Oregon Bioscience Association

2023 BIOSCIENCE WORKFORCE TRENDS REPORT

Talent Recruitment and Retention in the Post-COVID Era within a Growing Oregon Biosciences Industry

Prepared for: Oregon Bioscience Association
Prepared by: Boz Institute

Title: "Talent Recruitment and Retention in the Post-COVID Era within a Growing Oregon Biosciences Industry"

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Data Sources

[1]*Job Postings*: Quantitative data from 32,758 job postings in Oregon and Clark County, Washington from 2019 to 2022. The number of job postings includes both new and replacement hiring and does not necessarily reflect unique new postings each year. TEConomy Partners' analysis of Lightcast 2023.1 data set (as part of the national 2023 Life Science Workforce Trends Report preparation, https://www.csbioinstitutes.org/workforce-development)

[2]*Survey responses*: Survey responses of human resource and hiring managers from 30 bioscience firms in Oregon and Clark County, Washington obtained between January and March 2023. See Figure 1-2 for location and sector context.

[3]*Interviews*: Interviews with 10 industry leaders between January and March 2023. Interviewees were asked a set of open-ended questions about talent recruitment, changes in recruitment and hiring approaches, and DEI initiatives.

Data were visualized using the R Statistical Software (version 4.2.2) packages urbnmapr (version 0.0.0.9002) and ggplot2 (version 3.4.3).

Firm background/overview

The state of Oregon has a total of 1,480 bioscience firms and Clark County, Washington has 150 (REF: https://www.oregonbio.org/about/reports/). 23% of the 160 member firms of Oregon Bioscience Association were surveyed and/or interviewed; these are mostly small firms with 1-25 employees, located in the greater Portland metropolitan area (Figure 1). The majority (60%) are involved in research testing and medical laboratories (Figure 2).

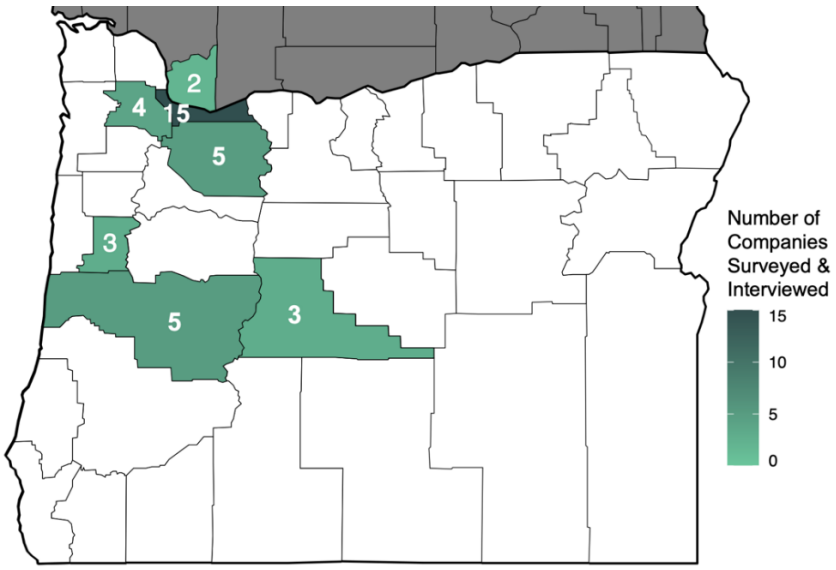

Figure 1. *Geographical Distribution of Surveyed and Interviewed Firms.*[2,3] A total of 37 firms, 30 surveyed and 10 interviewed (3 firms were surveyed and interviewed), are in the Benton, Clackamas, Deschutes, Lane, Multnomah, and Washington counties of Oregon, and Clark County, Washington. Twenty-four firms (65%) are in the tri-county region of Multnomah, Washington, and Clackamas.

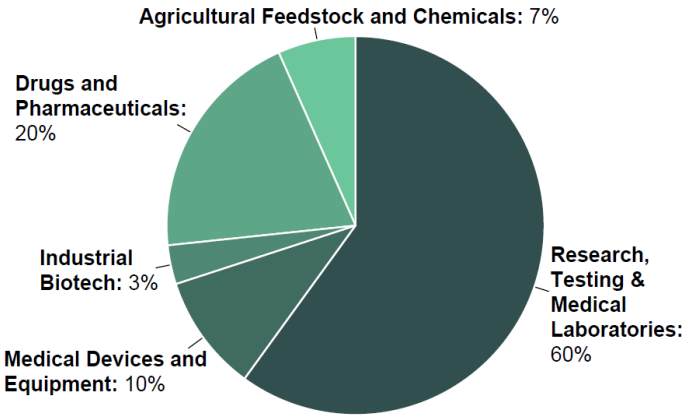

Figure 2. *Subsector Profiles of Surveyed Firms.*[2] 60% of the surveyed firms are from the research testing and medical laboratories sector.

Recent-current hiring trends

The bioscience sector expanded over the last four years, with job posting growth in all five subsectors, led by research, testing, and medical labs (Figure 3). Nearly a third of the surveyed firms hired 6-20 workers, and 7% hired over 50 workers in the last two years (Figure 4). 60% of the firms reported corporate growth as the driving force for future hiring. Employers with the most job postings included Interpath Laboratory, Thermo Fisher Scientific, and A-Dec in Oregon, and Quest Diagnostics, Absci, and Wilbur-Ellis in Clark County, Washington (Table 1).

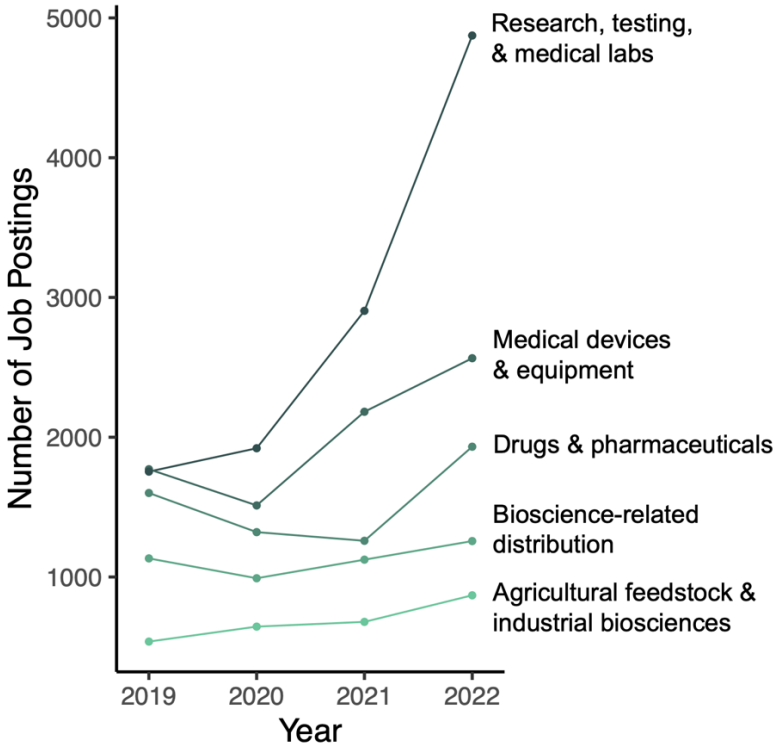

Figure 3. *Job Postings from 2019 to 2022 in the State of Oregon and Clark County, Washington.*[1] All bioscience subsectors increased job postings from 2019-2022, with the greatest increase in research, testing, and medical labs. The number of job postings increased 69.5% (from 6,772 to 11,478) across these four years.

Oregon	Clark County, Washington
Interpath Laboratory	Quest Diagnostics
Thermo Fisher Scientific	Absci
A-Dec	Wilbur-Ellis
Quest Diagnostics	Interpath Laboratory
Genentech	Vancare
Acumed	IQVIA
Wilbur-Ellis	Columbia Nutritional
Grifols	Hill-Rom
Pfizer	Bausch Health
Johnson & Johnson	RS Medical
IQVIA	Numotion
Biotronik	Pedigo Products
Nutrien	Takeda Pharmaceutical Company
Labcorp Drug Development	Stryker
Bayer	Organon

Table 1. *Leading Firms in Life Sciences Job Postings from 2019 to 2022.*[1]

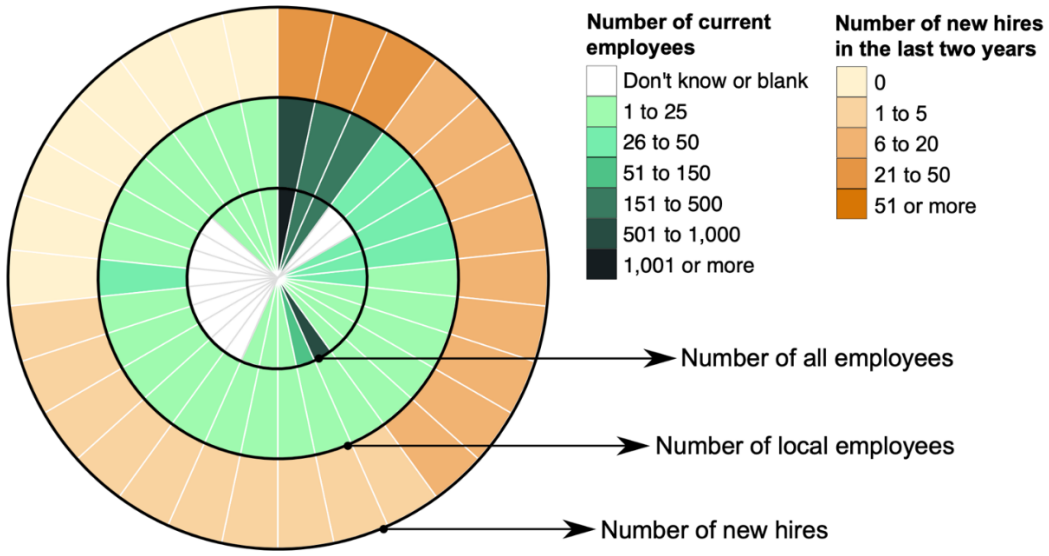

Figure 4. *Surveyed Firm Sizes and Associated Numbers of Recent Hires.*[2] Most of the surveyed firms are small (1-25 total employees). Expectedly, the size of the firm positively correlates with employment opportunities.

Technicians and production workers, the two occupations with the most job postings (Figure 5), are mostly recruited through colleges/universities, referrals/networking, and online job boards, per the survey responses (Figure 6). 15 of 31 (48%) of surveyed companies reported sourcing technicians for 4-year colleges, while 5 of 31 (16%) sourced from community colleges.

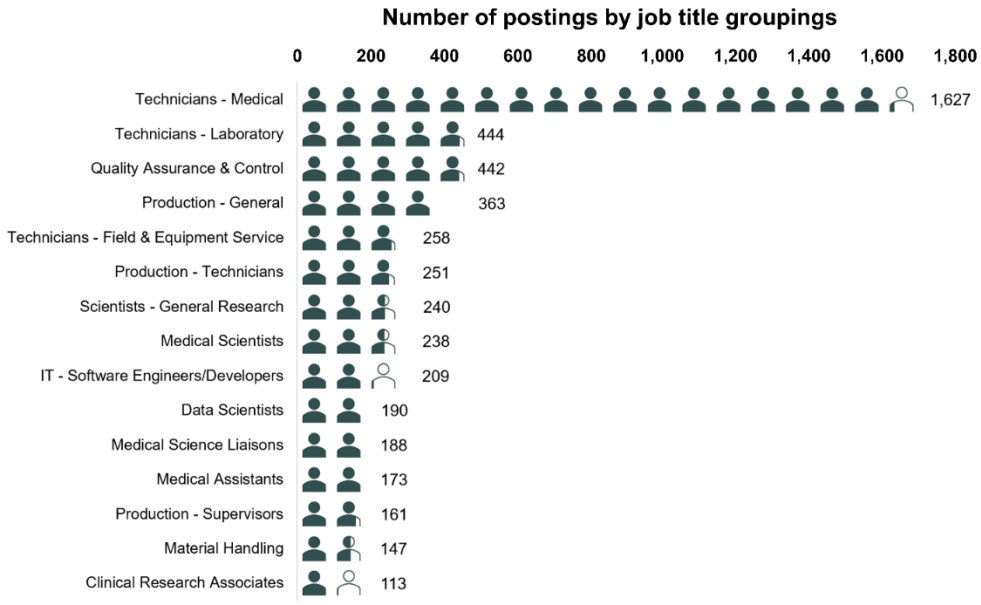

Figure 5. *Leading Technical & Production-related Job Title Groupings for Life Sciences Hiring from 2019 to 2022.*[1] Medical Technicians, where there is the largest demand, include a very large and leading focus on hiring Phlebotomists among both medical labs focused on diagnostic testing and biopharmaceutical firms focused on blood plasma-based products. Other examples of leading job titles include Flow Cytometry Specialists, Histotechnologists, Medical Lab Technicians, Cardiovascular Technicians, and Ophthalmology Assistants.

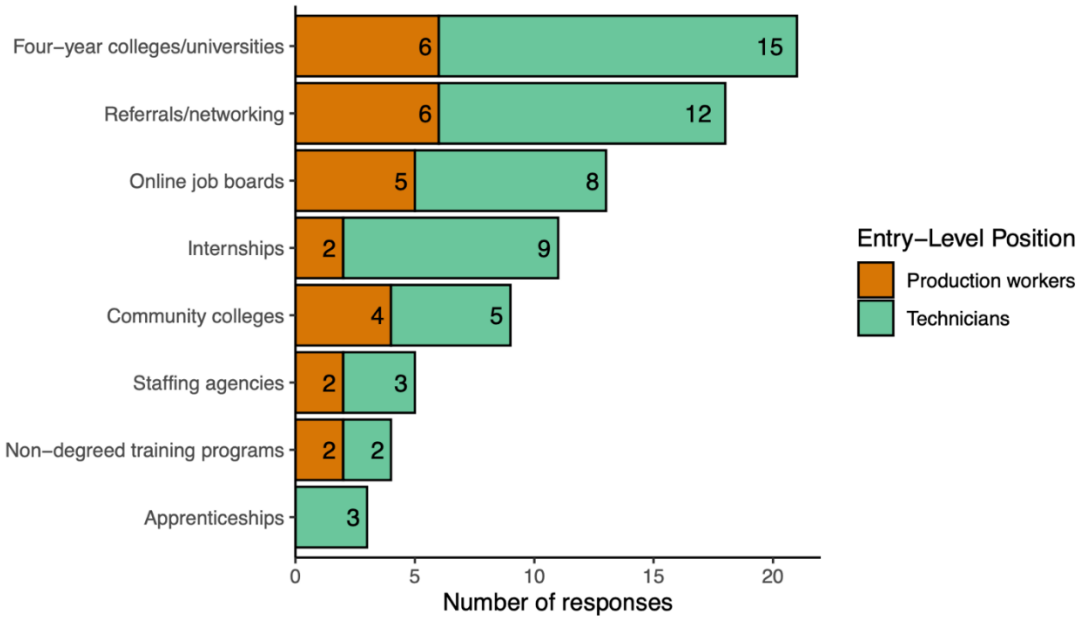

Figure 6. *Recruitment Sources for Entry-Level Production Workers and Technicians at Surveyed Firms.*[2] Most production workers and technicians from the surveyed firms are recruited through colleges/universities, referrals/networking, and online job boards. Technicians are often hired through internships.

Over 50% of all job postings require less than 1 year working experience, and less than 16% require a master's degree or higher (Figure 7). Demonstrated competencies/skills and degrees from 4-year colleges/universities are the most important credentials when hiring entry-level positions. (Figure 8).

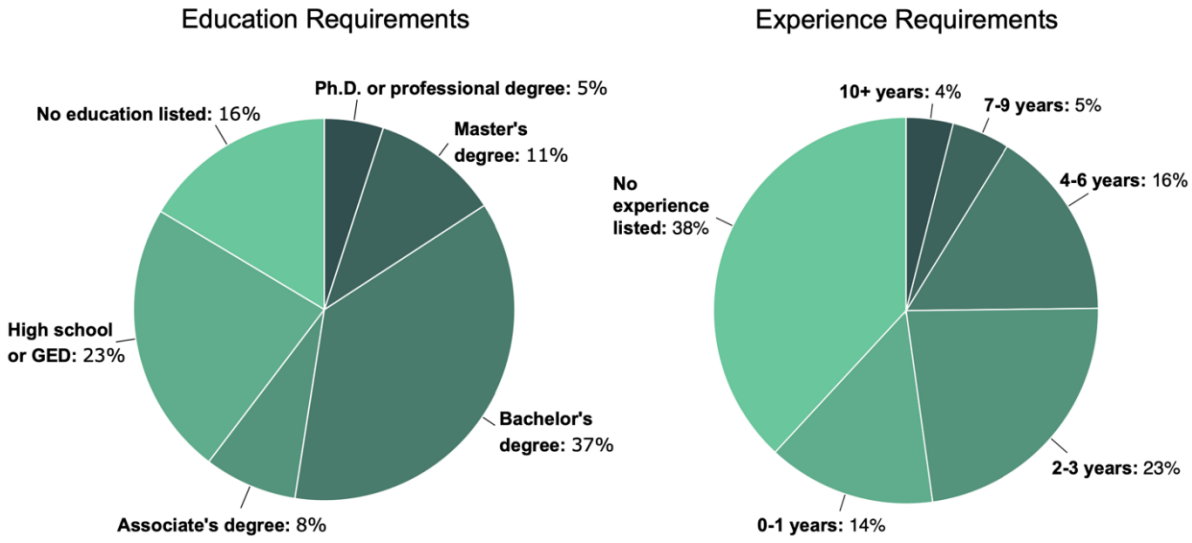

Figure 7. *Requirements Listed on Job Postings.*[1] Job posting education and experience requirements. Notably, 31% of job postings do not require a bachelor's degree; 16% require a master's degree or higher, and over 50% require less than 1-year experience.

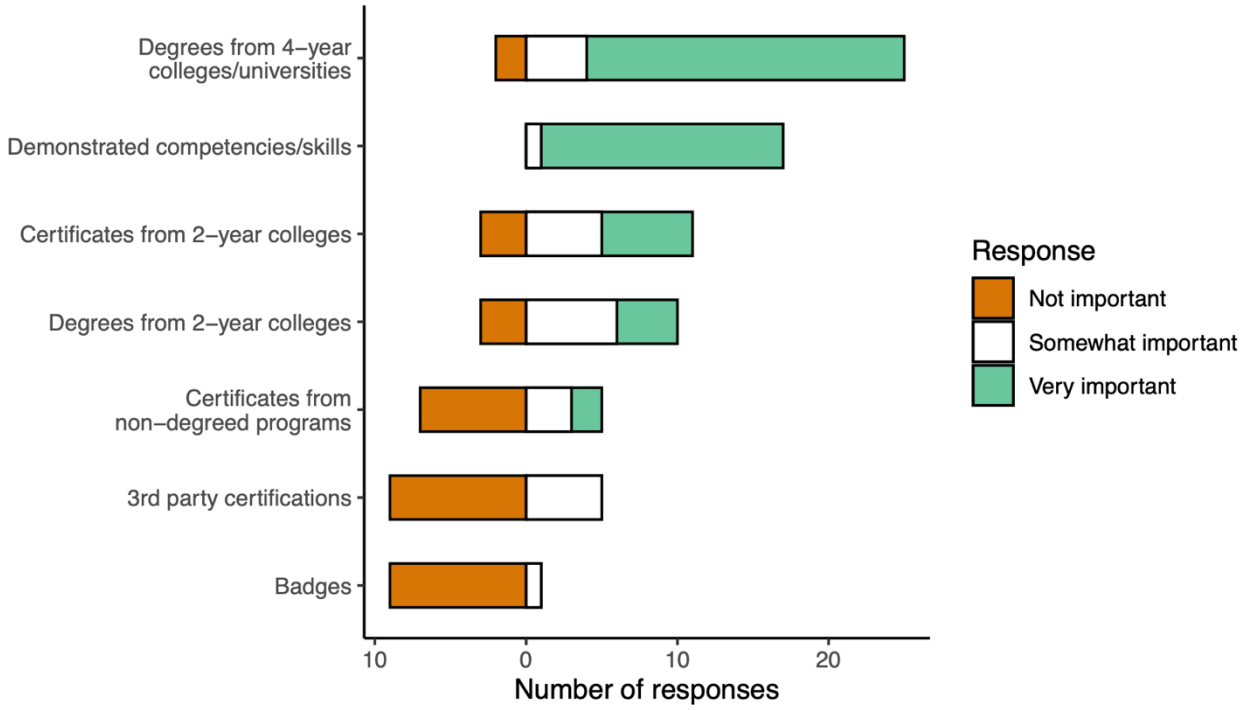

Figure 8. *Importance of Credentials for Entry-Level Positions to Surveyed Firms.*[2] Demonstrated competencies/skills and degrees from 4-year colleges/universities are considered the most important credentials for hiring entry-level positions.

All 10 interviewed firms expressed a preference for demonstrated competency and skillsets. High school and/or college degrees are not required for entry-level positions or promotions, as training programs and work experience provide pathways to develop specialized skillsets. Nonetheless, candidates with degrees are more competitive for higher starting wages and advancement to positions such as lab scientists, which still require advanced degrees.

"I believe strongly in meritocracy. [We've hired people whose highest education levels are] associate degrees or high school diplomas. If they perform well, then they can rise to the ranks and be shoulder to shoulder with bachelor's, and eventually with Ph.D.s."

[Newly hired technicians] "were only allowed to work on certain processes in the beginning. Over time, they evolved to a full specialist. We have multiple levels of specialists, which allows them to progress and gain skills over the years."

"… if we had someone apply and they had the right prior experience, we wouldn't necessarily hold to educational requirements."

Expectedly, the COVID-19 pandemic had a measurable impact on the work culture. Firms are now more considerate of remote work options for certain occupations. While recognizing the advantages of remote working, including the cost of living and uninterrupted productive time, most surveyed firms are promoting in-person workplaces, noting the value of real-time employee interactions and teamwork. Another commonly noted change is prioritizing work-life balance. Consequently, recruiting and retaining a talented workforce is more challenging, especially for small/startup to mid-sized firms.

> *"… the talent that we brought in almost always worked remotely and had very little connections with the other members of their team. It was a full year before we could fully, properly onboard them and get them socially integrated into the mix…"*

> *"[Parts of] our organization can [function with a] remote [workforce], but [for] the day-to-day work we do, it's very important that people are on site."*

> *"[The pandemic] definitely allowed us to see some of the advantages of working from home, which are primarily that people have a sort of uninterrupted productive time."*

Hiring trends and future needs

Most surveyed firms anticipate fewer than six new hires in the next year per occupational category, primarily for lab technician positions (Figure 9). Quality control and product/process development engineer positions were noted as most challenging to fill with qualified candidates: respectively, 66% and 100% of firms hiring for these positions found the task somewhat or very difficult (Figure 10).

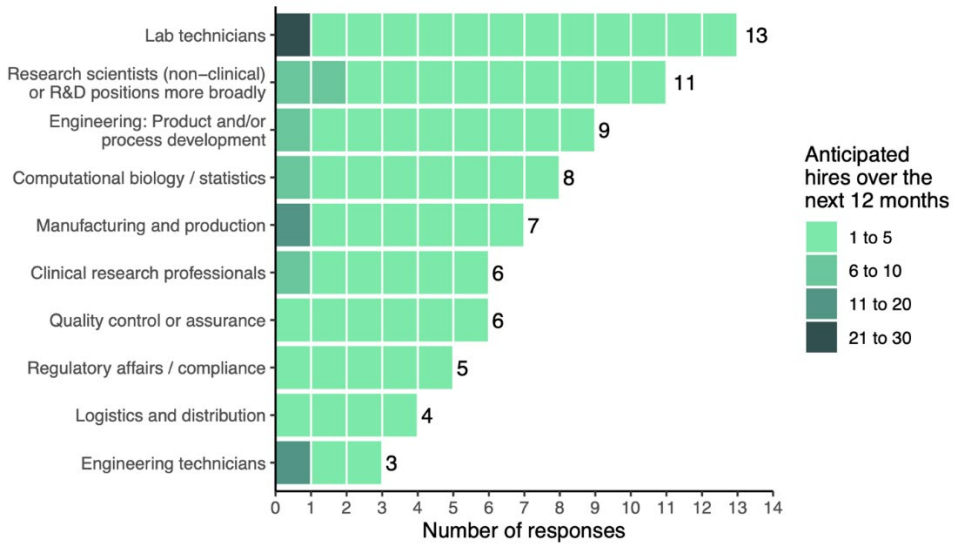

Figure 9. *Surveyed Firms' Anticipated New Hires in the Next 12 Months.*[2] Most firms anticipate 1-5 new hires across various biotech positions (e.g., lab technician, computational biology statistics, etc.).

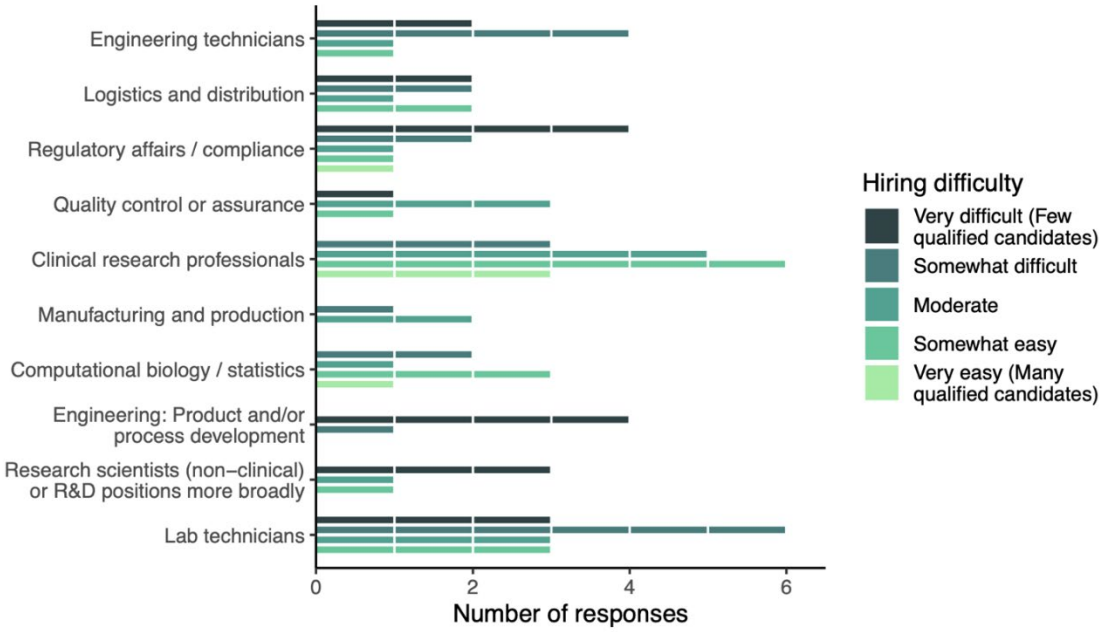

Figure 10. *Perceived Hiring Difficulty Levels by Position Among Surveyed Firms.*[2] Lab technicians are the easiest to hire, while quality control positions and product/process development engineers are the most difficult to hire.

Recruiting competent candidates has been a challenge for many firms, particularly at the entry level. Firms' strategies to expand the pool of candidates include considering applicants with little experience but high interest, and broadening recruitment strategies: internships, recruiters, and online job boards attract a wider applicant pool. A high cost of living and inflation necessitate hiring incentives such as greater pay, bonuses, and benefits, but small firms find it difficult to compete with larger, established, and recognizable organizations.

- 59% of the surveyed firms reported a significant (greater than 10%) average wage increase in the previous year.
- 77% of these firms consider the intense competition for talent to be the largest contributor, and
- 85% cited inflation as another major cause.

"Finding qualified people is extremely difficult right now. There seems to be a post-pandemic shift in the mindset of how people think about or approach work, and I don't think it's always necessarily good for the workplace or for the companies… the priorities and the value of what people do has changed."

"… another [challenge] has been just trying to attract talent and keep it"

Relationships with educational institutions are an important hiring strategy. Firms are eager to recruit and steer high school and early college students toward science. Numerous universities and community colleges have implemented training or internship programs and outreach at high schools is a common strategy to increase firm and industry visibility among students and educators unfamiliar with life science firms and careers in the bioscience sector. Interviewed

industry leaders also emphasized the need for skills specific to each firm's operation, which could only be obtained through quality workforce development training programs.

Automation and artificial intelligence/machine learning are generally considered the most impactful emerging technologies. Firms don't anticipate a reduction in workforce demand caused by AI implementation but emphasize a need for developing a new set of skills and talented candidates utilizing such technologies to enhance productivity.

DEI initiatives, outreach

Firms recognize the need to diversify their workforce and are eager to support educational/entrepreneurship efforts to develop and retain local talent. 80% already have or plan to implement DEI initiatives. Ultimately, the goal is to hire the most qualified candidate, so firms promote and prioritize DEI in hiring practices (resulting in greater diversity among candidates) and some provide education and training opportunities to support underrepresented groups. Committees and employee resource groups are structured to cultivate a diverse and inclusive work environment. While relatively low diversity in Oregon may be a challenge for some firms' DEI efforts, others have found that hiring the best candidates results in a naturally diverse workforce. Firms are aware of a potential male-bias and implement strategies such as hiring from diverse scientific backgrounds to provide opportunities to women.

> *"…our mindset has evolved around DEI, it's a true business need, not just a nice to have."*

Outreach initiatives to diversify the STEM talent pipeline mostly focused on colleges and universities, with internships and mentorships being the most popular approach (Figure 11).

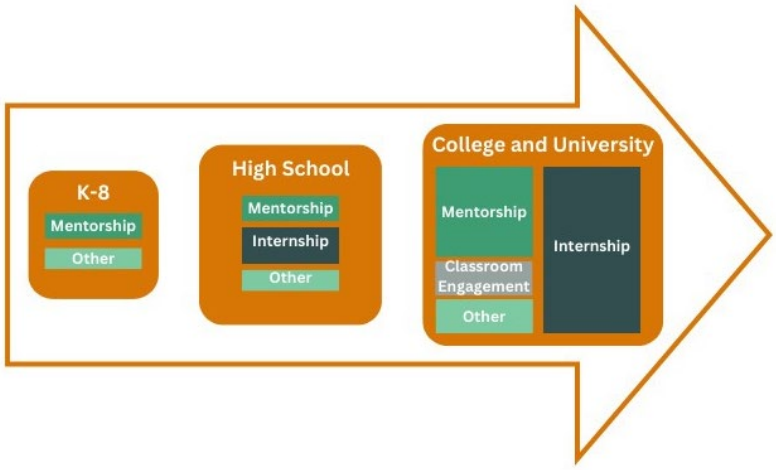

Figure 11. *DEI Initiatives in Educational Institutions.*[2] Initiatives to seek and develop a more diverse STEM talent pipeline mostly focused on colleges and universities. Mentorship opportunities are provided for all three education levels from K-8 to the college/university, while internship opportunities are more available than mentorship for both high school and college/university levels.

Conclusion:

The life sciences sector in the state of Oregon and adjacent Clark County, Washington is growing, with research, testing, and medical labs leading the job growth. The most important credentials are demonstrated competencies and degrees from 4-year colleges. However, training programs and work experience provide pathways to develop specialized skillsets, meaning that high school and advanced degrees for entry-level positions or promotions are not always required. While recognizing the advantages of remote working, most surveyed firms are promoting an in-person structured workplace, noting the value of real-time employee interactions and teamwork. Recruiting competent candidates has been a challenge and firms are broadening recruitment strategies, including cultivating relationships with educational institutions. AI implementation is unlikely to reduce workforce demand, but it emphasizes a need for developing a new set of skills and talented candidates utilizing such technologies to enhance productivity. Firms recognize the need to diversify their workforce and are eager to support educational /entrepreneurship efforts to develop and retain local talent.