



Why – and How – to Apply STEM Solutions in A World of VUCA

Our volatile, uncertain world needs staff with the innovative, STEM-based skills to rapidly adapt. Understanding the reasons STEM is the solution and taking guidance from industry leaders will help companies of all sizes compete.

In a VUCA (volatility, uncertainty, complexity, and ambiguity) world, businesses have to be ready to constantly change and adapt to whatever may come their way. Flexibility and innovation are vital to maintaining long-term success. For organizations looking to remain competitive, focusing on diversity and STEM (science, technology, engineering and mathematics) skills can make a substantial impact on creativity and productivity. Following leaders in these areas, such as the Canadian government, Dell, and others can provide helpful examples of best practices and benefits.

Diversity Leads to Innovation

Once an organization recognizes that innovation is essential, its hiring practices need to support that commitment. One of the ways companies can improve their innovation is by bringing diverse candidates on board.

It is easy to make a case for diversity on the basis of equity or social responsibility. But diversity in the workforce is also demonstrated to improve innovation. According to the Society of Human Resource Management, when a company has a more diverse workforce there is a greater appreciation for a variety of solutions. Valuing different approaches increased innovation and made organizations more adaptable to change. It is not the differences themselves that improve company culture, but the valuation of difference that boosts creativity and fresh perspectives.

Not only are diverse businesses able to be more creative, but they also tend to be more profitable. Research firm McKinsey has found the companies in the top tier for gender diversity are more than 20 percent more likely to also have financial outlooks above industry norms. The benefits of ethnic diversity bring that number up to 33 percent more likely to have a stronger financial position.

Additionally, more homogenous organizations are more likely to make mistakes and have a less robust decision-making process. When it comes to business decisions, mistakes mean money and



customers lost. Diversity leads to greater agility, inclusion, and collaboration, which is valued by employees and customers alike.

According to ISED, “Research shows that organizations that are diverse at the board and senior management levels are more likely to outperform their peers, twice as likely to meet or exceed financial targets, and eight times more likely to achieve better business outcomes.” Exclusivity in company culture stifles creativity, while diversity allows businesses to thrive.

STEM Plays a Central Role in Innovation

STEM is a skillset with a demonstrable positive impact on innovation and productivity. Why is this?

STEM literacy encourages problem-solving and working smarter. Even in fields that are not traditionally STEM per se, having numeracy and technological proficiency saves time and errors. Through STEM study, workers develop basic approaches to finding solutions that bring innovation and profits to a variety of sectors.

STEM literacy equips workers with greater adaptability. Given the future of technology, the impact and integration of automation, and the changing nature of work, STEM literacy represents a “sensible response to growing uncertainty,” according to the Council of Canadian Academies.

STEM literacy positions employees to advance and ride new trends. With their technical acumen and analytical skills, STEM-skilled workers can embrace new technology without being caught up in fads.

STEM literacy is vital but is best when combined with complementary skills. If a worker has both STEM skills and is an able communicator, the impact is dramatically magnified. Teamwork and leadership make STEM skills shine. Retraining workers to provide more STEM or “soft” skills, especially those from diverse backgrounds, would certainly be a worthwhile investment for any organization.

Interestingly, a majority of Canada’s STEM graduates are also immigrants, who additionally account for almost 75 percent of the advanced degrees in engineering and computer science. As STEM skills continue to be highly valued, workplaces may also become naturally more ethnically diverse.



Best Practices to Promote a Culture of Innovation

The Canadian government has declared its commitment to both diversity and STEM as drivers of innovation. Some of the particular programs involved include the 50-30 Challenge, which is aimed at encouraging companies to have their leadership include “gender parity (50 percent) and significant representation (30 percent) of under-represented groups.” This challenge comes with more than \$33 million in funding and incentives.

Private organizations bring together diversity and STEM as well. Girls in Tech Toronto, founded in March 2020, provides mentoring, encouragement, and guidance for young women pursuing careers in tech. This is particularly valuable for supporting the minority of the tech workforce – just 20 percent in Canada – who are female.

Beyond gender parity, Dell is a great example of a global organization that is leveraging diversity to create winning solutions for employees and the business. Realizing that they needed additional tech skills in order to remain competitive in their fast-growing sector, Dell developed a recruitment program specifically aimed at increasing the neurodiversity among their staff. By creating a paid internship program designed to be comfortable for persons who have autism, and then hiring from their successful interns, Dell was able to tap into a talent pool other businesses had not.

Companies can also use STEM advancements to improve themselves. Artificial intelligence can be used to screen prospective candidates in ways that could reduce implicit human bias in the hiring process. Applicants who differ from the hiring manager could be advanced rather than unfairly overlooked.

Finally, there are several basic best practices for organizations that want to develop their cultures of innovation with diversity and STEM skills in mind. First, recruit creative minds. Expand traditional hiring pools. Second, compensate new hires well. Match company resources with research and development to stay competitive. Third, give employees room to experiment and take risks. Create and foster a company culture where failure is in fact an option if it leads to advancements and new opportunities. Finally, offer lots of prospects for education and networking. Get leaders on board to value talent development in ways that lead to greater creativity.

Focus on diversity and STEM development will lead to innovation, profitability, and employee satisfaction overall.



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