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## Fourth industrial revolution and future of workforce

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### ABSTRACT

*With, the introduction of new technology, the skills in the workplace, are significant, since the 4th industrial revolution, the adaptation of automation and artificial intelligence will mark an acceleration over the shifts of even the recent past. Majority of employees do not have the skills to work with technology in the workplace. With the acceleration of industry changes, if current employees are not adapting to the situation the industries and employees both will be in critical issue and finally effect to the national economy as well. This paper will discuss what skills employees need to develop and how to adapt to the new workplace.*

**Keywords**— *New technology, Automation, Artificial intelligence, Technology in the workplace*

### 1. INTRODUCTION

All over the world, 4th industrial revaluation drives the technology and technology drives the disruption formally or informally while shaping the economies, people. The technology impact is complicated, sometimes unable to predict, it can be at once positive and once negative.

The requirement of skills, for instance, technological, social and emotional skills are in demand as well as physical and manual skills, will drop at the modern workplace. These changes will require employees to develop their existing skill sets at the expected level or acquire new ones. Companies need to think about how work is organized within their organisations with the latest technological changes.

In the next 10 to 15 years, the automation and AI technologies will transform the basic workplace, and people engage with smarter machines. This technology transformation and the human-machine interaction in the workplace are expected to bring numerous benefits such as higher productivity, quality of work, GDP growth, improved production performance etc., but it is required to change the skills of the human workers.

### 2. DISCUSSION

Some organizations have understood that the workplace skill levels of employees do not meet the needs of the rapidly changing business environment. It is critical to mention which skills are needed in current working environments, which skills will be required in the future, and at which levels of competency employees will need to perform in the organization.

The defining employee skills are a critical task, systems for analyzing, identifying, and measuring essential employee skills will grow rapidly and in many directions.

The demand for basic and advanced technological skills will increase in the workplace from 2020 to 2030. The advanced technologies required employees who understand how they work, can innovate, develop, and adapt to the new working environment. It is expected that the fastest rise of advanced IT and programming skills which will grow by at least 80% in the next five years. Since most of Sri Lankans are not much technologically adapted, there is also a significant need for everyone, employer and employee both, to develop the necessary digital skills for the new age of automation. It is critically important to mention here that Digital skills are the second fastest growing skills in the Asian countries.

As a result of the adaption of advanced technologies into the modern workplace and people interact with machines than before, the social and emotional skills need to be developed within the organization and outside of it, to behave human as human.

The relationship between digital technology and human emotion is no longer only a critical issue in the workplace. Social and Emotional Learning (SEL) and its application in education and the workplace will give tremendous assistance to develop digital workplace. As both fields continue to grow, the question of how to apply technology toward SEL will be no longer a daydream for the future, but a growing reality with powerful implications is required for the outcomes.

There will be a shift in demand for higher cognitive skills as well. Cognitive skills are the core skills that the brain uses to think, read, learn, remember, reason, and pay attention. Demand for the cognitive skills, for instance, creativity, critical thinking, decision making, and complex information processing, will be required in the modern workplace. The basic cognitive skills such as literacy, numeracy etc. will decline with the successful application of automation. However, basic data-input and -processing skills will be particularly affected until machines take over straightforward data-input tasks.

The largest category in the workforce is physical and manual skills. The need for these skills will continually decline with automation. The industry requirement for physical and manual skills has been falling for the last 10 to 15 years, and this decline will accelerate with automation. The requirement of physical and manual skills will depend on the amount of work automated in the workplace. The country like the USA, since the majority of work is already automated, the declining rate of physical and manual skills will be very low. But, a country like Sri Lanka, most of the operations are still using physical and manual skills, the declining rate will be high from 2020 to 2030. In a simple word, if we are unable to shift the skills, we will end up with high unemployment and need to import the skilled labour from another country.

### **3. RECOMMENDATIONS**

Talent is not always where it's needed and often cannot find. Workforce shortages will make a high impact on the GDP of the country. Acquisition and retention of human capital is the top risk of all organisations. There is no debate; companies need to adapt to new technologies, this change will require the redesigned business model and a new focus on the skills for the expected transformation process.

Another adaption strategy is a continuous learning process and instilling a culture of lifelong learning throughout the organisation and business cycle. When employees adapted to the culture, they will change with the working culture changes and shift the skills as per the requirement of the organisation.

The employees in agile organisations, ignored the traditional hierarchy entirely and decentralized power, are easily move with skill shift and the new culture, organisations will achieve for both stability and dynamism.

The top executives of the most of Asian Countries are not sufficient in the understanding of the technological breakthrough. Most of them believe that human resource is not a critical factor for the organisation, especially in this transformation process. Even if the current staff lacked sufficient understanding of technologies to lead the organisation, the proper training should be organised about how automation and AI change the working environment.

The retention of current employees is not a risk if teaching those new or qualitatively different skills and the new skills needed. These employees will have in-house functional knowledge, experience, and understanding of company culture etc. and it will be useful assets if proper training happened about the entire transformation process.

The redevelopment of employees is also a good strategy. Based on the skills capacity already they have, the re-development can be arranged in a changing workplace.

All of us need to address the issue of unemployment driven by technology. This is including the basic needs of the human and identifying the new sources of income for citizens. How underdeveloped countries respond to this situation that will increasingly struggle to catch up with the changes or end up with unexpected unemployment and GDP downturn. In the long run, they will need to create their internal markets to make the primary source of revenue.

Let me introduce the responsibility of the individual, workers at any level, students, parents or consumers; all must have clear idea about the future, the technological driven megatrends and what is your role today and tomorrow, how you change yourself to accept tomorrow's challenges.

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