By Aimable Twahirwa;

KIGALI: Boosting innovation and using technology to build competitive and comparative economic advantages have been at the top of Rwanda's research and innovation policy agenda, says Dr Eugene Mutimura, Chief Executive Officer of Rwanda's National Council of Science and Technology (NCST).

Dr Eugene Mutimura, Head of Rwanda's National Council of Science and Technology

During the second phase of the Science Granting Councils Initiative (SGCI2) which begun in 2018, NCST is emphasizing the use of robust science, technology and innovation (STI) to strengthening its capacity through knowledge exchange with other national science councils in Africa.

SGCI program is based on a funding scheme benefiting to 16 science granting councils in Sub-Saharan African countries including Rwanda to support research and evidence-based policies that will contribute to economic and social development. It is a multi-donor initiative supported by the Swedish International Development Cooperation Agency, the United Kingdom's Department for International Development, IDRC, and South Africa's National Research Foundation.

Advancing scientific research capabilities

According to Dr Mutimura, Science granting councils played a critical role in supporting the consolidation of the existing nation system of innovation by focusing on three key pillars including STI Policy review, the Monitoring, Evaluation and Learning (MEL) framework and supporting the peer-to-peer learning.

Key areas of intervention in Rwanda concern national priority areas like sustainable energy, agriculture, and food security, as well as the Sustainable Development Goals to end poverty and hunger.

Apart from the interactions between policy instruments aimed at supporting knowledge transfer, key considerations have also been given to potential interactions with other science and innovation policies and with economic and social policies through the establishment in June 2020 of a national research coordination committee with a mandate to facilitate national institutions to advance national scientific research capabilities.

During an interview, Dr. Mutimura said that new forms of policy intervention are currently emerging and include adapting knowledge exchange to the digital age. With major focus on making sure that universities maximize the returns on their science, effectively ensuring technology transfer between universities and private sector — something that did not exist before in appropriate context.

Science-industry knowledge transfer

In a move to integrate Science, Technology, Scientific Research and Innovation in a framework that shall include capability building, technical transfer initiatives, and the promotion of innovation, in the context of the issues facing Rwanda, Science, Technology and Scientific Research has been considered during SGCI 2 as catalyst to underpin all public and private sector activities to enable the country's national strategies to be realized.

According to the rules, relevant authorities were mobilized to ensure that there is a demand for technology in industry and that this technology is used to build competitive and comparative economic advantages in line with the seven years policy blueprint of National Strategy for Transformation (NST1) to be achieved by 2024.

Whereas Rwanda's drive to establish a knowledge-based economy requires a solid STI governance framework in terms of policy, regulations, standards and coordination mechanism to create an enabling environment, the most pressing challenge during the implementation of SGCI 2, according to the head of NCST was about human resource. In addition, there was still a need to providing incentives to the different parties involved in science-industry knowledge transfer, including start-ups, SMEs, large firms.

The current science-industry knowledge transfer in Rwanda aims to ensure a modern and competitive Private Sector geared towards revival of industry and the service sector.

Among other challenges facing Rwanda to advance innovation and promote academia-industry in Rwanda during SGCI 2, include limited efforts to bring to the market a stream of new and improved, added-value, products and services that enable the business to achieve higher margins and thus profits to re-invest in the

business.

Although, the Public and Private sector in Rwanda have different strengths such as the research skills of the public institution and the entrepreneurial, marketing and business skills of the private, experts stress the need to ensure a link to bridge the gap between the public research institution and private enterprise through the engagement in scientific research and development specific to fulfill the needs of the private enterprise.

Monitoring and Evaluation Framework

In addition, experts believe that Science and technology in Rwanda still needs strong development to provide the knowledge base for all sectors of the country at a time Government is emphasizing to promote a sense of commitment in public and private sector institutions and individuals toward research and technological innovation as basis for human development and business success.

With large public investment in research, Rwanda placed increasing emphasis on boosting the impact of these investments, specifically by building stronger science-industry links. This knowledge transfer, according to Felly Kalisa, STI Policy Analyst at Rwanda's NCST has been key to transforming scientific breakthroughs into new products and services and is contributing to addressing more efficiently some challenges affecting the communities such as climate change energy, food and water supply etc.

In a move to support all these initiatives, Rwanda also launched since 2018 a National Research and Innovation Fund (NRIF) with the aim to support research and technology with particular emphasis to link young innovators with the labour market.

The Fund which is managed by the National Council for Science and Technology also aims to facilitate the implementation of the national research and innovation agenda.

Major targets of this funding initiative was to supporting ideas that are aligned with the country's priority areas of development, including agriculture, healthcare, energy, environment, ICT and manufacturing, among others.

Despite these efforts, latest Rwanda's National Policy Report shows that Science

and technology still needs strong development to provide the knowledge base for all sectors of the country. It is recognized that low standards of knowledge in these areas is reflected in the weakness of these areas in education, and needs to be strongly addressed, the report said.

Although there is now consensus that industry-science links are crucial, Monitoring and Evaluation Framework is another important milestone in the measurement of public attitudes to science in Rwanda.

But Rwanda’s NCST officials are convinced that an important step has been made with emerging practices implemented to foster knowledge transfer between science and industry. (END)