

# LABOR MARKET OVERVIEW ADAPTING TO CHANGE WITH A FLEXIBLE WORKFORCE

**FEBRUARY 2024** 

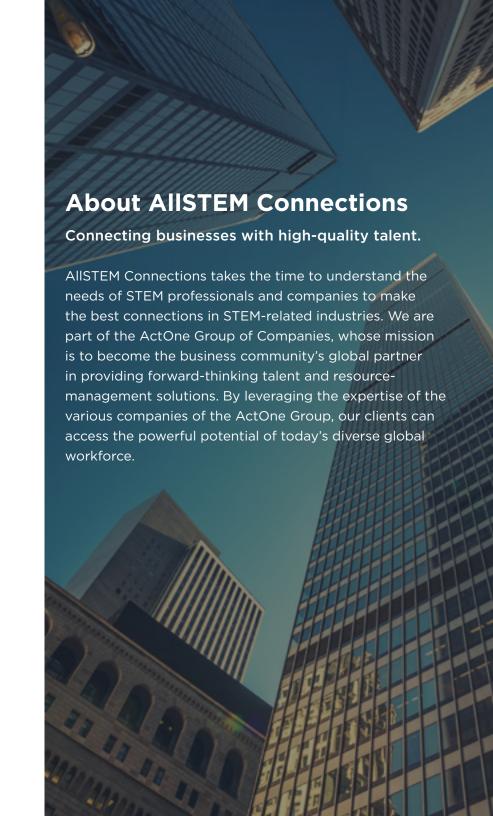
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## About This Report

he economies of the United States and Canada present a study in contrasts. Entering the new year, employers in the U.S. have continued a remarkable post-pandemic trend of month-after-month job growth, underpinning a national GDP that continues to expand. Even as data indicates a modest slowdown in hiring is underway, there is cause for optimism: the underlying strength of the job market — combined with a decline in inflation — offers encouraging signs that conditions are once again normalizing. Across the border in Canada, economic data reveals a slightly different story. After a robust start to the year, the Canadian economy has seen a more pronounced deceleration, reflected by a sharper rise in unemployment rates from the lows of 2022. Still, the medium-term economic outlook for Canada remains positive, and employers are likely to benefit from a less competitive job market.

EMPLOYERS MUST DOUBLE DOWN ON THEIR COMMITMENT TO CREATIVE STAFFING: AMONG THEM, RESKILLING, UPSKILLING, AND DIVERSIFYING THE GLOBAL WORKFORCE.



## About This Report

The broader economy is hardly the only factor that stands to impact employers across North America. As these neighboring nations mark a new chapter in their continued economic recovery, companies will also need to adapt to underlying changes in how we work. The rise of new technologies, exemplified by the mainstream introduction of artificial intelligence last year, will impact employers of all sizes. It's just one of the reasons why, by 2027, nearly a quarter of the world's jobs are predicted to see movement — either through the creation of new roles or the elimination of existing ones. This will have consequences for all industries, with sectors like supply chain and transportation as well as media, entertainment, and sports expected to experience the highest churn.¹ As a result, employers must double down on their commitment to creative staffing, reskilling, upskilling, and diversifying the global workforce.

As companies search for ways to compete in the science, technology, engineering, and mathematics (STEM) talent revolution, understanding the latest economic trends is key to success. That is why we are pleased to present Workforce Solutions Market Overview: 2024 Outlook in STEM. Produced by AllSTEM Connections, an ActOne Group company, this report combines the latest economic data and insights from around the world with leading solutions to help companies adapt to change and succeed — no matter the circumstances.

#### **Guiding Principles and Core Values: UP HIRE**

#### **Understanding Matters**

We actively listen to each other, our STEM professionals, and customers. We take the time to understand their needs to make the best connections in the industry.

#### People Matter.

People are at the center of our company. All decisions we make are in the best of interest of our employees, co-workers, communities, candidates and customers.

#### **Honesty Matters.**

We conduct our business with integrity and DO the right things. We ARE trustworthy partners WHO stand behind our work and people.

#### **Innovation Matters.**

We are disciplined in bringing forward new thought and solutions that guide the industry and grow our company. Continued growth secures sustainability that provides solid careers for our employees, stability for our STEM professionals, and reliability to our customers.

#### Relationships Matter.

We take personal responsibility for all relationships with our employees, co-workers, STEM professionals and customers. Courtesy, dignity and respect EQUAL high performance results.

#### **Everything Matters**

We hold ourselves accountable to perform with the utmost of professionalism, attention to detail, and highest standard of service. We hit our targets and do what we say we will do.



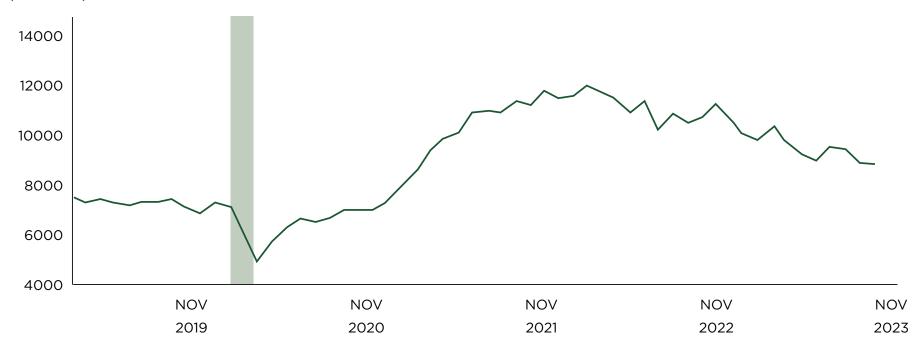
he numbers are in. In 2023, U.S. employers added an average of 225,000 jobs each month — more than 150,000 fewer jobs per month than in 2022. Meanwhile, the unemployment rate clocked in at 3.7 percent in December, ending the year slightly up from its 53-year low in January 2023.<sup>2</sup> In any other market, trends like these might be cause for concern. But not in 2024 in the U.S., where economists at the Federal Reserve have spent the better part of two years carefully engineering a soft landing.

Employment data like this — coupled with data showing that consumer prices slowed their year-over-year increase by more than 3 percentage points over the course of 2023 — is fueling speculation that their work might finally be paying off. On one hand, this is expected to translate to fewer job openings, meaning that hirers should face less pressure in the coming years as they jockey to fill vacant positions. The job openings rate, which measures the number of job openings as a share of all jobs — filled and unfilled — has decreased significantly from its record of 7.3 percent in March 2022. On the other hand, as openings continue to ease, so too should wage growth, which sat at 4 percent year-over-year in November. Wages for all employees are growing at their slowest pace since June 2021, when employers were extending generous pay hikes in an attempt to compete for workers, defining the period that became known as the Great Resignation.<sup>3</sup>



# Job openings, hires, and separations levels, seasonally adjusted<sup>4</sup>

(thousands)



As the labor market continues to normalize, companies are adjusting their hiring plans accordingly. After making headlines in early 2023 with several rounds of high-profile layoffs, the tech sector is just one of several STEM industries that have seen hiring level off in recent months. According to data from Indeed, there are fewer postings for jobs in software development and IT operations today than there were before the pandemic.<sup>5</sup> Still, the long-term demand for IT talent looks bright. By 2031, tech companies will need to fill approximately half a million software developer and IT manager roles. Elsewhere, the demand for STEM talent is expected to include the need to hire more than 115,000 nurse practitioners and 140,000 medical and health services managers by 2031 to meet a surging healthcare market in the U.S.<sup>6</sup>

#### U.S. Overview

Anticipating this demand, the federal government is working on efforts to build a larger STEM workforce at home, rolling out a series of new policies designed to attract and retain immigrants with education in STEM fields and jumpstart new STEM careers at home. This includes the Department of Homeland Security designating 22 new degree programs on its list of eligible fields for the STEM optional practical training (OPT) extension program, which allows these students to hold work authorization for an extended period, and Congress passing the bipartisan CHIPS and Science Act in 2022. Leaders from tech and business sectors are responding, contributing more than \$200 billion in private investments to fund the production of semiconductors in the U.S., which will create an estimated 44,000 new jobs in America.





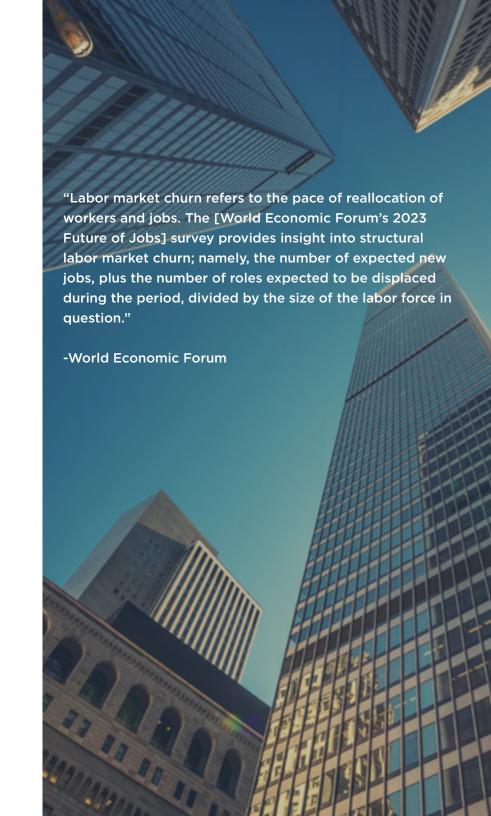
#### **Churn in the Labor Market**

ver the past four years, the world has faced a range of challenges that have reshaped various aspects of society and the global economy. Health crises, economic instability, and geopolitical unrest, alongside increasing social and environmental demands, have accelerated transformations in labor markets worldwide. These changes are influencing the demand for specific jobs and skills and leading to shifts in the composition of entire industries.

Seeking to understand these global trends, the World Economic Forum released the fourth edition of its Future of Jobs Report. This report leverages a comprehensive survey-based dataset that captures the expectations of more than 800 of the world's largest employers regarding job trends for the period of 2023 to 2027.

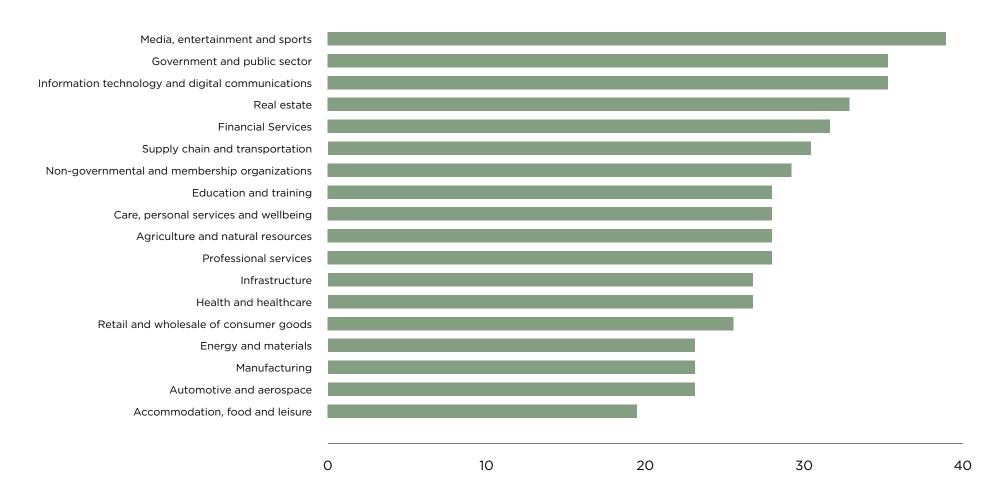
According to the report, employers can expect a substantial structural churn in the labor market, defined as the "pace of reallocation of workers and jobs." 23 percent of jobs are likely to see movement — either through the creation of new roles or the elimination of existing ones — by 2027. The survey also highlights industry-specific expectations. Among the industries requiring a background in STEM, the information technology and digital communications industry is predicted to experience higher-than-average job churn. Conversely, the automotive and aerospace sector is expected to face lower-than-average churn.<sup>9</sup>

The following chart illustrates how labor market churn is expected to impact leading industries around the world, including STEM industries.



#### **Churn in the Labor Market**

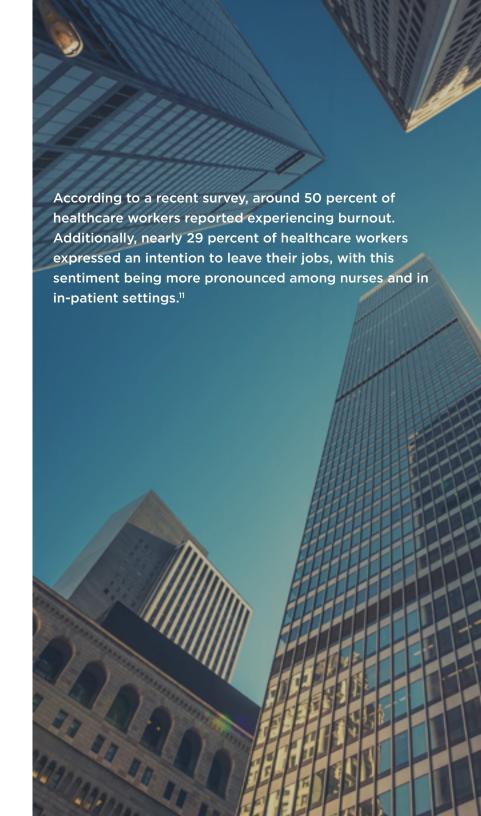
#### Projected global labor market churn by industry, 2023 - 2027<sup>10</sup>



## **Post-Pandemic Impacts in Life Sciences**

s the world reaches a milestone — four years since the onset of COVID-19 — it is worth pausing to reflect on its impact on the healthcare and pharmaceutical industries, which were hit hard by the public health crisis. According to a recent survey of more than 32,000 healthcare workers published in the Journal of General Internal Medicine, the pandemic led to widespread burnout in the healthcare sector that still continues today. Around 50 percent of those surveyed, which includes physicians, nurses, clinical and non-clinical staff, reported experiencing burnout. Additionally, nearly 29 percent of healthcare workers expressed an intention to leave their jobs, with this sentiment being more pronounced among nurses and in in-patient settings.<sup>12</sup>

Meanwhile, following a year in which many countries like the United States formally ended their emergency response to the pandemic, pharmaceutical companies have felt the effects of softening demand for COVID-19-related treatment.<sup>13</sup> Combined with global economic pressures and tightening standards for clinical studies, this led more than 180 biotech companies to announce layoffs in 2023 — up from 119 in 2022.<sup>14</sup> This dynamic may tilt momentum back in favor of employers, who spent recent years extending extraordinary raises and benefits in an effort to retain workers. In the meantime, the unemployment rate for life, physical, and social science occupations is just 1 percent, lower than the average of 3.5 percent for all occupations.<sup>15</sup>



# **Post-Pandemic Impacts in Life Sciences**

DESPITE RECENT UPHEAVAL, FINDING LIFE SCIENCES RESEARCH TALENT MAY PROVE EXTREMELY DIFFICULT. THE UNEMPLOYMENT RATE FOR LIFE, PHYSICAL, AND SOCIAL SCIENCE OCCUPATIONS IS JUST 1 PERCENT, LOWER THAN THE AVERAGE OF 3.5 PERCENT FOR ALL OCCUPATIONS.<sup>16</sup>

Despite these challenges, the healthcare sector is expected to experience steady growth in employment in 2024, addressing critical workforce shortages that still exist in healthcare systems in the United States and around the world. In pharmaceuticals, there's a rising demand for skilled labor, especially among payers and contract research organizations. Key areas such as gene therapies, oncology, respiratory diseases, and weight loss drugs are fueling opportunities. Meanwhile, small to midsize pharmaceutical companies are actively seeking funding and partnerships to advance their clinical trials.<sup>17</sup>



# **Powering the Future of AI in Tech**

igh costs, supply chain issues, and geopolitical uncertainty all converged in early 2023 to create one of the most tumultuous periods on record for the technology sector. However, following months of highly publicized layoffs, recent employment data indicate that conditions have stabilized. Tech companies laid off an average of just over 8,000 tech employees each month in the second half of the year, July through December. That's significantly less than the more than 35,000 employees who were let go every month in the six months prior.<sup>18</sup>

Driven by cost-cutting measures and a shifting focus toward artificial intelligence (AI), this episode can best be described as a reshuffling. According to an analysis, 79 percent of laid-off employees found a new job within three months during the depth of the layoffs. And while the pace of hiring slowed across the tech sector, it has regained momentum in recent months. In January 2024, employers added approximately 178,000 job postings, which reflects an increase of more than 30,000 more postings than in December 2023. That represents the largest month-over-month increase in a year. Meanwhile, tech companies added jobs in four of the industry's five primary sub-sectors, with software development leading the way. This includes a notable increase in the number of technology job openings requiring skills in AI, which stood at more than 17,000 postings in January.



# Powering the Future of AI in Tech

of working hours could be transformed by large language models.<sup>21</sup>

Innovations in AI, cloud computing, cybersecurity, and other high-tech focus areas underscore the need for continued investment in skilled talent especially in a competitive global marketplace. That includes the workforce powering large language models (LLMs), a name given to advanced Al systems designed to understand, generate, and interact with human language based on vast amounts of text data. According to a recent study, up to 40 percent of working hours could be transformed by LLMs, with impacts on the entire career spectrum from entry-level jobs to those requiring an advanced degree.<sup>22</sup> As this picture emerges, it stands to reshape a range of industries, especially information technology, which will encounter a growing demand for everything from AI model and prompt engineers tasked with developing and testing LLMs to interface and user experience designers to help make AI tools intuitive to the general public.<sup>23</sup> With countries like China and India forming public-private partnerships to incorporate STEM curricula into primary school curricula, companies across North America have an obligation to play a part in fostering the next generation of technology leaders by building their own programs to train workers.24



# **Powering the Future of AI in Tech**

# EMERGING JOBS: UPSKILLING TO MEET THE DEMANDS OF LARGE LANGUAGE MODELS<sup>25</sup>

- AI Model and Prompt Engineers: Engineers and scientists are at the forefront of developing and refining LLMs, encompassing roles from algorithm programmers to systems and power engineers, ensuring efficient and stable operations. Prompt engineers play a crucial role in optimizing LLMs by crafting and refining inputs for better outcomes.
- Interface and Interaction Designers: These professionals design user-friendly interfaces for LLMs, making advanced AI accessible to the public through tailored interaction modes, including voice commands and typed inputs, and incorporating human feedback to improve model responses.
- Al Content Creators: Leveraging the capabilities of LLMs, Al content creators produce a wide array of content across domains, from articles to multimedia stories, by understanding and applying the models' vast knowledge bases.
- Data Curators and Trainers: Essential to LLM performance, these specialists focus on curating and ensuring the quality of massive data sets used for training, with a keen eye on data integrity and quality to reflect in the LLMs' outputs.
- Ethics and Governance Specialists: To prevent biased or unethical outputs, these experts rigorously test LLMs and training data for quality and bias, encompassing AI safety officers, ethicists, and domain-specific legal professionals to ensure responsible AI deployment.



# Industry Spotlight

# A New New Deal for Infrastructure Jobs

# Quick Facts: Civil Engineers <sup>26</sup>

2022 MEDIAN PAY	\$89,940 PER YEAR \$43.24 PER HOUR
TYPICAL ENTRY LEVEL EDUCATION	BACHELOR'S DEGREE
WORK EXPEREINCE IN A RELATED OCCUPATION	NONE
ON-THE-JOB TRAINING	NONE
NUMBER OF JOBS, 2022	326,300
JOB OUTLOOK, 2022-32	5% (FASTER THAN AVERAGE)
EMPLOYMENT CHANGE, 2022-32	16,200



#### A New New Deal for Infrastructure Jobs

ot since the New Deal was passed nearly a century ago has the United States experienced the kind of generational infrastructure investment promised by a trio of bills enacted by Congress since 2021. That includes the Infrastructure Investment and Jobs Act (IIJA), Inflation Reduction Act (IRA), and the CHIPS and Science Act, which together funnel more than \$1 trillion toward transportation, energy, and climate infrastructure projects.<sup>27</sup>

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infrastructure occupations employ 16.6 million workers in the U.S., accounting for 11.8 percent of the nation's jobs.<sup>28</sup>

Investing in infrastructure — from building roads to upgrading power plants — necessitates a larger workforce. However, leaders in the infrastructure industry continue to confront longstanding challenges in recruiting and retaining infrastructure workers, which threatens to derail critical investments in the nation's aging infrastructure. Recent studies indicate that new federal infrastructure funding will generate up to 1.5 million new jobs every year for the next ten years. However, according to Bureau of Labor Statistics forecasts, approximately 1.7 million existing infrastructure workers are expected to leave their jobs annually within the same period, either retiring or transitioning to different roles.<sup>29</sup> That stands to create a large gap that will only widen without a significant investment in STEM careers to power the nation's infrastructure reinvestment.



#### A New New Deal for Infrastructure Jobs

CONTRACTORS INVESTED \$1.5 BILLION IN WORKFORCE DEVELOPMENT IN 2022, BENEFITING MORE THAN 1.3 MILLION COURSE ATTENDEES.<sup>30</sup>

Among the careers that stand to be impacted by the renewed focus on infrastructure is civil engineering, where employers have extended generous pay hikes and benefits to workers in an effort to attract and retain talent. According to a recent survey, median base salaries for civil engineers have risen to \$124,000, up \$16,000 since 2019. Meanwhile, roughly two-thirds of those surveyed indicated that they have telework options, while a similar share receives paid maternity or paternity leave. Benefits like these are critical to shoring up civil engineering talent, according to research, which has shown that engineers are flocking to positions that offer remote work options and greater career flexibility. In response to this shift, companies must look to the rising popularity of the gig economy, opening themselves up to contingent workers to supplement their traditional workforce. Additionally, companies can turn to upskilling and cross-training programs to better align the skills of existing workers with those that are in the greatest demand.







obody knows what the future has in store. That's why it's important to greet changing times with solutions that are future-proof. To help, AllSTEM Connections has compiled five leading solutions that apply to companies of any size or scope.



# Own change with flexible hiring

Al. Automation. Economic expansion and contraction. These are just some of the factors driving historic churn in the labor market, with one-in-four jobs likely to see movement by 2027.33 Amid changing times, more companies are relying on flexible hiring. With a focus on temporary, temporary-to-hire, direct placement, and independent consultant services, AllSTEM is ready to serve you. The flexibility of temporary arrangements appeals to every type of worker. It has an added benefit for companies, too: it's costeffective and comes without the rigid commitment of a traditional hire.

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# Reduce vacancies with reskilling and upskilling

COVID-19 underscored the importance of skills. According to a McKinsey Global Survey, 58 percent of respondents reported that closing skill gaps in their companies' workforces became an even higher priority in the aftermath of the pandemic as companies reckoned with shifts that have become the new normal.<sup>34</sup> Facing prolonged labor market tightness, companies would be wise to implement reskilling and upskilling programs, equipping their workers with new skills — or enhancing existing ones — to adapt to changing needs.



# Be the company where workers want to work

Corporate culture is one of the leading factors driving where workers work and how long they stick around. Yet, according to a recent study, only 2 in 10 employees feel connected to their company's culture.<sup>35</sup> In order to stay competitive in a high-employment environment where workers have many choices, employers must recommit themselves to creating an environment where workers want to work. This includes promoting open communication, encouraging employee engagement and recognition, aligning values with actions, and investing in professional development and teambuilding activities.

## **Top Solutions**



#### Embrace a diverse workforce

Companies around the world have pledged to prioritize diversity. It's a winning strategy for employers who are looking to tap into a deeper pool of talent amid continued labor market tightness. Hiring a diverse workforce isn't only the right thing to do; it makes good business sense. According to one study, companies that are willing to open up jobs to nontraditional candidates will benefit from a larger — and more diverse — talent pool. Furthermore, organizations that embrace a diverse workforce have been shown to outperform across several criteria, including attitude and work ethic, productivity, quality of work, engagement, attendance, and innovation.<sup>36</sup>



# Harness the power of technology

Today, there are over 450 technologies that assist with the attraction and management of both external and full-time talent. That's why it's important to partner with trusted workforce solutions providers like the ActOne Group of Companies, which makes the selection and integration of these tools easy. But that's just the start. Our team works at the cutting edge of emerging technologies like artificial intelligence and can help businesses of any size and scope understand the complete range of benefits and risks — from opportunities for capacity building to considerations around security and ethics.

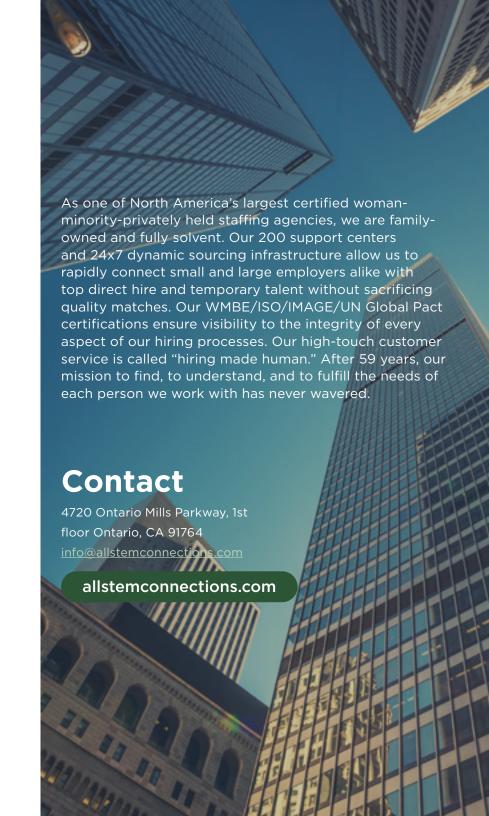


#### Conclusion

hen it comes to the labor market, change is hard to predict.
Mixed signals in the global economy coupled with shifts in
worker habits and expectations have created an environment of
uncertainty where companies have a lot to lose by being uninformed. As
we begin another year, it's never been more important to have a partner
you can trust at your side.

AllSTEM Connections is that partner. Part of the ActOne Group of Companies, we are a full-service employment company that focuses on careers within STEM fields. Our Talent Engagement Agents take the time to understand our job seekers' career progression and achievements to connect them with the right client opportunities. With a focus on temporary, temporary-to-hire, direct placement, and independent

Changing times call for a change in approach, and at AllSTEM Connections, we're with you every step of the way as you navigate today's complex, changing marketplace.



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