key findings:

Pennsylvania’s Regional Gap Analysis Reports

The Gap Analysis Reports provide analyses of employer demand and higher education supply for Pennsylvania's five sub-regions in order to:

- produce an outlook for skilled jobs,*
- identify the specific industries that are driving growth in the regions,
- evaluate the production of postsecondary completions, and
- reveal the workforce gaps that can be expected in the future for skilled occupations.

This summary presents the findings for each respective region: Central (CEN), Northeast (NE), Northwest (NW), Southeast (SE), and Southwest (SW).

Pennsylvania will see strong growth in demand for skilled workers to 2024.

- In Pennsylvania, 536,200 new jobs are projected to 2024—a growth rate of 9.5%.
- Regional growth rates range from a high of 10.5% in SE to a low of 7.6% in SW.
- Skilled jobs are growing at a faster rate of 10.9% (303,800 new jobs) to 2024. Regional skilled job growth ranges from a high of 12.0% in SE to a low of 7.9% in NW.
- Low-skilled jobs are growing more slowly at 8.1%, ranging from a high of 9.3% in CEN to a low of 5.4% in SW.
- STEM-H jobs (a subset of skilled jobs) show growth of 15.6%. Regional STEM-H job growth ranges from a high of 18.5% in SE to a low of 13.5% in NW.

* Skilled occupations in the State System’s Gap Analysis project are defined using terminology from the O*NET program. The O*NET program is the nation’s primary source of occupational information. O*NET Job Zones range from 1 (lowest) to 5 (highest). Job Zones 3, 4, and 5 require some level of post-secondary education. To be considered skilled for the State System’s Gap Analysis Project, an occupation must have an O*NET Job Zone code of 3, 4, and 5.
Pennsylvania’s strong growth and aging workforce will translate into high new and replacement demand.

- After accounting for the replacement demand for workers who have either retired or left the workforce, skilled job openings will be 963,100 through 2024.
- Skilled occupations that show particularly high demand from employers include accountants and auditors, registered nurses, computer systems analysts, and general and operations managers.

Figure 2: Top skilled, high demand occupations in Pennsylvania’s regions: new and replacement jobs to 2024

Pennsylvania’s strong growth will support fast-growing occupations, with healthcare and practitioner occupations showing common themes across all five regions.

- Occupational therapy aides are projected to grow fast in every region. Other fast growing occupations concentrated in the healthcare field include exercise physiologists, podiatrists, nurse midwives, physical therapy assistants, and chiropractors.

Figure 3: Fastest growing skilled occupations in Pennsylvania’s regions: projected growth, 2014-2024
Pennsylvania generates a substantial amount of talent for the labor market every year.

- More than 400 post-secondary institutions enroll over 800,000 students annually and graduate, on average, 166,000 students with an associate’s degree or higher.
- **Annual associate’s completions** by region ranged from 1,800 in NE to 11,000 in SE.
  - Top major fields of study include Health professions and related programs; Business, management, marketing, and related support services; and Liberal arts and sciences.
  - The largest State System producer was NW with 230 associate’s degrees.
- **Annual bachelor’s completions** by region ranged from 5,200 in NE to 35,700 in SE.
  - Top major fields of study include Business, management, marketing, and related support services; Health professions and related programs; Social sciences; Education; and Visual and performing arts.
  - The largest State System producer was CEN with 5,400 bachelor’s degrees.
- **Annual graduate completions** by region ranged from 2,400 in NW to 23,400 in SE.
  - Top major fields of study include Health professions and related programs; Education; and Business, management, marketing, and related support services.
  - The largest State System producer was SW with 2,100 graduate degrees.

Notable gaps exist between the kinds of skilled workers PA employers demand and the skills that universities in the state are producing.

- **Healthcare practitioners** and technical and support occupations show average annual excess demand gaps ranging from a high of 1,250 in SE to a low of 125 in NW. These occupations include nurses, dental hygienists, medical and clinical laboratory technicians, and veterinarians.
- **Business and financial occupations** show average annual excess demand gaps ranging from a high of 840 in SW to a low of 40 in NW. These occupations include accountants and auditors, market research analysts, and claims adjustors.
• **Computer and mathematical occupations** show average annual excess demand gaps ranging from a high of 1,300 in SE to a low of 15 in NW. These occupations include computer systems analysts, information security analysts, computer programmers, and software developers.

• **Middle-skill jobs** show average annual excess demand gaps ranging from a high of 800 in SW to a low of 40 in NW. These occupations include maintenance and repair workers, industrial machinery mechanics, computer-controlled machine tool operators, and machinists.

• **STEM-H** was a significant driving force of job growth, demand, and gaps, including jobs in healthcare practitioner roles, engineering, computing, and mathematics. Regional STEM-H gaps range from a high of 3,500 in SE to a low of 200 in NW.

In total, the research produced 23 unique reports (14 university-specific gap analysis reports, 5 sub-region reports, 2 university center reports—Dixon University Center and @Center City, 1 statewide report and 1 statewide summary report). The gap analysis is only one component of a larger resource base that the State System and universities can use for program development, strategic planning, engagement with businesses, and support for current and prospective students. Other factors, not included in this analysis that could also influence decision-making in these areas, include higher education trends, student aspirations, university goals, live data analysis, and direct employer input. These should be considered together with the gap analysis results.