

Leadership, Innovation, Foresight and Development

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WEEKLY REFLECTION THE INDUSTRY 4.0

The impacts of globalization and the unprecedented technological irruption, can be seen in the economy and society of the XXI century, energized and driven by the Industry 4.0 in magnitude and depth resulting from the integration of the physical, digital and biological world¹.

The Internet of Things (IoT), robotics, quantum computing, artificial intelligence, 3D and 4D printing, synthetic biology, big data, the chain of blocks, virtual and augmented reality and a wide range of other areas are some concrete examples of an exponential development that promotes the creation of innovative models of production, organization and management in the knowledge society.

Connectivity, flexibility, integration, immediacy, virtualization and optimization of production processes are setting the course for an unprecedented way of conceiving the progress of humanity, demanding cutting-edge challenges in terms of human talent, digital transformation, cyber security and disruptive innovation.

Future generations will have to assume and lead new roles in terms of relearning and applying a higher dimension of human intelligence, understood as that which provides answers to global problems, such as: climate change, the exhaustion of food on the face of the earth, extreme poverty, access to drinking water, armed conflicts and forced migration; motivating imagination, reflection, design and creation of models thought of in complex systems that propitiate and generate solutions to issues of high connotation, incidence, transcendence and significance on a global scale.

Scientists and experts of diverse nationalities are working in laboratories and research centers, contributing to the development of science and technology, activities evidenced in the achievement of substantive progress, translated into studies and research of phenomena of varied nature, in a planet undergoing turbulent changes and additionally presents extremely antagonistic situations in health, education, access to basic services and goods, etc, This is a historic opportunity to aspire to and certainly achieve a reasonable use of resources -always scarce-, which are fundamental for the most vulnerable populations -least developed countries (LDCs)-.

The World Bank, in its recent report², indicates that approximately 100 million people will fall into poverty (income less than or equal to US\$ 1.9/day) during the course of 2020 due to the effects of the pandemic -COVID-19-.

World leaders have the excuse to change the course of events and inject incremental flows of money to research, development and innovation (R+D+i) with the north to contribute to sustained

¹ Schwab K., (2019), The fourth industrial revolution.

² Banco Mundial, (2020), “La pobreza y prosperidad compartida 2020: Un cambio de suerte”.

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and sustainable growth in pursuit of a greater goal, which is to mitigate the risks of various kinds to achieve a healthy life, away from disease and warlike conflicts that disrupt global harmony.

Research centers, universities, companies and public institutions can and should jointly promote the establishment of strategic alliances to move the knowledge frontier and advance towards as yet unknown stages that will facilitate the conditions around a more expeditious, prosperous and sustainable transit, as explicitly postulated by the UN in the 17 Objectives of Sustainable Development (ODS) to the year 2030.

It is highly imperative to have a HRPS³ vision, that is, holistic, resilient, prospective and sustainable that invites us to have a winning aspiration -agile strategy-, being the cultural change, adaptability, integral vision, knowledge, innovation, entrepreneurship and the existence of resources in quantity and quality, key pieces in the construction of desirable futures, preparing us in the medium term to the antechamber of what will be the entrance to the fifth industrial revolution (Industry 5.0), the beginning of an unimaginable future -at present-, however, we must be convinced that it will be very prosperous for human development from every perspective.

³ Oportus P., (2020), "global trends and the mining of the future", CEM USACH