



BRIGHT SPOTS

- The care economy could provide decent work Opportunities, and is likely to be less vulnerable to automation.
- Demand for sustainable products and services could generate new employment opportunities.
- Employment in tourism is likely to grow, driven by the access of individual service providers to digital platforms.
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(Source: Future of work in Sri Lanka -shaping Technology Transitions for a Brighter Future-ILO)

What impact will emerging technologies associated with 4IR have on the future world of work in Sri Lanka?

Today, radical system-Wide Innovation can happen in only a few years.

The interplay between fields like nanotechnology brain research,3 D printing ,Mobile networks and computing will create realities, that were previously unthinkable access to technology will spread like wild fire almost anyone will be able to invent new products and services cheaply and quickly.

The business models of each and every industry will be transformed. How do we avoid of joblessness low productivity and inequality?

If Sri Lanka is to become a prosperous country, the main development task of today is to produce a large enough number of entrepreneurs with a strategic vision. We must start training our country's manpower to use and produce automated tools.

To be operationalized With 4IR

Building in a virtual world



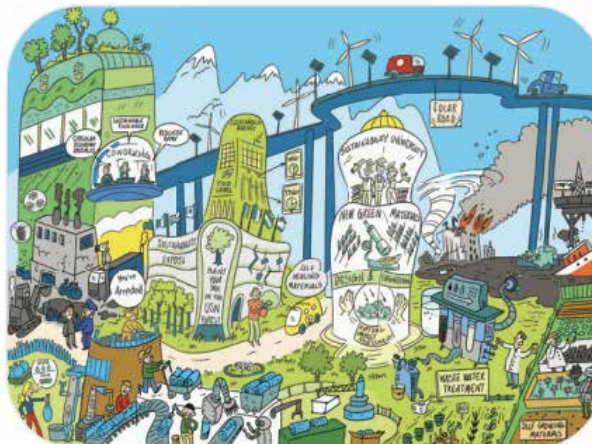
In an Era Where people are immersed in virtual reality in all aspects of life intelligent systems and robots run the construction industry.

Factories run the world



A corporate-dominated society uses prefabrication and modulaization to create cost efficient structures.

A green Reboot



A world with increasing conflicts over scarce resources and climatate change rebuilds using envireonment friendly construction methods and sustainable materials.

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Welcome To The Fourth Industrial Revolution



**"THAT IS BLURRING THE LINES BETWEEN THE PHYSICAL,
DIGITAL, AND BIOLOGICAL SPHERES"**
KLAUS SCHWAB -WORLD ECONOMIC FORUM



Department of Manpower And Employment
Ministry of Skills Development, Employment
and Labour Relations

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Human Capital Readiness

- Human capital readiness refers to the ability of an economy to respond to shifts in labour markets from both the demand and supply side. In addition, it depends on a current labour force's capacity to adopt and use emerging technologies while also cultivating the right skills and talents for a future workforce.
- To achieve human capital readiness, an economy has to create a high-skilled, agile, and multi-faceted labour force, with transferable skills, to face potential disruptions. Sri Lanka has long touted its high literacy rate.
- However, basic literacy and numeracy based employment are likely to suffer the most during the 4IR era. The country relative low-level of enrolment in tertiary education is, therefore, concerning only 10% of age 20 and above population has formal professional or technical training relevant to their occupation. Even in university, a vast majority study Arts subjects and relatively fewer study Science, Technology, Engineering, and Mathematics (STEM subjects) – a priority area under 4IR. Notably, even at the school level, the shares of subject qualified teachers in STEM subjects are lower than the recommended level. This indicates low human capital readiness.



Economic Agility

Countries at all levels of development can lay the foundations for improved economic performance in the future by Investing smartly in two categories: infrastructure and human capital, including Education and health.

A third category in this dimension is economic agility, which will measure whether the business environment is forward-looking and responsive.

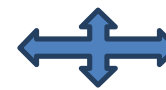
- Industrial, Services sectors given the sector's increased vulnerability to extreme weather conditions and diseases, 4IR technologies could improve information flows and find solutions to minimize such shocks.
- Given that the sector is experiencing an increasing labour shortage, labour replacing technologies could improve productivity without causing much disruption.
- Critically, only 6.7% of Sri Lanka's manufacturing value addition is estimated to take place through medium hi-tech and hi-tech industries. As such, the country is dependent on industries that are susceptible to losing value and becoming obsolete during the 4IR.

- Distrust of new technology, along with the unavailability of necessary capacities, has somewhat hindered the integration of technology into the production process thus far. Therefore, concerted efforts to improve trust in new technologies while improving the usage capacity of farmers and other stakeholders is vital.



Opportunities and Challenges for Sri Lanka

Challenges Opportunities



Agriculture	<ul style="list-style-type: none"> Extreme Weather Disaster Climate risks Reliable climate information Services Unreliability traditional weather forecasting Methods Adopted with traditional Forecasting Methods Distrust of new Methods Lack of Availability of sophisticated methods No Agriculture specific weather application Rising population Level Aging population 	<ul style="list-style-type: none"> Modern technology usage of mobile apps high use of mobile phones
Megatrends	<ul style="list-style-type: none"> Decline Productivity Urban dwellers Improving Social Welfare 	<ul style="list-style-type: none"> More workers entering to the Labour force
Social Security	<ul style="list-style-type: none"> Including protecting and re-Skilling workers for the Knowledge Economy 	<ul style="list-style-type: none"> Social protection Benefits
Trade	<ul style="list-style-type: none"> Unique challenges 	<ul style="list-style-type: none"> Right national policies and stronger regional cooperation
E-Governance	<ul style="list-style-type: none"> The Spreading of technology to generate economics transformation Including the enabling of faster 	<ul style="list-style-type: none"> Without a supportive foundation of strong governance

Industrial Revolution



The First Industrial Revolution started in Britain around 1760. It was powered by a major invention: the steam engine. The steam engine enabled new manufacturing processes, leading to the creation of factories.

The Second Industrial Revolution came roughly one century later and was characterized by mass production in new industries like steel, oil and electricity. The light bulb, telephone and internal combustion engine were some of the key inventions of this era.

The inventions of the semiconductor, personal computer and the internet marked the Third Industrial Revolution starting in the 1960s. This is also referred to as the "Digital Revolution."

Fourth Industrial Revolution is different from the third for two reasons: the gap between the digital, physical and biological worlds is shrinking, and technology is changing faster than ever.

4th Industrial Revolution

The technologically driven, Fourth Industrial Revolution (4IR) will mark significant changes in the modern way of life. However unlike other industrial revolutions, 4IR technologies are significantly more invasive, complex and evolve rapidly.

4IR, which includes,

- Artificial Intelligence (AI)
- The Internet of Things (IOT)
- Intelligence robotics
- 3D printing
- Neuron-technological brain enhancements

03 Critical Pillars of Digital Readiness



Sri Lanka in the Fourth Industrial Revolution

Digital Readiness

- Only 34% of Sri Lanka's population uses the internet. Whilst this is a rapid rise from less than 1% in 2000, and is higher than most other South Asian economies, it is significantly lower than comparator economies such as Malaysia, Thailand, and Vietnam. This lack of internet usage corresponds with a low national computer literacy rate of 22.9% in 2018.
- Notably, however, Sri Lanka has over 32 million cellular mobile subscriptions (70% of the population owns a mobile phone), albeit with just over 7 million fixed and mobile broadband subscriptions (approximately 21% of the population). Meanwhile, mobile cellular networks cover 95% of the country's population. The disparity in the availability of technological infrastructure and usage is most likely due to structural factors such as gender and sectoral disparities. For instance, the gender gap for internet usage is estimated to be as high as 40%. Furthermore, there are significant disparities in IT literacy levels between the Urban (36.9%), rural (22.0%), and estate 8.6% sectors.

These disparities thus indicate significant structural weaknesses of Sri Lanka's digital readiness for 4IR.