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Developments Around Data in Botswana to support 4iR preparedness, Research, Innovation in a Developing Country

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The 3rd Industrial revolution of the 20th Century ushered in the 1st Information Revolution that brought the internet, digitisation, digitalisation and digital transformation and created a basis for knowledge-based economies. It is now widely accepted that the world is experiencing the advent of the 2nd Information revolution that is ushering in a 4th Industrial Revolution - a revolution that is characterised by a fusion of technologies to address current and future human needs. The 4th Industrial revolution is also characterised by large amounts and variety of data – coming from various sources at high frequency – and our ability to analyse them, in real-time and derive information and knowledge for timely decision making. It is anticipated that the 4th Industrial revolution will revolutionise Industry production processes through advanced automation (often referred to Industry 4.0), it also further anticipated that it will revolutionise practice and effectiveness in a variety of areas - health care provision (e.g. personalised medicine), development of Smart Cities, precision agriculture and help address weather and climate change.

There is therefore need for African countries and developing countries to respond to the onset on the 4th Industrial revolution (amidst arguably addressing challenges from previous industrial revolutions still unravelling in the continent). This will help to bridge the digital divide and help not leave anyone behind – and achieve Africa's vision 2063 – the Africa We Want. It will also help accelerate attainment of Sustainable Development goals through riding on technology advances, efficiency and transparency. There is need for Africa to transform its infrastructure, research & innovation ecosystems, skills and education systems etc – this for 4th Industrial revolution readiness and competitiveness of African economies and Africans in this new dispensation. Africa and African countries need to have tailor made responses to the 4th Industrial revolution and its implications to the African context. This can be done by concretising National, Regional and Continental Policy Frameworks, structures, resourced roadmaps and increased expenditure in Research, Science, Technology and Innovation and developing partnerships. The universities and other centers of knowledge creation and skills development must play a critical role. The Universities must be alive to this responsibility and aim to transform to be a research-intensive institutions – and is enhance their internal university innovation ecosystems including around data exploitation through innovations.

This talk will provide an update on the developments of around data in Botswana, this from the prism of policy and strategy development, research and Innovation, skills development and science communication for public and policy engagement – this to help address Botswana's socio-economic challenges and attainment of Vision 2036 – Prosperity for all and address 4IR preparedness. The talk will discuss developments around Botswana Open Data Open Science, Botswana Space Science and Technology Strategy Development, highlight example National Open Data projects and discuss the University Industry Government Co-creation Initiative that aims to foster innovation- including around exploitation of open data.

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