NEWSLETTER

June 2018

BITRI
BOTSWANA INSTITUTE FOR TECHNOLOGY RESEARCH AND INNOVATION

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CEO'S FOREWORD

Welcome to another edition of the BITRI newsletter. We use a multi-pronged approach to initiating and maintaining dialogue with our stakeholders, with platforms such as kgotla meetings, Council briefs, Public Seminars, radio and television, as well as new media such as our official website and Facebook page to reach a wide audience as we possibly can, and the newsletter is just one of the multiple channels we use to keep you informed about our work.

This quarter, we are pleased to inform you of a significant appointment in BITRI, Dr Sebusang Sebusang, who joined BITRI on May 2nd, 2018 as Executive Director – Technologies. In this position, Dr Sebusang's responsibilities include leading, managing, directing, coordinating and supervising all research and development undertaken by BITRI in the areas of Information Systems & Technologies, Energy, Electronics & Communications as well as directing the support functions of Information & Technology, and Design and Manufacturing. We have utmost confidence in Dr Sebusang leading the Technologies department to achieve and exceed expectations in delivering on its projects, which are by orientation, crosscutting and applicable in all sectors of the economy.

In what could be considered a leap into the future, BITRI has introduced the Seding® V2 solar street light, a robust and forward-looking solar light that far surpasses the capabilities of the alternative solar light offerings in the market. The Seding® V2 streetlight is efficient, eco-friendly, durable with long-lasting components to boot, is not prone theft and vandalism and can be used in cattleposts, shopping malls, homes, offices and workshops, amongst the multiple uses. The progress made, is testimony to the Team Work ethos that we espouse at BITRI. Energy Division had adopted the earlier version of the light, and on the basis of their groundwork, the Electronics & Communications and the Design divisions worked to produce a solution that incorporates the views and needs of users.

Staying true within the framework of our Corporate Strategy, BITRI continues to participate 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. We participated in the Business Botswana Northern Trade Fair (BBNTF) in order to reach out to the business community, specifically those in the mining, tourism, and agriculture sectors, with the aim of sensitising them of the opportunities that exist for collaboration. Our work is borne out of collaborations and partnerships, and we drove this key message in our presentations and interactions with clients.

The BBNTF is also a good platform for spreading awareness of Science, Technology, Engineering and Mathematics (STEM) amongst the school-going demographic, and BITRI uses this platform to expose pupils to STEM at a young age. This approach, has proven to be a catalyst for creating a foundation for them to take keen interest in the field, and choose STEM-related vocations.

The Seding® V2 is efficient, eco-friendly, durable with long-lasting components to boot, is not prone theft and vandalism and can be used in meraka, shopping malls, homes, offices and workshops, amongst the multiple uses.

The BITRI Climate Change division also hosted Barolong Annual Field Day and a farm walk in Tlhareseleele in the Borolong District in May, with the objective of promoting the use of Climate Smart Agriculture (CSA) practices in rain-fed agriculture. Pages 8 and 9 delve into the details on how Mr Sello Motseko and other farmers use the CSA tool to improve their yields and mitigate the effects of climate change.

The Climate Change Division is tasked with leading adaptation and mitigation of climate change through sound scientific base, taking stakeholders on board by incorporating their views and practices into solutions. You are invited to engage with them for solutions that touch on climate proofing growth and development, climate projections, greenhouse gas (GHG) emissions and inventory, as well as the socio-economic effects of climate impacts and policy responses.

I hope you enjoy this latest edition. As always, we invite you to contact us, should you have any comments you would like to share or s solution you would like us to assist with.

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Dr Sebusang appointed BITRI Executive Director Technologies

Pictured Above: BITRI Executive Director – Technologies, Dr Sebusang Sebusang.

Dr Sebusang has been appointed as the BITRI Executive Director – Technologies. Dr Sebusang graduated with a BEng (Hons) in Mechanical Engineering from the University of Southampton, United Kingdom. He also has a PhD in Systems and Control Engineering attained from University of Bristol in the United Kingdom; and MBA from the University of Botswana.

Dr Sebusang is an experienced executive, consultant, project manager, community leader and director of companies with a record spanning more than 20 years in leading academic, corporate and non-governmental organisations. He has been an academic and member of Senate of the University of Botswana, Sesigo Project Director at ACHAP, Director of companies (Mmegi, MIMS Consulting), Director of regulatory bodies (BTA now BOCRA and currently the Engineers Registration Board (ERB). Dr Sebusang follows the permacultural philosophy of the problem is the solution, thus sees his role at BITRI as helping provide technology solutions to the country's economic challenges.

As Executive Director – Technologies, Dr Sebusang's responsibilities span leading, managing, directing, coordinating and supervising all research and development undertaken by BITRI in the areas of Information Systems & Technologies, Energy, Electronics & Communications as well as directing the support functions of Information & Technology, and Design and Manufacturing.

Dr Sebusang takes over from the inaugural Executive Director Technologies, Prof Shedden Masupe, who has ascended to the position of BITRI Chief Executive Officer.

BITRI
BOTSWANA INSTITUTE FOR TECHNOLOGY RESEARCH AND INNOVATION

MISSION

To conduct needs-based technology research that provides sustainable innovative solutions through co-creation and collaboration with local and international stakeholders.

VISION

To be the leading technology solutions provider that transforms lives.

TECHNOLOGY SOLUTIONS
FROM YOU TO US FOR YOU

VALUES

Teamwork

We operate and innovate through teamwork, and although we expect individual expertise, the team performance takes priority. The value of innovation through teamwork includes behaviours such as valuing contribution, accepting diversity, pro-active approach, collaboration and co-creation.

Excellence

We expect and encourage unquestionable technical and operational excellence in planning, executing, monitoring and continuously improving everything we do.

Empathy

We interact, operate and generate solutions that optimally balance the interest of all stakeholders.

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BITRI Introduces the Seding® Version 2 Solar Light

BITRI, through the works of the Electronics and Communications division in constant collaboration with the Design division, has introduced the Seding® V2 solar street light. The new and fully BITRI developed version is a response to customer feedback on the Seding® V1, adopted from CommLight, as well as the shortcomings of other current solar street light products in market.

Convectional solar lights currently in the market have some disadvantages in that they use inefficient light sources, require frequent battery changes, have non-optimized charging technology and are often exposed to theft and vandalism (that of the whole device and/or components). These are usually not durable and have a relatively high maintenance costs.

There are two variations of Seding® v2 at 2000+ lumens and 3000+ lumens of illumination capability. The Seding® 2000+ lumens consumes 13 Watts of power while the 3000+ consumes 19 Watts, and competing products normally require around twice the power to produce the same lumens, which is a highlight of how optimized the light is, in terms of energy harvesting and conversion to light. The product is full bright operation, and has an autonomy of up to three days with battery fully charged.

In completely dark areas, the lighting effect continues to ranges of about 100m, helping illuminate homesteads, masimo, meraka, shopping areas, workshops, primary and secondary roads, walkways, bus stops, parking areas, public buildings, island resorts and any social & security lighting application. This is due to careful LED selection and their ideal operation for maximal range and electrical energy to light conversion. This light also addresses the misconception of more luminance is better, in that certain LEDs are rated at higher power to luminance convergence than the ones used in Seding v2, but these only produce more distractful shine as opposed to actual illumination of the area, and that is why this product is able to cover a wide range in completely dark areas. There is far less dazzle and is relatively a much safer product to the eyes.

Where the Seding® May Be Used

- Residential areas and homes
- Masimo and meraka
- Shopping areas and malls
- Highways and secondary roads
- Walkways in commercial and industrial spaces, including offices and tourism accommodation facilities
- Bus stops, public parks and golf resorts
- Parking areas and public buildings
- Events to provide public safety

This product is recommended for various places, where in electrified areas it can significantly reduce the operating bills, at the same time being able to illuminate remote un-electrified areas by solar harvesting.

The products utilized in the development of this light are more eco-friendly, such as the Lithium-ion Phosphate battery which can be more safely disposed than the usual batteries, such as lead acid. The small size and higher power density makes for a more appealing design where all components are fully integrated into one unit, a design that improves safety, offer better protection to vandalism, as well as easier installation and maintenance on field.

Seding® Main Features

- Long lasting LiFePO4 Batteries
- High Efficiency LEDs with less dazzle and more scene illumination
- One unit integrated design (panel, battery, and all sub-systems)
- High efficiency charge/discharge control designs, reduced size, better illumination
- Waterproof housing

The light also used high efficiency of LED of over 140 lm/W, a guaranteed life time of more than 36,000 hours, with up to 278,000 hours expected. Moreover, the LED components experience little degradation over time, do not require cooling and has reduced attraction for insects. The average life of the Seding® light LED lamp component stands at 75, 000 hours, or over eight and a half years, which is 3.75 times longer the closest competitor technology that utilizes High Pressure Sodium lamps.

Seding® V2 Comparison with Competitor Technologies

Lamp Type	Avg. Life time [hrs]
Tungsten	1,000
Tungsten Halogen	2,000
Fluorescent	18,000
Compact Fluorescent	10,000
High Pressure Sodium	20,000
Seding®	> 75,000
Metal Halides	12,000

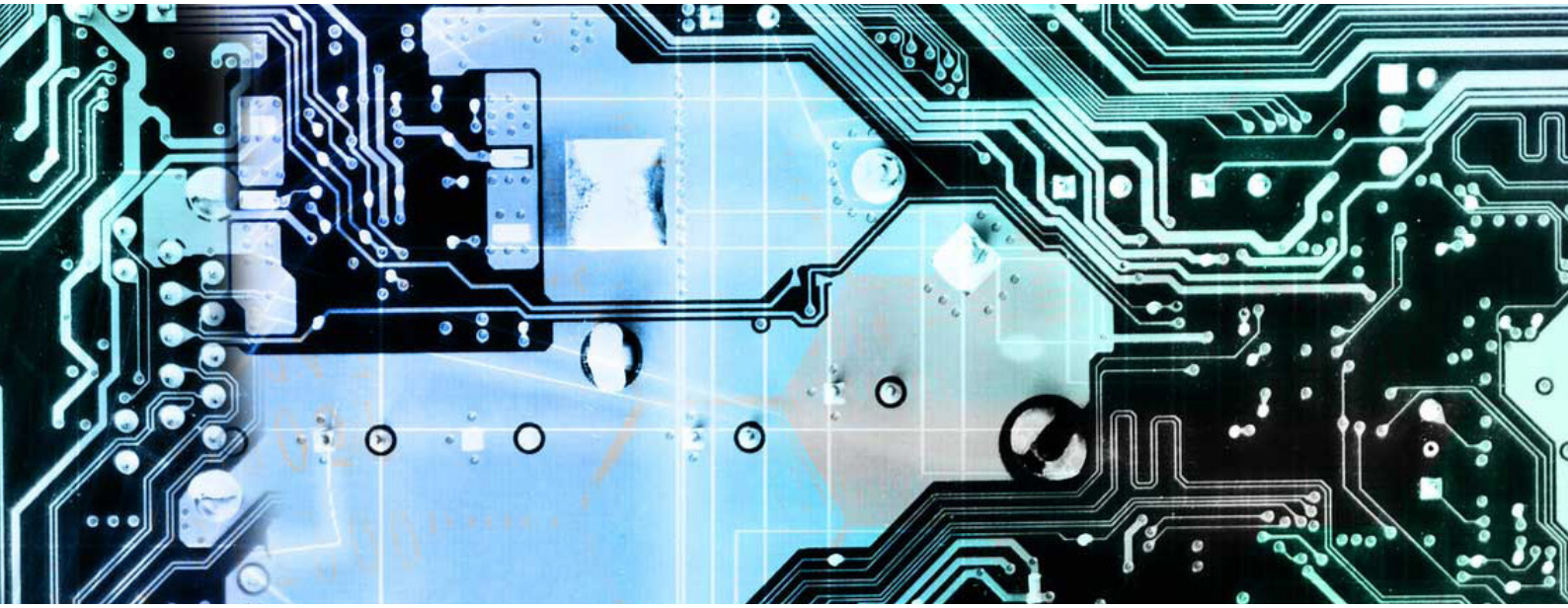
The light also, in comparison to competitor products, has theft protected mounting that uses anti-theft screw protection on a long lasting aluminum die cast waterproof housing. The light employs double housing concept for electronic components as an extra measure. The compact configuration of the light enhances the integrity of all the components, including the solar panel, which is ordinarily prone to damage, theft and vandalism in similar competitor products.

The Seding® v2 is in production at the BITRI production plant in Kanye and has been installed in several areas around the country, with more to be installed nationwide.

For inquiries and orders, please contact BITRI at communications@bitri.co.bw

The Seding (r) v2 lights lighting up a street, therefore, providing security for residents.

The Electronics and Communication division @ BITRI



The Electronics and Communication division was set up to improve efficiencies in all sectors of the economy, including but not limited to Government departments, Non-Government Organisations, private companies (startups and established) , as well as to provide cutting edge and highly influential electronics and communications systems.

The work of the division is divided into two programmes, namely Consumer Electronics and Smart Systems.

Consumer Electronics is a major cash-cow for developed countries especially, Asians countries such Singapore, China and Japan. The E&C division invests a lot of future-looking research into niche areas that can ascertain market control in development of key and mandatory electronic and communication sub-systems. All research is focused at the international market to attract foreign income and to exemplify electronics as a major possibility for economic diversification in Botswana.

In relation to Smart Systems, current and next generation electronics are largely based on smart decision making systems, with extreme cases being full automation. The E&C division has a comprehensive coverage of wireless sensor network applications to various economic sectors with all data to be stored in the BITRI cloud. This data is essential for customer use and remote monitoring and will be used in what is now a mandatory field, data analytics, for informed decision making be it in system design, policy formation, and everyday business influences. It is in this area that the E&C is most willing to collaborate with credible researchers in the field, to collect, store and analyse useful and credible data, which would be beneficial to various sectors on the economy.

Some notable projects the division is undertaking, at a glance;

- **The utilization of the Television communication band idle channels, termed TV White Spaces**, for provision of internet for last mile connectivity. This project was executed alongside the Information Systems Technology (IST) Division. This division had to standardize and help with the regulatory framework where the E&C team dealt with radio communications and IST engaged in smart control applications to ensure seamless utilization of idle channels without any interference to primary users such as BTV.

- **The Seding v3**, which is built on the Seding v2 electronics control platforms, but with introduction of smart wireless control systems to fit the desired application. The lights can be clustered for synchronized dim/bright operation. That is to say, if motion is detected by a particular light within a cluster, then the entire street can go bright and will dim at the same time for better illumination and awareness. This light is bright at 4500+ lumens with dim set at 2500+ lumens.

- **Water Quality and Sanitation Monitoring**, for fully automated water parameter measurement and access from any smart device with internet connection through utilization of the E&C's own wireless communication network platform, with which various sensors utilize with data collection to the BITRI server/cloud.

- **Next generation Intelligent Transport System** with aims of localized control and decision making at individual traffic junctions by utilizing E&C's developed vehicle sensors. This system will use far less energy than the current power hungry systems and intelligent systems, and eliminates the need for high cost installations, support service provision fees, and maintenance fees.

For collaboration and partnerships opportunities, send your inquiries to communications@bitri.co.bw

The lead host farmer for the walk, Mr Sello Motseko (in a Basotho ethnic blanket) taking the delegates through a tour of his field.

Climate Smart Agriculture Key to Improved Yields for Small Scale Farmers

BITRI Climate Change division hosted Barolong Annual Field Day and a farm walk in Tlhareseleele in the Borolong District in May under the theme "Climate Smart Agriculture: Ensuring Sustainable Production Under Uncertain Climatic Conditions" . The objective of the event was to promote the use of Climate Smart Agriculture practices in rain-fed agriculture.

Giving an overview of the event, the Secretary of the Goodhope Crop Farmers Association Mr. Masen acknowledge the traditional leadership, Department of Agricultural Research office in the region, the Department of Meteorological Services and BITRI in contributing support, expertise and resources to growing the agricultural sector in Borolong.

"The quality of a successful farming enterprise does not necessarily depend on the size of the field. You may have a big farm, but yield less harvest than a subsistence farmer with only two hectares of farmland. The target should be for a farmer to yield over sixty bags of grain per hectare, and if you fall way below that standard, then, you should reconsider your farming and farm management practices," elaborated Mr. Masen.

Mr. Masen said a delegation of the Goodhope Crop Farmers Association took a familiarization tour of some farms in the Free State in South Africa, and learnt some of the best practices in integrated farming which they aim to use to re-establish the Barolong farms as the granary of the nation. Mr. Masen extended gratitude towards BITRI for its intervention, which invariably lead to an improvement in yields for beneficiary farmers.

The day culminated in a farm tour and the lead host farmer for the walk, Mr Sello Motseko took the delegation through a tour of his field amongst them dikgosi, farmers, Extension Officers, and representatives of the various Government functions and explained how he managed his operation.

"My field is about eight hectares. I am on hand every day, and I participate in every aspect from ploughing, weeding, to harvesting. I am always on site, and I remember even the contractor who ploughed my field this year complimented me for my dedication because I was there every day, directing him on how I want my field to be ploughed. With this small field, my harvest per hectare is more than sufficient to make farming a sustainable business for me. My family, including children, also contribute labour and expertise in managing our enterprise," stressed Mr. Motseko.

On the second leg of the tour, the delegation proceeded to Mr. Cronje's farm. Mr. Cronje is a commercial farmer whose field is two hundred (200) hectares in size. The quality of the crop in Mr. Motseko and Mr. Cronje's fields were of similar quality, confirming the principle that farming practices, regardless of the size of the field, are the principal determinant of the success of a farming enterprise.

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Mr. Cronje explained how a farmer should chose breeds based on the availability of rainfall, as well as other concomitant conditions.

"The amount of rainfall has generally decreased, therefore, we choose cultivars based on the time of ploughing. Some varieties take a longer time to harvest, and would be best suitable during a season where there is plenty of rainfall. Since this year the rains came late, I chose a variety with early maturity, excellent drought tolerance rate and good tolerance to grey leaf spot," said Mr. Cronje.

Mr. Cronje advised upcoming farmers not to place paramount importance on the size of the farm, but work on good farming practices, amongst them good spacing of crops, which in his decades of experience, can attest that it leads to better yields per hectare.

IN his keynote Address, BITRI Associate Researcher – Climate Change & Society, Ms. Kgomotsego Motlopi gave an overview of the Climate Change division and the contribution of the Climate Smart Agriculture (CSA) initiative. The initiative was preceded by a study that identified risk factors to rain-fed agriculture, chief among which, were erratic rainfall and high temperatures. The beneficiary farmers of the CSA are supported with fertilizers, hybrid maize and cowpea seeds that mature early and give good returns and are encouraged to adopt the climate smart production methods that focuses on moisture and soil conservation. A dedicated team from the Climate Change division monitors the projects on a continuous basis. The project initially targeted dry land small scale farmers in Barolong and Kgalagadi South Sub-District, and has been extended and modified to cover similar scale farmers in the Northeast District.

BITRI had invited and facilitated logistics for farmers in Barolong and Kgalagadi South Sub-District, as well as the Northeast District for them to learn from farmers who have adopted Climate Smart Agriculture practices.

A farm used to demonstrate the efficacy of the Climate Smart Agriculture tool coordinated by the BITRI Climate Change Division. The crop is healthy and is not infested by weeds and pests.

A farm used as a control, without employing the Climate Smart Agriculture tool . The crop is tended to be conjested, yielding small cobs, and was generally infested by weeds and pests.

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The BITRI Centre for Material Science

The Botswana Institute for Technology Research and Innovation (BITRI) is a parastatal under Botswana's Ministry of Tertiary Education, Research, Science and Technology, established with a Mandate to identify, develop and/or adapt appropriate technology solutions that provide sustainable innovative solutions through co-creation and collaboration in line with national priorities and needs of Botswana. The technologies will as much as possible maximize the use of local materials to ensure efficiency and affordability.

BITRI has established a world-class Centre for Material Science (CMS) with state of the art laboratory facilities, such as XPS, XRD, XRF, SEM, high resolution GC/MS, LC/MS and ICP/MS. The CMS has synthesis capabilities for metal nano particles, electrospun nano fibres and materials characterisation that will serve the research needs as well as the commercial materials analysis needs of Botswana and Africa across a variety of sectors.

BITRI invites all interested parties to use the facilities for a fee.

For more information, contact Thatayaone Tladi

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BITRI @ the 2018 BBNTF

BITRI's Elliot Kablay showing the pupils how the mhele online game is palyed. The game is played on the same principles as the traditional version, except that the BITRI version is played on mobile devices.

BITRI participated in the Business Botswana Northern Trade Fair that was held in Gerald Estate, Francistown from 23rd - 27th May 2018. The fair, in its 24th year, provided exhibitors with an opportunity to actively promote their business and network with other exhibitors. Held under the theme "Is tourism Botswana's hope amidst dwindling mining fortunes?" the gathering is a platform for exposure for the city of Francistown. BITRI participated with the twin goals of promoting research with emphasis on Morabaraba, Signcoach and mhele games as well as sensitizing stakeholders about opportunities for partnerships and collaborations.

In the Official Opening Remarks, Okavango Diamond Company Managing Director, Mr Marcus Ter Haar implored the business community to come up with new concepts of doing business.

Mr Ter Haar said, although he agreed with the general proposition of the theme, mining was still a viable and profitable venture, and urged businesspeople to explore and exploit opportunities, including those in the mining value chain.

"Though tourism is the new engine of economic growth, there is still a new sense of confidence in the mining industry, particularly in the diamond industry. There is still potential on diamonds given the high demand of the precious stone globally," add Mr Ter Haar.

Given the context of the advent of synthetic diamonds, Mr Ter Haar said authentic diamonds, had a premium of over 40% over synthetic diamonds, and the market still preferred authentic diamonds over the synthetic type. Mr Ter Haar impressed upon the delegates to add value to the economy by creating a new business venture through effective use of knowledge, passion, dreams and desires, thereby, enhancing the standing of their enterprises and that of the country within the global economy.

The fair attracted one hundred and twenty (120) exhibitors amongst them Small and Medium Enterprises (SMEs), insurance companies, service industry, tourism enterprises, parastatals, and Government Departments. This annual event presents opportunities for exhibitors creating brand awareness, customer relationship management and promoting sales for products and services.

The event was organised and coordinated by Business Botswana.

A customer learning basic Botswana sign language using the Signcoach application. Assisting the customer is BITRI's Selinah Baalafeng (left).

BITRI Commemorates World Intellectual Property Day

Pinkie Nkhwa attending to the judges at her stand. The theme for this year , titled "Powering Change: Women in Creativity and Innovation" presented a platform for women in the creative and innovation fields to showcase their products and spread brand awarness for their businesses.

As one of the creators of intellectual property particularly technologies or inventions, BITRI joined other important stakeholders to commemorate the World Intellectual Property Day (IP Day) on 9 May 2018.

The IP Day was celebrated under the theme "Powering Change: Women in Creativity and Innovation". This year the world celebrated and recognized women who had significantly contributed to the betterment of lives by creating useful technologies and different works of authorship. The brilliance, ingenuity, curiosity and courage of the women who are driving change in the world and shaping the future were celebrated across the globe. According to the World Intellectual Property Organization (WIPO) website, the fields of biotechnology, pharmaceuticals and chemistry show the highest rates of women named as inventors (creators of technologies) in international patent applications filed via WIPO. New data reveal that in total, women were listed in 31 percent of the 243,500 international patent applications published by WIPO in 2017.

Intellectual Property (IP) protected with appropriate intellectual property rights have proven to speed up creativity and innovation across the globe. Creators both big and small, individuals, organizations and firms as well as individual countries have leveraged on IP to obtain competitive advantage in the market place, diversify economies, build knowledge economy and become globally competitive.

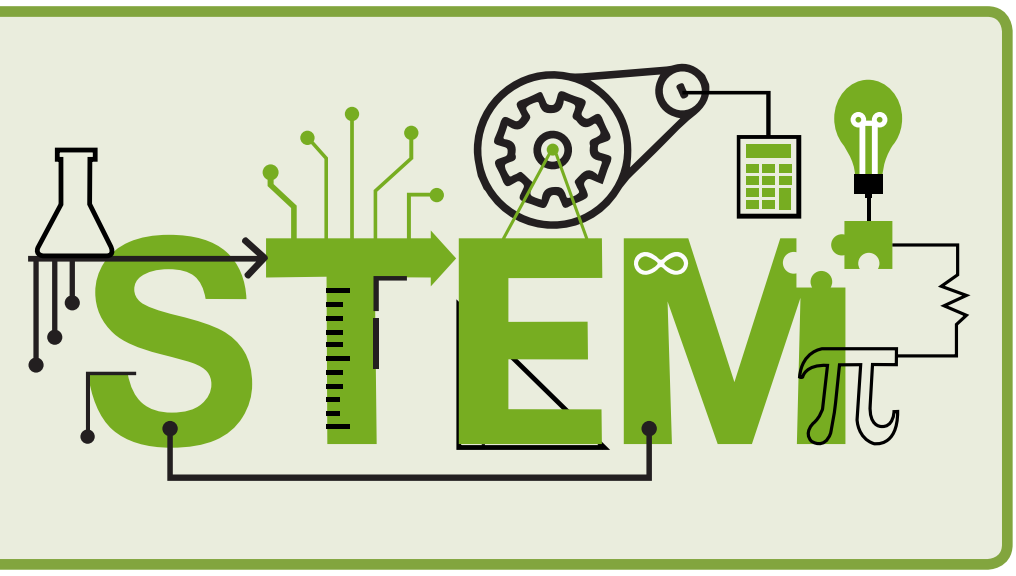
The Copyright Society of Botswana (COSBOTS), an organization established by the Copyright and Neighboring Rights Act, Cap. 68:02 of the Laws of Botswana, to collectively manage intellectual property rights of various creators in the literary and artistic domain, Botswana Innovation Hub (BIH), Ministry of Tertiary Education, Research Science and Technology (MOTE) and the Companies and Intellectual Property Rights Authority (CIPA) coordinated the IP Day this year.

In Giving closing remarks the BITRI Communications and Partnerships Manager, Ms Lesego Moribame encouraged women present at the commemorations especially those who were exhibiting their wares not to be discouraged by challenges in their businesses. She encouraged them to learn from each other and create forums where they can share ideas and experiences. "Take advantage of the various platforms to market your products and make use of the various government funding initiatives to grow your business" she said.

BITRI Communications and Partnerships Manager, Ms Lesego Moribame giving closing remarks.

The platform also presented an opportunity for stakeholders to converse about challenges for women in the creative and innovation space as well as to ruminate on how to provide a conducive environment for their success.

Lesetlhana Primary School Tours BITRI Nanomaterials Lab



Lesetlhana Primary School visited the BITRI Nanomaterials laboratory facilities to develop awareness on the interrelationship between Science and its application and relevance in their daily lives.

The familiarization tour entourage, comprising over one hundred and twenty pupils and their teachers, learnt about the Mandate of BITRI as well as nanotechnology and its use to making the products that pupils encounter and use daily, but not aware of the technology behind their production and functionality.

A lineup of Researchers were on call to explain their work to the pupils, at the same time inspire them to appreciate how the work of the division can improve their lives. Bakang Modukanele's presentation primarily focused on the functionality of the Scanning Electron Microscope, which performs complete material characterization.

This is an image of a strand of hair of one of my colleagues" said Mr Modukanele, directing the pupils to an enlarged image of a sample on the computer screen.
"We wanted to examine its structure and authenticate, if indeed it belongs to him. This microscope enables you to see the structure of any material, which you otherwise would not be able to do see with the naked eye. In this lab, after materials have been fabricated in other laboratories, we take samples of such to examine their structures, and verify if indeed, they will be able to serve the intended purpose," explained Mr Modukanele.

Pupils also got an opportunity to view objects such as the needles, roots and pollen grains in detail to further their understanding.

Dr Lesego Mmualefe, with the use of samples, explained the materials fabrication process, specifically for the purpose of producing water filtration media. The pupils went through the different labs, and were shown granules of polymers, how they are converted to liquid state and ultimately nanofibers for different applications, depending of the goal of the research project.

The pupils were also taken through other laboratories with equipment that have the capacity to do material analysis, and example of examining water for microbes and other elements and determining it suitability for human consumption was used.

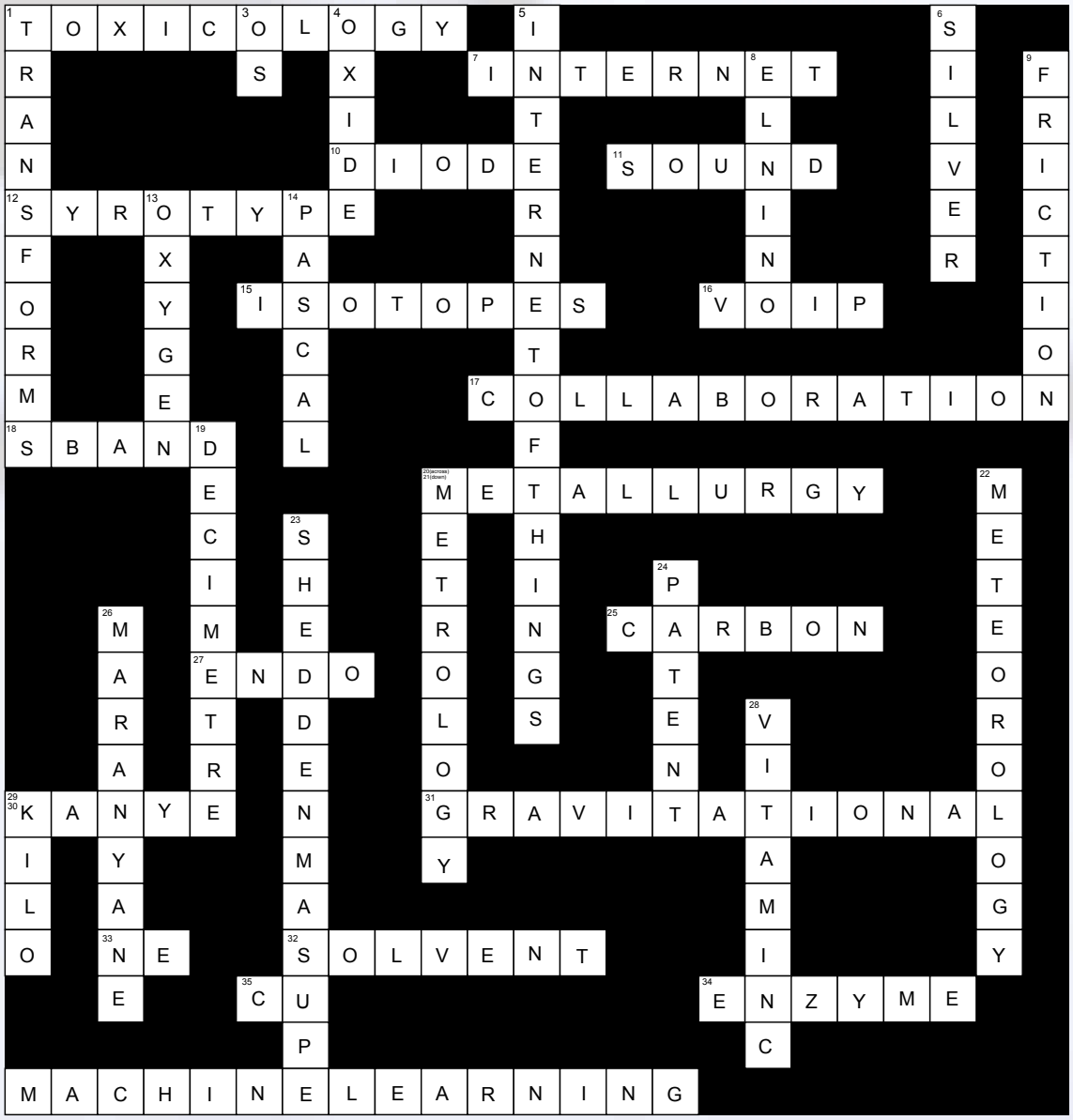
"With the equipment in this lab, we can, for instance, check the quality of the water that we drink. We can test for salts such as magnesium, calcium and iron to check if they are within acceptable levels permissible for human consumption. This equipment helps us determine the quantities of such substances. We can then reduce, in some cases, remove some harmful substances to human and animal health," explained Ms Masego Leshona.
Kefentse Tumedi, in simple terms, explained the work done in the microbiology laboratories.

"The equipment in the microbiology laboratory helps us with diagnostic and environmental testing on various types of human and environmental specimens submitted for laboratory diagnosis. Using an example in which a child gets sick after drinking supposedly clean water, a customer would bring a sample of the water to us for testing of the presence of bacteria. We would use a media that bacteria feeds on.

We would then incubate the sample at a temperature of around 37 degrees Celsius, which is the nominal body temperature of a human being. Some bacteria make us sick because they can live in that range of temperatures. The presence of bacteria will be confirmed by the growth of strands in the media. We would then check the exact nature of the bacteria. For some of our applications here, we would also test if the material fabricated for the purpose of water filtration can filter out microbes of water," explained Mr Tumedi.

The familiarization tour forms part of an effort to sensitise stakeholders about the work the organization does as well as to enhance interest in Science, Technology, Engineering and Mathematics (STEM) amongst pupils from a young age. The pupils were also informed about the career and business opportunities under STEM, with a view to build a pool of future scientists and STEM entrepreneurs.

Answers for the March 2018 Puzzle



Events worth noting..

Botswana Consumer Fair	27th Aug- 2nd September	2018
BITRI Public Seminar	4th September	2018
SA Innovation Summit	12th -14th September	2018

DIACORE
GABORONE
MARATHON

BITRI @ THE 2018 DIACORE GABORONE MARATHON

Each year, **#BITRI** sponsors a team of employees to participate in various events, foremost being the Diacore Gaborone Marathon in order to enhance staff morale and well being.

The joy and excitement is palpable, even from the pictures.

#TeamBITRI

TECHNOLOGY SOLUTIONS

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FOR YOU

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BITRI invites all interested parties to use the facilities for a fee. For more information, contact Thatayaone Tladi

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