

SPEECH BY HON. LAWRENCE KARANJA, CHIEF ADMINISTRATIVE SECRETARY, STATE DEPARTMENT OF INDUSTRIALIZATION DURING ZETECH UNIVERSITY'S GRADUATION CEREMONY HELD ON 12TH NOVEMBER 2021.

- **The Chairman, Board of Trustees Zetech University, Eng. Ken Mbiuki**
- **The Chancellor, Zetech University, Prof. Susan Alfano Nkinyangi**
- **The Chairman, Zetech University Council, Mr. Hassan Mohammed**
- **Members of the Zetech University Council**
- **The Vice-Chancellor, Zetech University, Prof. Njenga Munene**
- **Members of the Zetech University Management Board**
- **Members of the Zetech University Senate**
- **Zetech University staff**
- **Students, Parents and Guardians**
- **Distinguished Guests**
- **Graduands, Ladies and gentlemen**

Good Morning,

I am honored to join you today, as we celebrate this great milestone. Allow me to extend my hearty appreciation to the graduating class of 2021, who stayed on course, in the middle of COVID 19 global pandemic. As you step out to face the world, you can be sure that your lecturers have shaped your attitudes and created values that give you what it takes to conquer the world.

Theme and 1st Revolution

It is my genuine request that you remain aligned to the graduation theme of this year- **HARNESSING THE 4TH INDUSTRIAL REVOLUTION THROUGH ENTREPRENEURIAL EDUCATION RESEARCH AND INNOVATION.** The world of technology is drastically changing, and so should we. The first industrial revolution was witnessed in the 18th Century, with the biggest changes being witnessed in mechanization. This revolution was evidenced by the immense mining of coal and the invention of steam engines which powered machinery in industries.

2nd Industrial revolution

A century later; in the 19th Century, the world experienced the second industrial revolution. This revolution was signified by industrial advancements and the emerging of new sources of energy such as oil, electricity and gas. Telephones, telegraphs and the plane were some of the key developments of this revolution. The second industrial revolution is considered the most significant to date.

3rd Industrial revolution

Halfway through the 20th century, the world underwent another revolution; the third industrial revolution. This revolution was signified by computers, electronics and other forms of telecommunication. The emergence of nuclear energy and robotics were the key inventions of this revolution.

4th Industrial revolution

The world is now experiencing the fourth industrial revolution, otherwise known as industry 4.0. This revolution has seen the emergence of the disruptive technologies such as artificial intelligence, advanced robotics, internet and the creation of virtual realities. While the previous industrial revolutions focused on technological occurrences, industry 4.0 has brought innovations that give us room to bend the laws of physics.

These changes are likely to affect the traditional role of the industrial sector in economic transformation and growth and job creation.

Innovation and Industrialization.

My Ministry, through its agencies such as Kenya Industrial and Research Development Institute (KIRDI), is involved in research and development targeting MSMEs where they are involved in supporting an Idea to product development and standardization, training and capacity building, packaging, as well as facilitating patent registration. KIRDI does this through research & innovation and incubation centers in the Country that help promote research, innovation and training. For example it has set up laboratories in Nairobi and Kisumu to enhance research in renewable energy, food processing, engineering, textile and natural products.

COVID 19 in manufacturing

The COVID-19 pandemic negatively affected all economic sectors globally. In the Kenyan context the pandemic impacted negatively on the country's economic performance. The impact has been witnessed in the manufacturing sector whereby significant effect has been on investment capital, productivity levels, supply of inputs and spare parts and loss of employment opportunities. However the pandemic also created opportunities for the local manufacturing sector such as local production of Personal Protective Equipment (PPEs), medical devices and other consumer products to substitute imports in response to shortages occasioned by the disruption of global supply chain by the pandemic.

The continued emergency of disruptive technologies and the new normal emanating from the impact of COVID-19 pandemic calls for increased investment, adoption and application of research, technology and innovation in the manufacturing sector.

Innovation is about exploring new ideas in an enterprise and improving processes that may result into improved and new products in the market. Innovations in a business lead to enhanced efficiency, productivity and in improving market access. It therefore has benefits to any economy as they create value, growth and the much needed employment especially to our youths. Through research and innovation, it is now possible to participate in the circular economy which involves use of green energy, reducing waste, reuse and/ or recycling of materials. This way we are able to come up with new products, create employment and also mitigate on climate change.

Covid- 19 Pandemic in Education

The Covid-19 pandemic exposed the inadequacies of our education systems and challenged academic institutions to be better prepared and embrace digital transformation. I congratulate Zetech University for being among the first institutions to roll out and maintain e-learning throughout the pandemic.

iZET Hub

Innovation hubs play a crucial role in filling gaps among startups by linking them to talent and building their capacity through strategic mentorship initiatives. I note that Zetech University has been at the forefront of innovations, and I look forward to the innovations that will stem from the recently launched Zetech Innovation Entrepreneurship and Technology Hub (iZET) which will resolve some of the pressing problems affecting humanity.

To the Class of 2021

This is a defining moment for you. As you reflect on the challenges you have been through and the milestones that you have made in your academic journey, keep in mind that you have the necessary knowledge and skills to conquer what lies ahead.

In a few years to come, you will look back to this day and marvel at how much you will have achieved because all the sacrifices you have made will pay off.

Ladies and gentlemen

I would like to acknowledge the parents, guardians, benefactors, faculty and all staff who supported these graduands in this journey. There's no doubt that you too have

made sacrifices and taken on responsibilities, to ensure that these graduands focus on their studies.

Congratulations to the class of 2021, God bless us all!