

NEWSLETTER

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BITRI Stakeholder Engagements

19-23

AUG

Science Week
Goodhope

03-06

SEP

SARIMA Conference
Somerset West, RSA

10-12

SEP

Electra Mining Botswana
Fairgrounds, Gaborone

24

SEP

BITRI Public Seminar
Gaborone

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EDITORIAL TEAM

Chief Editor:

Dr Batsheba Mbongwe

Editor: Lesego Moribame

Content & Pictures: Frank Rakgomo

Design & Layout: Tersara

CEO's Foreword

On behalf of the Botswana Institute for Technology Research and Innovation (BITRI) management and staff, and all key stakeholders, it gives me great pleasure to highlight some of our achievements and ways through which we endeavor to deliver on our Mandate, which reads, "...to identify, develop and/or adapt appropriate technology solutions that provides sustainable innovative solutions through co-creation and collaboration in line with national priorities and needs of Batswana."

Staying true to the ethos of our Mandate and our Corporate Strategy, BITRI continues to take part in stakeholders engagement initiatives throughout the breadth of the country to communicate how we can make a difference to communities and economic sectors within and outside the confines of our borders.

This quarter, we participated in the Business Botswana Northern Trade Fair (BBNTF) in order to reach out to the business community, and in the same forum, I had an opportunity to address stakeholders, including the business community, business advocacy bodies, investment promotion and regulatory bodies, as well as decisionmakers on the BITRI Mandate, our projects, as well as the potential for collaboration in the research development and innovation value chain. It should be taken into cognizance that some of what I put forward are ideas that are not commonly-adopted in practice, but for us to progress and attain a knowledge-based economy, we ought to support locally-produced products and solutions, and also devise ways to develop solutions that address our challenges, whilst reducing our dependency on solutions developed in developed economies.

The Academia-Industry Partnerships Workshop also enabled us to engage in the RDI space, ranging from local institutions including the University of Botswana (UB), Botswana International University of Science and Technology (BIUST), Botho University, Institute of Development Management (IDM), Botswana University of Agriculture and Natural Resources (BUAN); regional institutes, as well international partners such as the renowned University of Cambridge.

Another key platform, the BITRI quarterly Public Seminar, shared some insightful information on the pertinent topic of efforts made to find the best treatment for prostate cancer. The guest speaker Dr. Mike Sathekge, who is leading the research on that front, shared challenges and progress made in this regard. We also had engagements with other stakeholders, including Botswana Defence Force and the Southern African Development Community (SADC) Communication and Information System Working Group, the launch of Additive Manufacturing project, which is a partnership between our institution, UB, CUT and SAIS, the annual STEM Festival spearheaded by BIUST, the hosting of Boitekanelo College pharmacy students, as well as the annual World Intellectual Property Day (WIPD) commemorations.

We recognise the value of the Government of Botswana, partners, clients, BITRI Board, management and staff, the media and the society at large for supporting our efforts and we commit to being an integral part of the national ambition to 'Achieve Prosperity For All' as per the dictates of Vision 2036. Enjoy this edition, and we look forward to your engagement and input in delivering relevant solutions.

Prof. Shedden Masupe
BITRI Chief Executive Officer



BITRI Targets Corporates and Pupils at BBNTF

BITRI continued its programme on promoting public understanding and appreciation of research and development by joining other key stakeholders in exhibiting at the Business Botswana Northern Trade Fair (BBNTF) at Show Ground at Gerald Estates in Francistown. The 2019 edition held from 29th May to 2nd June was held under the theme “Innovate-Integrate-Industrialise.”

BITRI used the event to enhance awareness and market some of its products. The event also encompassed other components such as business networking forum, a golf tournament, business-to-business (B2B) and business-to-government (B2G) meetings as well as a fashion show.

The BITRI Chief Executive Officer, Prof Shedden Masupe when presenting at a Business Forum during the fair called for a mindset shift in research, development and innovation, advocating for deeper collaboration and use of locally-developed raw materials and finished products. Prof Masupe’s presentation titled “Innovating Solutions for Economic Development” covered the corporate overview as well as the main projects at BITRI. “I know someone is going to ask, ‘What is difference between BIH and BITRI?’ I will answer that upfront; BIH capacitates innovators and supports them. At BITRI, we do innovation - we create solutions. So, we could be capacitated by BIH. BITRI was set up to create solutions that are in line with national priorities. Another aspect of our mandate is that we have to commercialise those technology solutions that we produce, and we do that through collaboration and technology transfer. We intend for our work to transform lives. In our view, a solution that can transform lives in Botswana, can transform lives in Namibia, and in Tanzania, and the entire Sub-Saharan Africa,” explained Prof Masupe.

Prof Masupe beamed up the logos of some of the well-known brands and gave some examples to explain the difference in approach between the pull versus push approaches in product development and marketing. “Take an example of Facebook; do you think if they had gone to Tonota to ask people if they needed a platform accessible



BITRI Communications and Partnerships Manager, Ms. Lesego Moribame attending to high level delegates at the BITRI stand during the 2019 BBNTF.



BITRI Chief Executive Officer, Professor Shedden Masupe during the presentation at the BBNTF Business Seminar.

to the public, where they could share and store their pictures, do you think that people would have said 'Yes, this is what we need?'," quizzed Prof Masupe when explaining the push approach, which anticipates and develops products without undertaking market research.

"There are two approaches to developing a product; with the first approach, you can sit in a lab, develop a product, and push it to the people. The brands I have talked about did that because in their countries of domicile, the culture allows for that approach to take place. The second approach of market pull, where there is a need and you try to address that particular need, and for an economy such as ours, this is the approach we seem to take. Because you want to address national priorities, you identify the needs and try to address those specific needs. However, you need to balance between these two approaches," explained Prof Masupe.

Prof Masupe also outlined what he termed the 'Innovating for Development' process which includes identifying a need, aligning proposed solution to national priorities, identifying and evaluating already existing solutions, and solving a real-life technical problem. "It is important that, even if you were to source some inputs from elsewhere, you ensure that you use some local and natural resources in developing the solution," said Prof Masupe when stressing the need for sourcing local input and believing in the quality and locally-produced goods.

"Industry should engage and have their inhouse research and development units, or if you cannot afford at your scale, you can approach BITRI with a specific request. Also, the venture capital subsector should come forth and support innovation, especially at the formative stages where most technology entrepreneurial ventures are likely to fail due to undercapitalization. We need angel investors - there are some individuals in Botswana who have the capacity to play that role. And lastly, do not be afraid to re-invent the wheel. Taking the instance of software - you are made to believe in buying an off-the-shelf solution, and you are locked in to a contract that obliges you to pay two million Pula per year, while you can take the same amount to develop your own solution that you will not pay annual fees for," explained Prof Masupe in his concluding remarks.

The BITRI exhibition targeted pupils and students to enthuse them on taking up careers in Science, Technology, Engineering and Mathematics and promoting awareness of the Mandate and BITRI projects, while some effort was dedicated to soliciting key accounts for solutions such as SignCoach, the Fleet Management System and Nthusa.

Progress in Theranostics Treatment of Prostate Cancer

BITRI held a public Seminar in April, entitled “Theranostics in Prostate Cancer” focusing on progress in treatment of cancer using theranostics. The seminar is part of the BITRI Public Seminar Series held on a quarterly-basis, intended to share and exchange research ideas on topics of current relevance to our mandate in contributing to Botswana’s socio-economic development.

The guest speaker, Head of Nuclear Medicine Department at the University of Pretoria and Steve Biko Academic Hospital, Professor Mike Sathekge, commenced the lecture by giving the context of prostate cancer in relation to other types of cancers. “It is important that when we speak of prostate cancer, we do within the context of the incidence of cancer in males. Prostate cancer globally, is a problem. It is the most common amongst men. Where are we in the context of Botswana and South Africa? You have to know that the mortality is dependent of the size of the prostate. In black men, prostate cancer is also more likely to be aggressive or advanced. Despite being at the same stage of prostate cancer, black males show a large indication of bio markers that show the extent of cancer in the body. The size of the prostate is relevant and depends on where you were born, and clearly the socio-economic status is a factor in if the kind of food a person eats and if they can afford treatment once diagnosed,” explained Dr. Sathekge.



The Head of Nuclear Medicine Department at the University of Pretoria and Steve Biko Academic Hospital, Professor Mike Sathekge, during the presentation.

Dr. Sathekge also gave an overview of other cancer treatment options, which relatively, are less successful and some, prohibitively-costly. Accordingly, theranostics as an alternative, is aimed at achieving a higher probability of success in the treatment of cancer as it uses specific biological pathways in the human body, to acquire diagnostic images and also to deliver a therapeutic dose of radiation to the patient. This allows for targeting of tumours and receptor on the tumour, in comparison to the available options such as chemotherapy, that also target and affect non-cancerous cells and tissues. Theranostics, therefore, allows for administration of appropriate treatment, at the right time, and with the right dosage and with efficient targeting.

Regarding the progress of the project, Dr. Sathekge said "We have performed several first-in-human studies and introduced peptide receptor radionuclide therapy and peptide radioligand therapy in Africa. The new Theranostics treatment has less side effects as it uses targeted molecular imaging and therapeutic probes to specifically target affected cells."

Dr. Sathekge cautioned that despite the success of the Theranostics therapy, the treatment of cancer in the body cannot be achieved with mono-therapy and requires multiple therapies as is the case with diseases such as Human Immunodeficiency Virus (HIV) and Tuberculosis (TB).

Earlier during the Welcome Remarks, Member of the BITRI Board of Directors Dr. Poloko Kebaabetswe had painted a bleak picture regarding the prevalence of cancer, in the present and in the foreseeable future. "Cancer is a global scourge and continues to be major health problem. By 2012, there had been 8.2 million cancer-related deaths globally, while an estimated 75 million new cases are reported annually. Most of these cases are found in the African continent, especially in low to middle income countries," stated Dr. Kebaabetswe, adding that the prevalence was expected to be as much as 70 percent by 2030.

In his closing remarks, The Deputy Permanent Secretary, Ministry of Tertiary Education, Research, Science and Technology, Dr. Kekgonne Baipoledi implored men to go for prostate cancer screening so as to detect the biomarkers, so that in the case of a positive diagnosis, they can receive treatment on time. Dr. Baipoledi also shared with the audience that the Ministry (MOT) is tasked with engaging all stakeholders, inclusive of scientists, researchers, innovators and indigenous health practitioners in the health fraternity to develop solutions to health problems facing the country and expressed optimism regarding the full utilisation of the nuclear medicine and oncology department at the Sir Ketumile Masire Teaching Hospital.



Member of the BITRI Board of Directors, Dr. Force Thema posing a question during the Q&A Session.

BITRI Participates and Exhibits

2019 WORLD INTELLECTUAL PROPERTY DAY

Botswana Institute for Technology Research and Innovation participated in the World Intellectual Property Day (WIPD) 2019 commemorations held at Boipuso Hall, Gaborone. As Botswana's premier science and technology research institution generating considerable Intellectual Property, the Organisation showcased some of the products of IP and inventions in the form of SignCoach, the Fleet Management System and Nthusa. With the country's growth premised on diversified knowledge generation and commercial exploitation, it is fitting for all the stakeholders along the research, development and innovation value to develop a common platform in order to enhance the country's capability to move research and development results from the laboratory into new or improved products and services in the marketplace.

The theme for the commemorations was 'Reach for Gold: IP and Sports'. Activities on the day including the keynote address, panel discussion, debate session by secondary school pupils, and art competition were centered on the same. The Registrar General of Companies and Intellectual Property Authority (CIPA), Mr. Conductor Paul Masena when delivering the Welcome Remarks said Botswana's Intellectual Property space was still in its infancy. "There is a lot still to be done to create awareness on how intellectual property such as copyright, trademarks and patents can be used to derive economic value from locally-produced products. The Intellectual Property Day is one of the many avenues through which we can create this much needed awareness. The theme for this year's World IP Day commemoration is Reach for Gold: IP and Sports. A recent study on sports infrastructure, sporting goods, licensed products and live sports events is worth around 620 billion US Dollars, and a significant portion of sports revenue streams is generated by intellectual

property protected activities," elaborated Mr. Masena.

Mr. Masena explained that IP in sports generates wealth for sports people, making sport a sustainable commercial venture giving examples of the gaming industry, sports merchandise manufacturing and retailing, sports broadcasting, worldwide phenomenon such the money-spinning FIFA World Cup, and also creates employment opportunities for different professionals amongst them referees, administrators and sports journalists.

"This is the right time to discuss intellectual property and sports in Botswana. I say so because our own local sports personalities such as Isaac Makwala, Karabo Sibanda, Amantle Montsho and Nijel Amos among others, are making their presence felt in the international sporting space, in the process establishing their own personal brands. These brands have an unlimited potential to earn income for them through sponsorships, appearance fees, advertising deals and merchandising. It would not be surprising for an international brand such as Nike to develop, market and sell Isaac Makwala high performance training shoe," Mr. Masena impassioned.

The Keynote Address by Mr Jared F. Barrie of O'Melveny's Sports Industry Group was in a similar vein as Mr. Masena's remarks, as he started by regaling an example of IP exploitation in sports. "Linsanity... I don't know if anybody knows Jeremy Lin who played for the New York Knicks. I happened to work at another firm that was responsible for registering that mark. So, in New York, he just went on a rush of playing incredible basketball within a short window of time. It became his brand in New York... Linsanity, because it was almost like 'insanity.' And he had the presence of mind to recognize that there was equity in that slogan and that name. He contacted us to figure out what he should do to protect that name... that IP. He saw that as a long-term revenue stream and opportunity. So, we registered the trademark, we educated him as to what that meant and how to manage that brand, and it's been very lucrative for him," elaborated Mr. Barrie. Linsanity as a brand name has spawned a motion picture and a book, amongst other forms of intellectual property and commercial enterprise. Jeremy Lin, is a Harvard graduate and the NBA's first American-born player of Taiwanese descent, who during the 2011-12 NBA season, rose from being a relatively obscure player and became a global

at the National WIPD 2019

phenomenon, scoring important points for his team in important games and against formidable opponents.

The ensuing panel discussion focused on IP in sports and protection, use of sports to promote other offerings, including country marketing as well as IP in traditional games. These discussions were made more relevant by the presence and participation of local sports brands such All Kasi, Dlala and Diphetogo 'Dipsy' Selolwane, who served as the Director of Ceremonies on the occasion.

The annual WIPD is a collaborative effort between CIPA, BITRI, Botswana Innovation Hub (BIH), Department of Research Science and Technology (DRST), Copyright Society of Botswana (COSBOTS), with the United States of America Embassy providing support through various avenues such as training workshops for IP holders and sponsorship of the WIPD commemorations. For this year's commemoration, Botswana National Sports Commission as a principal umbrella body for all local sporting codes, was enlisted as a partner.

WIPD is celebrated annually on the 26th April, with a focus on enhancing awareness about the role that IP rights play in encouraging innovation and creativity.



The Registrar General of Companies and Intellectual Property Authority (CIPA), Mr. Conductor Masena delivering the Welcome Remarks on the occasion marking the 2019 WIPD.



Mr Jared F. Barrie of O'Melveny's Sports Industry Group on stage delivering the Keynote Address.



Director of Ceremonies, Diphetogo 'Dipsy' Selolwane, posing for a photo with Knowledge Commons Intern, Kealeboga Kgosidintsi at the BITRI stand.

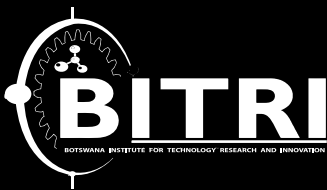


BITRI Associate and founder of Nthusa attending to a customer.

BITRI @ the BIUST STEM Festival

The annual Botswana International University of Science and Technology (BIUST) STEM Festival attracted researchers, innovators, pupils, students, and exhibitors from a wide spectrum of sectors and industries, who convened at the BIUST campus in Palapye from June 3rd to 7th. The event which mainly draws its market from Palapye and surrounding areas, was held under the theme "STEM Driven Economy: Transforming Research into Profitable Products and Services." The theme aimed to address means through which Botswana's push towards a knowledge-based economy can be enhanced by commercialization of research outputs.

The BITRI used the platform to promote awareness amongst pupils and youth, and exposing them to careers in Science, Technology, Engineering and Mathematics, as well as to promote awareness of the Mandate and BITRI projects. The organization has over the years, developed some products, and with some such as SignCoach, the Fleet Management System and Nthusa at the commercialization stage, customers got an opportunity to gain knowledge on these offerings.



BITRI Part of Cambridge Learning Trip

BITRI has secured a partnership grant with University of Cambridge, through the Cambridge Global Challenges. The Cambridge Global Challenges is a Strategic Research Initiative of the University of Cambridge that aims to enhance the contribution of its research towards addressing global challenges and achieving the Sustainable Development Goals (SDGs) by 2030.

Following the workshop at BITRI, a team of six colleagues from Botswana (four from BITRI, one from BUAN and one from UB) joined other colleagues from various African countries for a learning trip in Cambridge. Dr Mbongwe and Ms Radijeng attended workshop on Capacity Building in Research Administration with participants from Ghana, Uganda, Namibia and Sierra Leon.

BITRI Hosts Boitekanelo College Pharmacy Students

BITRI hosted Pharmacy students from Boitekanelo College. The group comprised of upcoming and enthusiastic pharmacists and pharmacy technicians, who due to the evolution of the field, must acquire skills to enable them to perform more clinical and patient focused role.

The students are training to form an integral part of the healthcare system and will be expected to perform more patient care activities, including counselling, medication management while ensuring that the medicines prescribed to patients are suitable. They will also be responsible for preventive care screenings as well as advising patients about medicines, including how to take them, what reactions may occur and answering patients' questions. The students were at BITRI to get a practical aspect of the analytical instrumentation and the analytical methods in assessing the quality of drugs. They got to see a variety of analytical techniques such as chromatographic, spectroscopic, electrophoretic and electrochemical and their corresponding methods that have been applied in the analysis of pharmaceuticals.



Students paying attention to Dr. Lesego Mmualefe presentation.

BITRI Hosts SADC Communication and Information System Working Group and BDF Military College

BITRI recently hosted a delegation comprising Botswana Defence Force and other senior ranking officers from the Southern African Development Community (SADC) Communication and Information System Working Group. The objectives of the visit were to understand BITRI functions pertaining to research and development (R&D) in Botswana, strides made in terms of R&D, BITRI's contribution to the SADC region and international R&D space, as well as challenges and opportunities pertaining to research in Botswana.

BITRI Chief Executive Officer, Professor Shedden Masupe gave the Welcome Remarks, and Director Research and Partnerships, Dr. Bathsheba Mbongwe and Executive Director Natural Resources and Materials, Prof. Asare Nkansah made a presentation covering the BITRI corporate profile and the key research projects. Following discussions and a Q&A session, the delegation was taken through a tour of the Solar Thermal Testing Facility (STTF) project and the Centre for Material Science laboratory facilities.

BITRI also hosted a tour for students from the BDF Military College, with a goal of apprising them on the operations and management of BITRI as a research institute.



BITRI Researcher under the Nanomaterials division, Dr. Segomotso Bagwasi showing the delegates a nanofiber sheet produced in the pilot-scale lab at the Centre for Material Science facilities.



BITRI Director - Research and Partnerships, Dr. Bathsheba Mbongwe giving an overview of the organisation and its key projects.

BITRI, UB, CUT and SAIS Launch

Botswana Institute for Technology Research and Innovation, The University of Botswana and Central University of Technology, Free State, with the support of The Southern Africa Innovation Support Programme (SAIS 2) have launched a project intended to develop an Additive Manufacturing (AM) Ecosystem. The project has Botswana and South Africa as participating countries, SAIS as the project sponsor, and BITRI, UB and CUT as the collaborative project partners.

The key objectives of the project are to establish an AM ecosystem through creating awareness, develop institutional capacity for regional innovation capacity, design and manufacture of some ten client-specific implants and devices including identification of AM devices and implants for commercialisation and developing a commercialisation strategy, to develop human capacity through workshops and short courses for joint solutions to medical challenges, as well as to develop institutional competence for regional innovation capacity.

The one-and-half-year project was launched during a workshop held at the UB conference centre from 29th - 30th April attended by representatives from the partner institutions, as well as invited stakeholders and the media.

The project follows a successful submission by BITRI, UB and CUT in response to a call from proposals issued by SAIS. The three partners already have Memoranda consideration to leverage on each partner's strength;

of Understanding between each other, and there was with BITRI's coming up with cutting edge designs and technical expertise, UB contributing the use of its AM facilities available to capacity building and training, plus possible access to the Sir Ketumile Masire Teaching Hospital resources and expert staff, as well as CUT leveraging on its capacity is one of the leaders in AM. During the life of the partnership, BITRI and UB will design medical products and CUT will manufacture the same.

In an interview with the BITRI Senior Product Designer, Shorn Molokwane, he explained that the application of AM must have an impact, as espoused in the BITRI approach to developing solutions. "Some of the goals of this project are to support manufacturing of innovative medical products, additive manufacturing of patient-specific implants as well as positioning guides through state-of-the-art technology platforms. We invited some of the local key stakeholders on board to help us identify to sensitise them about AM and its capabilities and for them to deliberate on how they can incorporate it into their operations to provide solutions as per their business objectives. The advantages of AM, in comparison to the traditional manufacturing process, are that has the capacity to enable direct manufacturing of complex geometries with ease, achieving therefore, a high degree of customization, making it ideally suited for patient specific medical device applications, as well as that it allows for combining of multiple parts and producing assemblies as single units."



BITRI Chief Executive Officer, Prof Shedden Masupe underscored the importance of collaboration and exploiting synergies between the partner institutions during his speech.



BITRI Senior Product Designer, Shorn Molokwane, giving a talk on the applications of Additive Manufacturing.

Additive Manufacturing Project

“In terms of its general application, AM delivers improved performance, complex geometries and simplified fabrication. As a result, opportunities abound for those who are willing to embrace the technology in other sectors such as manufacturing. In terms of its use in medical applications as per the scope of our project, AM offers patients improved quality of life, can be used at state and private health facilities, reduces costs of prosthetic surgery and time in hospital for patients and well as accelerated recovery periods,” elaborated Mr. Molokwane.

The project partners will work with local stakeholders such as the Ministry of Health and Wellness to identify the most suitable beneficiaries, as well as to overcome some of the challenges related to policy and professional ethics in related fields.

SAIS 2 is a regional initiative that supports the growth of new businesses through strengthening innovation ecosystems and promotion of cross-border collaboration between innovation role-players in Southern Africa. It is supported by the Ministry for Foreign Affairs (MFA) of Finland, in partnership with the Ministries responsible for Science, Technology and Innovation of Botswana, Namibia, South Africa, Tanzania and Zambia, and the Southern African Development Community (SADC) Secretariat.

Additive Manufacturing (AM), often used interchangeably with 3D printing and rapid prototyping, (which are in fact, subsets of AM), uses data computer-aided-design (CAD) software or 3D

object scanners to direct hardware to deposit material, layer upon layer, in precise geometric shapes. Materials normally used are thermoplastics, metals, ceramics, and in biochemical healthcare using material from silicon, calcium phosphate and zinc, with new research exploring the use of bio-inks fabricated from stem cells to form blood vessels, bladders and other organs.

The launch sought to bring together policy makers in the health sector, clinic administrators, medical practitioners, clinicians, designers, material scientists, engineers, manufacturers and research practitioners plus administrators in one setting to appreciate Additive Manufacturing, its role, possible impact and how they may contribute to its growth and make the best use of it for their respective professions and the wider benefit of the public.



Mr Gerrie Boysen, Director, Centre for Rapid Prototyping and Manufacturing at CUT, during a presentation of the project on design of patient specific devices.



Some of the prototypes.

ACADEMIA-INDUSTRY



BITRI Chief Executive Officer, Prof Shedden Masupe giving an overview of BITRI and welcoming the delegates of the workshop.

Botswana Institute for Technology Research and Innovation (BITRI), in collaboration with some of the local, regional and international key stakeholders, recently held a workshop under the theme 'Advancing the Impact of University-generated knowledge in the Southern Africa Development Community (SADC) through Academia-Industry Partnerships' programme.

The programme was borne out of the recognition that even though Africa is home to some of the world's fastest growing economies and rated the highly as a continent attractive for foreign investment, there is no substantial research and development (R&D) capacity to support future growth. The workshop was attended by representatives from BITRI, the University of Botswana (UB), Botswana International University of Science and Technology (BIUST), Botho University, Institute of Development Management (IDM), Botswana University of Agriculture and Natural Resources (BUAN), the University of Namibia (UNAM), Universidade Lurio (Mozambique), Universidade Nova de Lisboa (Portugal), as well as University of Cambridge (the United Kingdom).

The programme, under which this workshop was organized, is driven by the twin goals of addressing the advancement of academia-industry innovation eco-systems that benefit local communities in the SADC region, as well as the knowledge transfer systems and practices that underline such ecosystems. The recent workshop centred around particular research themes that, through collaboration with industry, have had or have the potential to be applied for the benefit of SADC communities. The central themes were around the key aspects of enabling R&D, physical and human capital for the improvement of the interface between academia and industry in Botswana, Namibia and Mozambique, as well as how policy can incentivize the research-to-innovation value chain to secure the application of endogenous innovation for the benefit of the relevant local societies.

When delivering the Opening Remarks, the BITRI Chief Executive Officer, Professor Shedden Masupe outlined the purpose for the establishment of the institution and its Mandate. "BITRI was set up to conduct research that will transform the lives of Batswana. Obviously, the research can transform the lives of Batswana, it can transform the lives of the Namibians, it can transform the lives of the Mozambicans, and it can transform the lives of the Portuguese," elaborated Prof Masupe while alluding to the potential for export of some of the BITRI products and innovations.

HOSTS

PARTNERSHIPS WORKSHOP

Prof Masupe also emphasised the need for a pipeline that would enable ideas to be taken up, developed and commercialized in a formalized and structured eco-system in which each stakeholder has role clarity and the customers and innovators know which partner or institution to consult and seek services from through the various stages of innovation and product development.

The Director of Research of the Cambridge Global Challenges (CGC) Strategic Research Initiative (SRI), Dr. David Good gave a background on their search for partners and said his organization had identified BITRI as one of the institutions they share common values with, and that their efforts culminated into a formal visit in March 2018. "While our ambition for the workshop is that you reconcile our unique perspectives, we have to hybridize these ideas and create some useful solutions. We hope after three days, all of us can generate something of value according to the kind of agenda that we have set," expounded Dr. Good.

The Permanent Secretary in the Ministry of Tertiary Education, Research and Science Technology gave an overview of the Mandate and Vision of the Ministry, which is responsible for policy on student financing, tertiary institutions and coordinating research science and technology development. Dr. Mooko said the work of MoTE is in tandem with Sustainable Development Goals, especially SDG 4 that prioritise Quality Education as well as the National Vision 2036, which is to 'Achieve Prosperity for All' through sustainable economic development driven by high levels of productivity.

"We believe that as a Ministry, whatever resources are invested, eventually, there have to impact the lives of the people. And, all the collaborations are not just about sharing, but resolutions of specific challenges or problems that our different countries face. We collaborate and co-produce solutions that are ready for consumption. We work with customers because, as researchers, we don't know everything. It is important to work with customers to come up with products that are relevant," explained Dr. Mooko.

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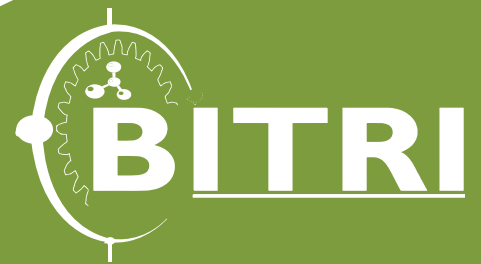
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TECHNOLOGY SOLUTIONS

FROM **YOU**
TO ^{US}
FOR **YOU**



Head Office
Maranyane House
Plot 50654, Machel Drive, Gaborone, Botswana



+267 360 7500



+267 360 7624



communications@bitri.co.bw



www.bitri.co.bw