only five-star occupations to selecting all one- through five-star occupations.