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The 4th Industrial Revolution - opportunity for skills development and job creation



The existing divergence between employer and youth skills needs threatens to become even wider as the 4th Industrial Revolution (4IR) transforms jobs and businesses quicker than the workforce can adapt.

Globally, many employers who are already struggling to fill vacancies cast a wary eye towards the future. Business owners, start-ups and even entrepreneurs are all facing the reality that their enterprises need to understand and effectively respond to 4IR disruption and rapid technological advances if they are to avoid obsolescence.

One of the most important challenges facing humanity today is how to understand and shape the new technology revolution. What exactly is this revolution, and why all the hype around it?

This blog is one of a few informational blogs where we will take you on an exploring journey covering the basics, challenges and the skills needed for 4IR by 2030.

What is the 4th Industrial Revolution?

The Fourth Industrial Revolution is the fourth major industrial era since the initial Industrial Revolution of the 18th century. According to Prof. Klaus Schwab from the World Economic Forum *“it is characterized by a fusion of technologies that is blurring the lines between the physical, digital and biological spheres, collectively referred to as cyber-physical systems”*. The 4IR captures the idea of the convergence of innovative technologies and their snowballing effect on our world.

The impact of the 4th Industrial revolution in South Africa

As Africa’s leading industrialised nation, South Africa has been preparing for the 4th Industrial Revolution for the past few years across its public and government sectors. It is important to know that the digital revolution, unemployment, education, and job creation are intrinsically connected.

Our South African reality is that we are already faced with huge unemployment challenges, with the majority of our population being employed in lower-skilled jobs.

Of concern is our digital economy, with skills shortages especially within the context of job creation and the promotion of local businesses. All businesses are being digitally disrupted, which presents an opportunity for a growing digital economy. Of course, skeptics are concerned that growth driven by the 4th Industrial Revolution will be even more exclusionary than in the past. While a lot of employed people are improving their skills set for a digital world, there are also thousands of school leavers every year without proper digital literacy. Apart from the lack of digital skills training at schools, we have to consider an improved technical education system so that people are equipped with the skills they need to flourish in the digital age. What we say is that in this digital age, unskilled or outdated digital skills won’t help as the youth and workforce who don’t possess or develop the higher-order skills will be excluded from opportunities.

While 4th Industrial Revolution technologies may have inspiring implications from a productivity, efficiency and creativity viewpoint, the real impact will be felt at a human development level by those who are not skilled for the 21st-century technologies.

What is the vision for 2030?

Most jobs currently require some level of digital skills, but it is predicted that 5,7 million jobs in South Africa will be digitally automated within the next 10 years. By 2030, robot automaton will fill approximately 800-million employment positions globally. Fifteen years from now, two-thirds of today's five-year-olds will find themselves in jobs that don't exist today, while the jobs that do exist won't necessarily be located where the job seekers live.

The National Development Plan (NDP) envisages that by 2030, South Africans should have access to education and training of the highest quality.

It is clear from the above that education, training and innovation systems should make provision for different requirements and produce highly skilled individuals. We desperately need the correct competencies to transform our society and shape our future.

What skills and competencies are needed for 4IR?

Some of the skills needed for 4IR are foundational skills such as Workforce Readiness, Soft Skills, Technical Skills and Entrepreneurial skills, etc.

- Professional competence requires programming skills, interpretation of failure notifications, quality control and maintenance tasks etc.
- Personal competencies include critical thinking, stress management and reliability etc.

To put this into context using a machine operator: apart from having technical and programming skills, the employee will have to cope with a large number of machines and for that he has to be reliable in his decision-making or aware of techniques to cope with stress and apply critical thinking from time to time when operating these machines.

Conclusion on the 4th Industrial Revolution and vision 2030

South African companies have a clear responsibility to provide life-long training opportunities to both our employees and our communities. The 4IR actually offers us a fresh and unique opportunity to address youth unemployment by specifically adjusting our education models to upskill the next generation and catalyse innovation for digital transformation.

Let's embrace this 4IR and vision 2030 where we all commit to strive for transformation, inclusive growth and job creation. South Africa now needs to draw on the strengths that we perhaps don't always fully appreciate having and to use these strengths to explore the new opportunities created by the fourth industrial revolution.

For businesses to prepare themselves, the management of staff within a changing work environment is important. *To address these challenges, SERR Synergy has developed training courses in innovation, communication and enhancing the analytical skills of employees to take advantage of this new dispensation.*

Sources:

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