

A young boy with dark, curly hair, wearing a light blue polo shirt, is smiling and focused on building a robot. He is using white and grey LEGO Technic bricks to construct the upper body of the robot. The robot has two large black wheels and a green motor. He is sitting at a wooden desk in a bright, modern classroom or workshop setting with shelves and a window in the background.

TIA SUPPORTS YOUNG INNOVATORS

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FROM THE DESK OF THE CEO

Dear valued stakeholders, it is my pleasure to present to you TIA's first Newsletter. This is an important initiative to keep you informed of the Agency work, our achievements and how we are responding to key developments of our National System Innovation.

We are launching this newsletter at the end of the first quarter of our new financial year 2022/23, this on the back of a year that saw the Covid 19 pandemic beginning to slow down, with decreased impact on the organisation ability to execute its mandate. However, the economy remained constrained the fiscal tight and unemployment continue to rise especially amongst the youth. As with many government initiatives intended to mitigate and contain these impacts TIA also played its part by supporting the commercialisation of technologies that contribute to economy recovery addressing challenges of distressed communities and protecting the health of our citizens.

In June the country marked the 46th anniversary of the June 16. On this day we remember and salute the brave and courageous youth who were at the forefront of the struggle for liberation. The South African government dedicated the month of June to the Youth. The declaration honours the contribution of the youth in the struggle for the liberation of South Africa. The Youth Day Commemoration this year was celebrated under the theme "Promoting sustainable livelihood and resilience of young people for a better tomorrow." This year's youth month was engulfed with sadness as 21 young people died tragically in the Eastern Cape, may their souls rest in peace.

Unemployment among the youth remains a challenge for South Africa, the government has made a call to the private sector and other stakeholders to collaborate in eradicating youth unemployment. TIA has continued along the trajectory to make a meaningful contribution to the country's national agenda. I am pleased to announce that TIA in collaboration with the Department of Tourism launched the Tourism Technology Grassroots Innovation Incubator Programme (TTGIIP). Twenty tech savvy entrepreneurs, between the ages of 18 and 35 were selected to begin a two-year journey in a tourism incubator programme to advance the design and business viability of their prototypes and innovations. The programme is aimed at introducing a pool of innovators to spearhead concepts that will stimulate the growth and recovery of the tourism sector. This is in line with TIA's vision of industry builder.

The agency has continued to make concerted efforts to build partnerships with institutions that share similar vision with ourselves. A few of these that have been recently established are worth highlighting;

- A partnership fund of R28million with the SAB Foundation to co-invest in a Social Innovation Fund, a Disability Empowerment grant, and a University Seed Fund.



- The Irish Tech Challenge South Africa Fund, a new initiative of the Embassy of Ireland, TIA and the DSI that targets tech businesses that address the United Nations' Sustainable Development Goals ('SDGs'), through climate or med-tech solutions, with a particular focus on women and young entrepreneurs.

TIA is committed to increasing its strategic positioning in the National System of Innovation. In this regard TIA participated at the international BIO convention held in the USA. This convention represents an important gathering of biotechnology stakeholders from policy makers, research community, business, bio-entrepreneurs and importantly, international partners.

The President highlighted several priorities in his state of the nation address including accelerating the economic recovery, economic reform to drive inclusive growth among others. There is a growing need to support economic growth and to improve the quality of life for all South Africans. TIA continues to support innovations aimed at stimulating different sectors of the economy. TIA stands ready as a willing and able collaborator to deliver on critical interventions necessary to support the state on the path of inclusive economic growth and social development.

Allow me, once again, to thank each and every one of our stakeholders and partners for the continued support and valuable contribution in ensuring that TIA delivers on its mandate. I invite you to walk this journey with us. Your commitment contribution towards the success of TIA is invaluable.

I hope you enjoy this edition of the newsletter.

Patrick Krappie, ACEO

MEET THE TIA BOARD



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Board Member



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Board Member



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Board Member



Deputy Minister of Department of Tourism, Mr Fish Mahlalela

COLLABORATION WITH TOURISM A BOOST FOR YOUNG INNOVATORS

YouthInTourism – TIA, an entity of the Department of Science and Innovation (DSI) in collaboration with the Department of Tourism, launched the Tourism Technology Grassroots Innovation Incubator Programme (TTGIIP) introducing a pool of innovators to spearhead concepts that will stimulate the growth and recovery of the tourism sector.

Twenty (20) tech-savvy entrepreneurs, between the ages of 18 and 35, were selected to begin a two-year journey in tourism's incubator programme to advance the design and business viability of their prototypes. Once finalised, the innovations will be introduced to the sector and potential investors for funding, implementation, or as resources for new ventures new ventures and new business entrants in tourism.

"The partnership with the Department of Tourism is part of TIA's Hub and Spoke Partnership model that seeks to expand the impact of innovation in the country by forming partnerships with government departments. Through the TTGIIP we will see young people demonstrate the role of technology in catalysing sector growth through the development of enterprises that will stimulate job creation in the tourism sector," said Dr. Anitha Ramsuran – Manager

Innovation for Inclusive Development (TIA).

"We hope that the success of this first cohort of TTGIIP innovators is testament to the role of TIA as industry builder. TIA will play its part in facilitating and translating the innovations of the twenty (20) tourism entrepreneurs into sustainable enterprises that will make an economic impact not just in the industry but in their communities as well," Dr Ramsuran concluded.

As the impasse of the COVID-19 pandemic steadily dissipates, the grim economic conditions are a stark reminder for government and the private sector to look beyond conventional business methods to rebuild the economy.

The Tourism Sector Recovery Plan advocates for the use of technology as an integral element in tourism operations. Digitalisation has the potential to open new frontiers, and improve resource management efficiency and sector competitiveness.

Addressing guests at the launch, the Deputy Minister of Tourism, Mr Fish Mahlalela said tourism's significance in the country's Economic Reconstruction and Recovery Plan (ERRP) is asserted by its ability to generate demand and production opportunities across various sectors of the economy. Leveraging on innovation and technological advancements bodes well to accelerate the sector's recovery, whilst creating sustainable and inclusive opportunities that

promote industrialisation.

"Technology advancements play a fundamental role in the growth and sustainability of tourism. Innovation, coupled with a multi-stakeholder implementation approach that encourages private sector and civil society participation, will be critical to the success of the TTGIIP. The gains of this initiative will create opportunities on the demand and supply side of tourism – empowering communities, promoting inclusiveness and driving the socio-economic recovery of the sector," stated Deputy Minister Mahlalela.

The launch of Tourism's Tech-Innovation incubator takes place aptly in Youth Month as we acknowledge the gains borne out of the actions of the youth of 1976 in the liberation of the country. The youth, who constitute a large majority of the country's demographic, have been hard hit by the economic devastation brought on by the COVID-19 pandemic. As we observe Youth Month under the theme: 'Promoting sustainable livelihoods and resilience of young people for a better tomorrow,' we envisage the TTGIIP inspiring and uplifting the youth to pursue their business ideas and innovations that will unlock sustainable livelihoods," said Mahlalela

"The TTGIIP is aimed at ensuring the meaningful involvement of youth and women in the travel and hospitality industry by capitalising on their intellectual and technological prowess to evolve traditional business systems and practices to stimulate new services, entrepreneurial and job opportunities in the sector," added the Deputy Minister.

As tourism steadily recovers, consumer demand for diverse and niche tourism offerings will increase. The sector needs to leverage on technology and innovation to meet the demands of travellers.

Tourism is a people-centred activity that thrives on interaction, exploration and the exchange of our diverse cultural experiences. Technological advancements have delivered the world in the palm of our hands through smart devices, and enabled us to connect and share our experiences – even through a global pandemic. Leveraging on technological innovation meet the demands of tech-savvy travellers will improve our global competitiveness as a prime destination, and increase our international arrivals.



TOURISM TECHNOLOGY GRASSROOTS INNOVATION INCUBATION PROGRAMME

Advancing sustainable and inclusive tourism growth through technological innovation and entrepreneurship

The reindustrialisation of South Africa is critical for growing the economy and increasing the rate of employment. Production industries are crucial drivers of economic growth. In the context of a green economy and advancing technologies, these industries have significant upstream and downstream linkages to various industry value chains. The socioeconomic contribution of these sectors is an important element to social upliftment. This is in line with the vision of TIA to support and stimulate technology innovation in order to improve the quality of life for all South Africans.

Operating within the National System of Innovation (NSI), TIA has a critical role as an Industry Builder in transforming the economy by supporting the development of new sectors such as green-tech, biotech, or nanotech industries. As South Africa moves towards reindustrialisation, it is critical that the skills acquired at academic institutions are in line with the fourth industrial revolution, and niche growth areas such as advanced manufacturing, chemicals, mining, advanced metals, and ICT.

The challenges of unemployment, poverty and inequality result in millions of young people and graduates remaining unemployed. To effectively tackle the challenge of unemployment and economic growth, there is a need for collaboration between government, industry, and academia. One such initiative is the Technology Station Programme (TSP), established by the DSI and implemented by TIA.

TSP was established to enable Universities of Technology to provide innovative science,

engineering, and technology solutions and development services for complex engineering challenges to small and medium enterprises (SMEs) and innovators. The programme is supported through 18 Technology Stations established within 11 Higher Education Institutions in South Africa. These Technology Stations specialise in various industrial sectors aimed at supporting government's socio-economic priorities.

TSP enables innovation by applying specialised knowledge and technology and facilitating interaction between industry and academia, thus improving industry competitiveness through technology innovation. The TSP provides an enabling and support ecosystem to enable the commercialisation of ideas and innovations in line with industry imperatives. This is done by offering SMMEs and industry service expertise



TIA Acting Executive Innovation Enabling, Mr Vusi Skosana

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The TSP provides an enabling and support ecosystem to enable the commercialisation of ideas and innovations in line with industry imperatives

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such as rapid prototyping and manufacturing; technology audit and feasibility study; product or process development; applied development, engineering, and design.

The technology stations serve as a bridge between academic theory and experiential training offering an environment for students to apply the knowledge acquired. This experiential training requirement is geared towards the improved capacity of graduates through the Work Integrated Learning and Graduate Internship Programme. Graduates placed at Technology Stations have access to state-of-the-art equipment and platforms enabling them to work on industry related projects giving them a competitive edge within the industry.

The internship can be served either in loco at the station or at an industry




















partner. Through the programme, the Downstream Chemicals Technology Station at the Nelson Mandela University developed a National Diploma in Chemical Processing Technology based on industry needs. This has greatly served to close the gap between academia and industry and increase employability of students by equipping them with technical skills required by industry.

In view of the current economic realities in South Africa, it is clear that the government cannot combat the continuous increase in the rate of unemployment on its own. The economy is driven by both the public and private sector. It is vital that stakeholders in academia and the private sector compliment government efforts to create jobs. TIA through the TSP, is facilitating the collaboration of SMMEs, industry and

government agencies to expand job creation opportunities in various economic value chains.

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TECHNOLOGY STATIONS

	Technology Station in Electronics (TSE) - Tshwane University of Technology		Technology Station in Chemicals (TSC) - Mangosuthu University of Technology
	Metal Casting Technology Station (MCTS) - University of Johannesburg		Reinforced and Moulded Plastics Technology Station (RMPTS) - Durban University of Technology
	Technology Station for Materials & Processing Technology (TSPMT) - Vaal University of Technology		Institutes of Advanced Tooling (IAT's)
	Product Development Technology Station (PDTs) - Central University of Technology		Institute for Advanced Tooling - Tshwane University of Technology (IAT-TUT)
	eNTSA - Nelson Mandela University		Institute for Advanced Tooling - Walter Sisulu University (IAT-WSU)
	InnoVenton: Institute for Chemical Technology - Nelson Mandela University		Institute for Advanced Tooling - Stellenbosch University (IAT-SU)
	Technology Station in Clothing and Textile (TSCT) - Cape Peninsula University of Technology		Adaptronics Advanced Manufacturing Technology Laboratory (AMTL) - Cape Peninsula University of Technology
	Agrifood Technology Station (ATS) - Cape Peninsula University of Technology		Process Energy and Environmental Technology Station (PEETS) - University of Johannesburg
	Limpopo Agro-Food Technology Station (LATS) - University of Limpopo		Technology Station in Rural Sustainable Development (TSRSD) - Upington in the Northern Cape, affiliated to VUT
	Technology Station in Chemicals (TSC) - Tshwane University of Technology		



TIA SUPPORTS YOUNG INNOVATORS

GRASSROOTS INNOVATORS



Tieho Tsiane

Province: Free State
Age: 33
Project: Kada Device

The device assists the visually impaired to use their phones whilst it is in their pocket. They are able to navigate through their cellphones without the need of touch, holding or tapping on the screen. The product consists of a mobile application, wearable hardware and bluetooth earpiece.



Anathi Mncono

Province: Eastern Cape
Age: 23
Project: Smartie

The Smartie innovation replaces the traditional lock Zip mechanism with a fingerprint lock making it more convenient for airline travelers.



Brendan Fernandez

Province: Gauteng
Age: 26
Project: ERS

The ERS Tech devices are designed to improve vehicle safety, monitoring and control using mobile gadgets such as cell phones, tablets. The IoT enabled platform enables motorists to track and communicate with their vehicles remotely.



Rhoda Storm

Province: Western Cape
Age: 19
Project: Leveraging Machine Learning to improve Medical Diagnosis

The machine uses machine learning to efficiently diagnose lung infections such as pneumonia. The device identifies and distinguishes between a pair of healthy lungs and infected lungs in a fast and efficient manner.



Mokete Ratlabala

Province: Limpopo
Age: 26
Project: Learn Base

The Learn base the technology collects and analyses data to provide real-time energy utilisation insights to consumers. The data is used to provide a guideline to help consumers to reduce energy usage and costs.



Bonga Thombeni

Province: Gauteng
Age: 34
Project: ENHLE

Vanadium Redox Flow Batteries (VRFB) is an energy systems manufacturer. VRFB products provide UPS Power Supply as an emergency power option. During a power blackout, VRFB offers uninterrupted power.

Promoting sustainable livelihood and resilience of young people for a better tomorrow.

**#Tiasupportsinnovators #TIAtechnologystations
 #TIAyounginnovators #TIAGrassrootsinnovation**





Age: 31

Province: KwaZulu Natal
Project: ZULA Application

Amanda Mathe

ZULA App is a demand-driven tourism application that allows people residing close to attraction areas such as in rural areas to offer street-level tourism walkabouts and concierge services. The ZULA App will create an enabling and user-friendly experience to local people to connect with tourists. People are inherently curious about the world, culture and about each other. They find it hard to connect with the on the ground pulse of the cities they travel to. The ZULA App will provide opportunities for tourism hospitality graduates from cities and communities in rural areas.



Age: 28

Province: KwaZulu Natal
Project: Guide Connect

Dominic Naidoo

Guide Connect is web and mobile application for connecting registered, qualified South African tour guides with domestic and international tourists. The software and application would allow tourists to search for qualified tour guides, drivers, and tour transportation services within a preselected region. Tourists will be able to book a guide based on criteria such as experience, qualification, tours, and specialties. The software and application will enable payment via the software.



Age: 26

Province: Western Cape
Project: Gido

Kyle Brijder

Gido is a mobile and web-based application that enables a traveller to create and book a tour in under five minutes while providing equal work opportunities for freelance tourist guides. On signing up the traveller selects their preferred language and their interests. The App will provide the traveller with tour routes most applicable to their profile. Travellers will the option of a default tour itinerary or create their own, select a date and group size. The App uses an algorithm to create a list of available freelance tour guides based on the traveller profile.



Age: 29

Province: Gauteng
Project: m-Temp

Ntshabo Lehong

m-Temp is a hospitality staffing chatbot platform to be primarily used for placing staff in the hospitality industry. The platform will be used by temporary work job seekers and hospitality business clients. m-Temp looks to directly connect companies with available temporary staff based on available shift work. Workers will set up their own profiles and companies will post shifts. A big selling point for m-Temp is the reduced data costs as it will also be available as a WhatsApp Chat-bot. The platform can also be accessed via a website.



Age: 27

Province: Gauteng
Project: The Arts Revolution Project

Mandla Magwaza

The technology is a virtual reality 360-degree video technology allowing for immersive video creation. The technology produces video recordings where a view in every direction is recorded at the same time, shot using an omnidirectional camera or a collection of cameras. During playback on normal flat display the viewer has control of the viewing direction creating the immersive experience.



Age: 27

Province: Gauteng
Project: Gigtour

Mfanafuthi Khoza

The innovation is an automated tour guide App which will allow tourists to get automated guidance and make payments. The technology will benefit the township tourism industry and the gig economy. These individuals and businesses include freelance tour organisers, transport rental companies (bikes, cars and buses), township retail shops and restaurants.



Age: 31

Province: Gauteng
Project: OwnTravel

Mpai Mokoena

The platform is a Travel marketplace that offers advertising opportunities for tourism operators offering travel packages, excursions, guided tours, attractions, accommodation, and events. It serves as a comparison metasearch aggregation site. The application will be accessible from both mobile and desktop web browsers eliminating the need to download an app before using it. An interface will allow tourism operators to easily upload and manage their own content. This Application will have offline capabilities to provide an advantage to tourism operators with limited internet connection.



Age: 29

Province: Eastern Cape
Project: EmboDGtech

Talita Giqo

EmboDGtech is a hotel check-in app that will shorten long queues and assist with social distancing for guests collecting room access cards and keys in the front desk. The online check-in through the App will enable guests and establishment owners to manage access to rooms through virtual cards that use pin codes, QR code, Bar codes or biometric verification via mobile devices. The App will enable the visitors to pre-order food enabling the establishment to eliminate wastage as they can prepare food per order.



Age: 26
Province: Gauteng
Project: Travelocal

Nkululeko Nkosi

Travelocal is a platform that offering tourism, travel, hospitality, and entertainment vendors tools to list and sell their products and services to customers looking for local Mzansi experiences, attractions and activities. The platform is a two-sided marketplace which aims to deliver value to businesses with service offerings and customers for experience-driven products and services in the hospitality, entertainment, travel, and tourism spaces.



Age: 34
Province: Gauteng
Project: Village Trotter

Philile Nzimande

The technology is a multi-platform App that assists travellers to navigate into various rural areas offering longer village stays and highlighting rural experiences. The platform will enable young people in rural areas to share local stories and folklore through tours. The platform has a call to action for booking rural tour guides, activities, and accommodation.



Age: 27
Province: Gauteng
Project: African Electric Vehicle Restaurant

Reneilwe Marilyn Masehela

Electric Vehicle Restaurant is an electric mobile restaurant that will use renewable energy to power all its functions. Using renewable energy, the mobile restaurant offers customers the experience of being driven through cities, townships and monument parks while enjoying their meal. This will also create an opportunity for local tour guides, chefs and public drivers as they can run a restaurant while showing tourist around the city.



Age: 29
Province: Gauteng
Project: Destination-Insight

Titus Khoza

The innovation is a one-stop online booking platform for all vacations needs arranging from attractions, accommodations, flights, car hire, travel insurance and eateries. Travellers will have the ability to customized their ideal trips based on the total amount of the trip (the cost will include attractions, accommodations, transportation and eateries). Through the platform, potential travellers will have the ability to contribute monthly payments towards the total cost of their ideal trip/vacation. Once the total funds are paid out the platform will issue out tickets to the travellers.

The innovation is a provides a one-stop online booking platform for all vacations needs from flights, accommodation, car hire, travel insurance attractions and eateries. The platform will give travellers the freedom to customise the ideal trip based on the total cost. Through the platform, potential travellers will be able to contribute monthly payments towards the total cost of the trip. Once the total funds are paid, the platform will issue tickets to the travellers.



Age: 31
Province: Gauteng
Project: Foodie

Mpho Moloi

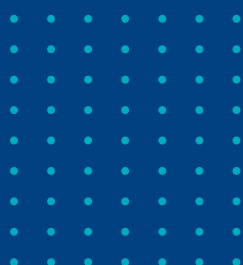
The solution is a mobile application that enables users to easily search and book food tours at a township of their choice. Customers will gain access to local food guides and find new eateries in their locality or a place they are visiting. The solution will also create opportunities for chefs or culinary professionals to generate income by creating and organising paid public food experiences. This will create job opportunities and benefit township-based eateries, independent chefs and culinary professionals who will generate income through the platform. Foodie will revolutionize the township based food and eatery sector and bring them to the fore of mainstream tourism economy and food tourism.



Age: 33
Province: Western Cape
Project: Travel Gurus

Khotso Micha

The innovation is an App that allows travellers to connect with freelance tour guides and serves as a platform for guides to advertise their service to tourists. Once an account is created, a traveller can select destinations, attraction sites, car rentals and guided experiences. The activities will be linked to a tour company or local guide. Each city/region will provide options for accommodation ranging from star rated hotels to backpackers. All experiences will have a check in and check out safety feature sharable with the tourist's next of kin.





Golden Mashego

The innovation is an online art store selling authentic handmade art crafts created by local people living adjacent to national parks. Through business partners including as shuttle services and tour guides, travellers can also book a tour into local national parks and a guided to visit stalls selling arts and crafts.

Age: 28

Province: Mpumalanga

Project: Mpumalanga Art exposure online store



Gcina Nomsa Dlamini

The proposed solution is an App that helps to facilitate intra- Africa Tourism and trade initiatives through a global marketplace for tourism on the continent. The user-friendly interface will easily connect suppliers and consumers. It will also give participating institutions access to new clients and provide updated and relevant information across the value-chain.

Age: 34

Province: Gauteng

Project: Technology as the catalyst for Intra-Africa Tourism and Trade



Anathi Mncono

Smartie Luggage employs an IoT technology for luggage security. The innovation uses a dual lock system that can be opened with both fingerprint and a key as an alternative. It is a zipperless luggage with such a mechanism further strengthened by a magnetic pulse.

Age: 23

Province: Eastern Cape

Project: Smartie Luggage



Abram Mashita

Abiri Innovations is a tourism platform that provides integrated mapping system giving tourism companies digital presence in townships and rural communities. The App allows for easy location of establishments in townships and rural communities for tourists. Profiling local tourism companies through digital maps enables local tourism businesses to compete with city-based establishments through digital identity and unlocking digital benefits.

Age: 31

Province: Limpopo

Project: Abiri Innovations



Mpho Mashego

BookingPal is a personalised online travel and holiday planning and booking solution. The App provides consumers with an online service to book family and business travel. Among the services offered are, family house swap, ABIRI localised tracking, timeshare software/hardware solutions, and a travel now, pay later solution.

Age: 25

Province: Limpopo

Project: BookingPal



Prashant Maharaj

ShazaCin Accessible Media - The ShazaCin App serves as a personal narrator, creating an imaginative visual experience of tourist attractions for blind persons. The App stores soundtracks of videos such as films and pre-recorded tours, local and global. The App enables the user can listen to the audio through their mobile phone and brings the visual world directly to the blind user. It connects them to educational, entertainment and economic opportunities in tourism, both as consumers and creators.

Age: 29

Province: KwaZulu Natal

Project: ShazaCin Accessible Media - Mobile App

TIA – SAB FOUNDATION SEED FUND PARTNERSHIP TO SUPPORT INNOVATION

TIA and the SAB Foundation have announced a joint partnership to promote entrepreneurship development in South Africa.

The partnership will see TIA and SAB Foundation co-investing a Social Innovation Fund, the Social Innovation and Disability Empowerment grant, and a University Seed Fund. The total investment by both partners is R28.6 million towards innovation and business development support.

As a fund leveraging strategy, the two organisations will contribute funds towards the SAB Foundation's Social Innovation and Disability empowerment Awards 2022, scheduled for the second half of the year. This will create a sustainable pipeline for projects and innovations that will be eligible for the foundation's Social Innovation Fund which supports innovators with technical funding in addition to business development support.

Since 2010, the SAB Foundation has provided support and funding for entrepreneurs and microenterprise owners who want to grow their businesses and achieve new levels of success. This serves as a stepping-stone for South African innovators and the social empowerment of impoverished communities.

TIA is mandated to promote the development and exploitation of



discoveries, inventions and innovations to improve the quality of life for all South Africans. TIA supports innovations by bridging the innovation chasm between research and commercialisation. In bridging the innovation chasm, TIA is an active funder, connector, and facilitator. Partnerships and collaborations are vital to TIA effectively fulfilling this role. .

"We are very excited about this strategic partnership,". "Our purpose as an organisation is to invest in and provide business support to entrepreneurs, and this partnership will assist us in achieving this," said Bridgit Evans, Director of the SAB Foundation.

"TIA's collaboration with the SAB Foundation positions the two organisations as partners in cultivating a culture of inclusive innovation with technology start-ups at the forefront of growing the economy and thus improving the quality of life for South Africans. Partnering with the private sector and industry who have enterprise development instruments will accelerate commercialisation of local innovations. Through the TIA SEED Fund, TIA will be in a position to leverage funding by collaborating with a private sector partner in developing and

commercialising publicly funded IP from universities," said Tando Nquma-Moyo, Acting General Manager: Strategic Partnerships and Business Development for TIA.

The TIA – SAB Foundation's SEED Fund co-investment will include capacity development initiatives, joint funding, market access opportunities, and commercialisation of technologies. The fund, which will offer access to seed capital for innovative ideas, will be targeted at previously disadvantaged Higher Education Institutions, identified Universities include, the Universities of Limpopo, Fort Hare and Zululand.

"We are looking forward to working with TIA to further support our entrepreneurs on their journey to success. Through this partnership we hope to give entrepreneurship in our country the boost that it requires to help tackle the challenges that we currently all face," concludes Evans.

R15M INVESTMENT TO BOOST SOUTH AFRICA'S PHARMACEUTICAL MANUFACTURING CAPACITY



A multi-million-rand initiative aimed at reducing South Africa's reliance on the importation of critical drugs has the potential of saving the country billions of rands annually, said the Deputy Minister of Higher Education, Science and Innovation, Mr Buti Manamela.

The Deputy Minister launched the Active Pharmaceutical Ingredient Plus technology innovation facility – which houses a state-of-the-art organic synthesis research laboratory.

TIA has invested R15 million towards the establishment of the API Cluster. This investment is aimed at driving technology development and commercialisation of local API manufacturing focusing on the synthesis of small molecule APIs for human health using modern manufacturing technology.

The API+ Laboratory will support the analytical testing required during the synthetic process of API molecule development. This laboratory will serve the analytical needs within the academia and industry and thus ensure the commercial translation of the API molecules are synthesised towards full scale production.

APIs are the biologically active components in a pharmaceutical drug which are formulated with other ingredients to make finished pharmaceutical products such as tablets and capsules. It costs South Africa R15 billion a year to import a vast majority of the APIs used to formulate medicines in local plants.

This dependence has at times led to import and distribution problems.

The Deputy Minister said the manufacturing of APIs has been a priority for the South African government since the large-scale roll-out of antiretroviral (ARV) drugs for those living with HIV and Aids, which unsurprisingly constituted a huge part of government's national health expenditure.

"It therefore goes without saying that reliance on the importation of finished drugs or the APIs not only burdens the country with a security of supply risk, but also results in a significant trade deficit for the pharmaceutical sector," said the Deputy Minister.

The Deputy Minister also went on to welcome the initiative as part of the national Bio-economy Strategy. The strategy's initiative for health is to support and strengthen local research, development and innovation capabilities to manufacture APIs, vaccines, biopharmaceuticals, diagnostics and medical devices to address the country's disease burden, while ensuring security and sustainable supply of essential therapeutics and prophylactics.

The collaboration between DSI, TIA and North West University (NWU) was hosted by CPT Pharma in Watloo, Pretoria.

CPT Pharma was granted a licence to manufacture APIs for human health by the South African Health Products Regulatory Authority over a year ago. This signalled a move forward for the country's pharmaceutical industry.

The API Cluster is also set to stimulate industry competitiveness by leveraging existing skills, technologies and facilities available in South Africa. Its foundation will be an aggressive locally developed technology strategy that can be used to leverage collaboration and

partnerships in the pharmaceutical sector.

The strategy will realign current capabilities within various sectors including commercial companies towards a focused process synthesis and engineering programme. The goal is to develop drug master files for the competitive manufacturing of targeted APIs and to leverage this to set up a commercial pipeline for local API manufacturing.

CPT Director, Dr Gerrit van der Klashorst, said the vision of the Unit is to harness intellectual capacities at higher education institutions, doing ground breaking research to develop economically competitive routes for API synthesis.

"The API+ Laboratory is also ideally positioned for technology transfer from international and open-source technology suppliers such as the Clinton Health Access Initiative and Medicines for all, as well as multinational pharmaceutical companies," Dr Van der Klashorst explained.

The API cluster represents TIA's approach to assessing value chains and stimulating the development of activities and interventions to facilitate sector or industry-level engagement through the crosscutting approach adopted in the Technology Innovation Cluster model. This approach is intended to address systematic weaknesses that hamper innovation and commercialisation beyond just the provision of funding to individual projects.



OPTISHUNT, EASES THE PRESSURE ON GLAUCOMA PATIENTS

Glaucoma is a leading cause of irreversible vision loss worldwide; in South Africa, vision loss is one of the leading causes of disability and accounts for 32% of all disabilities. Glaucoma is an eye condition caused by a build-up of fluid pressure in the eye resulting in irreversible damage to the optic nerve. Liqid Medical, a South African medical innovation company has designed a novel ocular implant, the OptiShunt, that uses a simple concept to revolutionise the treatment of glaucoma.

The development of the OptiShunt is funded and supported by TIA through its Health Unit. The TIA Health Unit aims to accelerate innovation technology development and commercialisation of health products and services in South Africa to increase access to health care, reduce cost of health care, enable local manufacture and reduce imports while developing health innovation skills.

The OptiShunt was conceptualised by Dr Daemon McClunan, an ophthalmologist and the lead innovator for OptiShunt after observing the problems caused by glaucoma in patients while working in rural Northern Cape.

The current treatments available for glaucoma pose a few challenges. Traditional glaucoma devices drain excess ocular fluid by creating a fluid filled blister on the surface of the eye, something known as a "bleb". Blebs are well known to be uncomfortable, associated with a high risk of complications and failure, and require lifelong follow up and management

by patients and doctors. This makes traditional glaucoma surgery one of the least cost effective and most quality of life impacting ophthalmic interventions.

The OptiShunt uses a novel mechanism that creates a self-regulating system which provides highly effective pressure control while avoiding the complications and costs associated with traditional devices. It is designed to limit unsightly bleb formation and the complications that arise.

Vision loss exacerbates poverty as it often leads to unemployment and loss of income, higher levels of hunger and ultimately low standards of living. 97% of visually disabled people are unemployed, 90% of which are from rural communities. South African women are 40% more likely to be visually disabled than men. This is common amongst people of African descent. The highly efficient and cost effective OptiShunt enables access to quality healthcare for the most vulnerable population groups, particularly those in public healthcare settings. This section of the population has been excluded from the use of traditional glaucoma treatment devices due to high costs. Tests conducted to date show that the OptiShunt is 50% more effective than current gold standard in the treatment of Glaucoma.

"Blindness has dire personal, social, and economic impact, particularly among those at the bottom of the pyramid. The goal for TIA is to identify and support innovations that have the potential to address society's challenges. We are therefore excited to partner with Dr

McClunan because the success of OptiShunt would enable access to quality healthcare at a reduced cost with much better clinical outcomes," said Mr Osmond Muroyiwa, Head of Health at TIA.

The use of the OptiShunt halts the progression of blindness and affords the patients an opportunity of a better life and the ability to contribute to the betterment of their families and communities. Furthermore, the OptiShunt will be manufactured locally and thus holds the opportunity to create jobs, reduce imports as well as enable exports.

The next stage in the development of the technology is to conduct regulatory clinical trials. The company is already in the process of obtaining the necessary quality management systems, regulatory approvals and ultimately certification such as CE marking and approval by the World Health Organisation (WHO).

"By leveraging local resources and industry partners such as the TIA, LIQID Medical is proud to have reached the major milestone of first in man clinical trials 40% faster and 90% more cost effectively than our European and American counterparts. In South Africa we have the unique opportunity to combine the innovative drive of a resource limited setting with the groundbreaking capabilities of highly skilled professionals and cutting-edge technology," Dr Daemon McClunan, Chief Executive Officer, LIQID Medical.

TIA continues to intensify efforts to increase the rate of translation of locally developed technologies; exploit intellectual property to ensure that these are commercialised in a manner that promotes economic growth and improves the lives of South Africans.

LOCAL INTELLIGENT SPEED ASSIST (ISA) TECHNOLOGY TO SAVE LIVES ON SA ROADS

Road carnage in South Africa is a massive cost burden on the taxpayer and the economy, costing the fiscus billions of rands, each year. Speed is a major contributor to road accidents and causes a significant percentage of road deaths. TIA is funding the further development and refinement of the SpeedFOX product, an Intelligent Speed Assistance (ISA) device. SpeedFOX was invented by the Geo Intelligence Corp (GeoInt), a South African specialist geospatial company.

This innovative technology is designed to reduce speeding and speeding related accidents and mortalities on South African roads. The SpeedFOX device is fitted into a vehicle to assist with actively limiting speed, taking into consideration the type and condition of the road. SpeedFOX with its offline embedded map technology ensures that the vehicle cannot exceed any of the legally posted speed limits, while still ensuring the driver is always in full control of the vehicle. The initial funding from TIA will be used to further refine the development of the device, to improve accuracy and conduct market validation to achieve market fit.

SpeedFOX has been piloted and commercially implemented with several South African companies that own large commercial fleets. In these pilots, SpeedFOX was demonstrated to improve safety, through the elimination of road speed limit infringements, which was independently verified through the vehicles telematics units. Actively managing the speeds which the pilot vehicles drive at, demonstrated the

potential to save significant costs across these fleets, especially through reduction of accident damage and downtime, up to 5% reduction in fuel consumption and elimination of speeding fines. SpeedFOX has achieved 70 000 independently driven kilometres.

"Geo Intelligence Corp is the first company in South Africa to create a multipoint speed limiter that actively ensures the vehicle does not exceed any speed limits. We have developed SpeedFOX as both a road safety and cost-saving solution. We are excited about the investment from TIA, the funding will be vital in scaling up and refining the SpeedFOX innovation and tapping into international markets," says Lee Annamalai, Chief Technology Officer at GeoInt.

The application of ISA technologies has been legislated in most parts of the world. Many African countries are adopting similar frameworks with specific applications in public transportation and logistics. This technology will significantly improve road safety, save lives, increase fuel efficiency, and reduce the costs associated with road accidents.

"We have designed SpeedFOX to work offline and in real-time. Apart from being more digitally secure, our solution is more cost effective and reliable for the local and developing markets than the always-connected options being trialled in Europe," Annamalai concludes.

Fleet operators will be able to set speed limits for specific road types such as



gravel roads, or steep gradient roads to ensure their vehicles are operating within set margins in compliance with traffic regulations.

TIA is proud to be associated with SpeedFOX as we believe this technology will revolutionise the transport industry. Among the strategic goals of TIA is that of industry builder and fixer. Identifying and supporting innovations such as SpeedFOX is one way of ensuring that local innovations have a positive impact on the economy and well-being of South Africans. Transport is one of the critical drivers of economic activity and innovations to modernise this industry through innovative technologies would create a more efficient and safe transportation system," said Mr Sipho Dikweni, Portfolio Manager: ICT at TIA.

SpeedFOX is funded through the commercialisation division of TIA, the Information Communication and Technology (ICT). The ICT Unit supports the development and exploitation of ICT driven innovations with a broad social-economic impact. It further supports innovators and the development of technologies that will increase South Africa's competitiveness and participation in the fourth industrial revolution.

IRISH TECH CHALLENGE FINALISTS

TIA congratulates the five impact-driven South African technology companies that have been selected to take their businesses global as part of the first Irish Tech Challenge South Africa. The Irish Tech Challenge South Africa is an exciting new initiative of the Embassy of Ireland in partnership with the DSI (DSI) and TIA. TIA has set up the €10,000 Irish Tech Challenge South Africa Fund, as mutually beneficial incentive for Irish technology expertise and small businesses in South Africa. Launched in February, the pilot targeted five majority-owned South African tech businesses that address the United Nations' Sustainable Development Goals ('SDGs'), through climate or med-tech solutions, with a particular focus on women and young entrepreneurs.

The Challenge attracted over 21 applicants who had to demonstrate impact in addressing one of the 17 United Nations' Sustainable Development Goals. The five tech entrepreneurs will embark on a fully funded 8-day curated business networking programme in Ireland, which is currently one of the world's fastest-growing technology hubs. There, they will be able to access the expertise of Irish tech leaders and build networks while receiving funding support of up to R129 200 each.

The companies include ShazaCin Accessible Media (Pty) Ltd, which has developed the ShazaCin app, a mobile application that allows visually impaired people to access videos with audio descriptions, including movies, documentaries and illustrated literature and sport in English and isiZulu.

Iraka Biotech (Pty) Ltd is a biotechnology company that has created an innovative vaccine production technology to make veterinary vaccines more accessible and affordable.

Memeza Shout is a tech-enabled social enterprise that focuses on innovative safety technology and intelligence. Memeza's key product is a community policing alarm system that seeks to combat gender-based violence and other crimes in low-income communities.

CreditAIs credit-scores small businesses through machine learning applied to alternative, non-financial data. Its models provide accurate credit predictions for previously excluded business owners, while also ensuring compliance with privacy laws.

Finally, Ambani Africa accelerates early learning by offering technology-enabled Afrocentric content. Ambani's approach is learner-centric, using games and augmented reality to teach African languages, science, technology, engineering, mathematics and more. They currently offer a free language app featuring six of South Africa's official languages, as well as augmented reality books and online tutoring.

Launching the Irish Tech Challenge South Africa, the Minister of State for Overseas Development Aid and Diaspora, Government of Ireland, Colm Brophy expressed his delight that the South African Government is co-partner in the Tech Challenge. The Minister emphasised that our governments shared priorities for the Tech Challenge are to accelerate tech entrepreneur partnerships, strengthen technology and innovation ecosystem linkages, as well as to inspire innovative solutions and share societal challenges.

said Dr Cele, who also added that existing economic sectors such as mining and agriculture require modernisation.

Irish Tech Challenge South Africa initiative is relevant to provide the youthful African continent with progress that would have not been achieved" said Dr Cele. In addition, he says high-tech small, medium and micro enterprises (SMMEs) are key to the future of South Africa in unlocking possibilities we have". "We look forward to successful young tech entrepreneurs ploughing back using innovation in ensuring that societal challenges in respect to health, education and future work progresses.

"TIA is delighted to be partnering in this challenge. South Africa has a great potential for high growth tech entrepreneurs to be a major driver for innovation, economic growth, job creation and poverty alleviation. The agency has been doing work with the Irish Embassy for years. The Irish Tech Challenge being launched today is an addition to our



It signals Ireland's commitment to deepening trade and investment relations with South Africa and support inclusive economic growth, through investment in education, skills and support for entrepreneurship among women and young people in South Africa" said Minister Brophy. "This commitment speaks to our common understanding of the role of science and technology and business development. We see great opportunity for partnerships in sectors such as cleantech, agritech, meditech and edutech".

Dr Mlungisi Cele, the Acting Head of the National Advisory Council on Innovation, an entity of the DSI said South Africa has identified and recognised the role that science, technology and innovation play towards socio-economic developments. "The DSI Decadal Plan prioritises issues of circular economy and digital economy as new sources of growth"

arsenal of other international partnerships and is established on the back of bilateral agreement between the DSI and the Irish Government.

South African tech entrepreneurs often face barriers due to limited resources, access to appropriate markets, global networks and infrastructure, despite their readiness to scale globally the Irish Tech Challenge will incentivise the birth of mutually beneficial partnerships between leading operators in Irish technology ecosystem and South African entrepreneurs and their businesses. In doing so, the challenge will support innovation, technology development, and technology deployment and commercialisation in South Africa and Ireland," said Mr Patrick Krappie, Acting CEO, TIA.

CALL FOR FUNDING APPLICATIONS: HYDROGEN ECONOMY

The completed applications must be submitted
on or before **23 September 2022**.

Applications should be submitted online
at <https://gms.tia.org.za/funding>



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA





MedAdd TO BRIDGE THE GAP FOR ACCESS TO CUSTOMISED MEDICAL DEVICES

With the support and funding from the DSI and stakeholders including TIA, South Africa will no longer have to rely on costly imported medical devices for people living with disabilities. The Medical Device Additive Manufacturing Demonstrator Project (MedAdd), is a R97 million additive manufacturing project that is housed at the Central University of Technology in Bloemfontein.

The DSI and Central University of Technology (CUT) launched MedAdd to bridge the gap in the availability of customised medical devices in the country. Additive manufacturing, better known as 3D printing, is one of the technologies used in advanced manufacturing and is considered a cornerstone of the fourth industrial revolution.

Until recently, the availability of the equipment for medical device manufacturing in South Africa was limited. The Centre for Rapid Prototyping and Manufacturing (CRPM) at CUT has been doing ground-breaking work over the years in the design, development and manufacturing of medical devices. This has positioned the university as a leading local institution in the field of customised medical implant production.

MedAdd functions under the CRPM's ISO 13485 certification, which acts as a safety net for small companies seeking to

develop and industrialise new products, de-risking their innovative development before fully-fledged commercialisation. Since the project's inception in 2019, more than 2 000 different products have been developed.

The DSI funded the project through the TIA Product Development Technology Station, which provides technical support to small and medium enterprises affiliated to the technology station at CUT for the project.

Dr Rebecca Maserumule, Acting Deputy Director-General for Technology Innovation at the DSI, said the advent of the global COVID-19 pandemic had highlighted the importance of African countries proactively investing in medical research and health innovation.

One of the areas that the DSI identified for the purpose of enhancing the impact of science in society was health innovation.

"Our overall objective in this space is to help grow the health economy by providing locally developed and relevant diagnostics and medical devices with a view to boosting their manufacturing," said Dr Maserumule.

"More specifically, we seek to enhance our existing capacity to manufacture active pharmaceutical ingredients, vaccines, biopharmaceuticals, diagnostics and medical devices to address the disease burden while ensuring the security

and sustainable supply of essential therapeutics and prophylactics."

CUT Council Chairperson Matthew Rantso added that since 2015, more than 1 000 patients had been assisted through the support of state and private hospitals, the expertise of the CRPM, and funding from the DSI, TIA and other strategic partners.

This has given people like 35-year-old Luan Adams a new lease on life. After sinus cancer disfigured his face, Adams' speech and breathing were affected. Now, with a facial prosthetic implant made of silicone at the CRPM, both his breathing and his speech have improved. The CRPM 3D-printed the titanium frame implant that is used to hold the prosthetic in place. "I am more than grateful to be alive," said Adams.

The MedAdd project has been successful in bridging the innovation gap for medical device companies by leveraging the advantages that additive manufacturing brings to the manufacturing industry.

Rantso said the project had brought the CRPM and industry together in planning and investing resources in a collaborative manner, which is a big plus for the university. From a product development point of view, he added, this was an opportunity for CUT, business and industry, through government, to create African solutions for South African challenges.

BIO-ECONOMY: INNOVATION IN AGRICULTURE CAN DRIVE ECONOMIC GROWTH



The Bio-Economy Strategy aims to drive South Africa's bio-economy through the exploitation of the country's diverse natural resources such as animals, plant biodiversity, micro-organisms and minerals, to improve human health, address food security and contribute to economic growth. The strategy seeks to use South Africa's bio-based resources to create and grow biotechnology-based industries. This is crucial for job creation, contribution to GDP, exports, the building of industries and addressing market failures, by harnessing human capital, financial resources, infrastructure and knowledge.

TIA plays an important role in the implementation of the Bio-Economy Strategy. The Agency is mandated through the Technology Innovation Agency Act, No. 26 of 2008, to promote the development and exploitation of innovations and technologies in the public interest.

Through its bio-economy strategic pillar, TIA supports the translation of South Africa's knowledge resources into sustainable bio-based solutions for impact through the convergence of specific focus areas, namely Health, Indigenous Knowledge Systems (IKS), Agriculture and Industrial Biotechnology. In addition, TIA manages cross-cutting Technology Platforms, Technology Innovation Clusters and Programmes.

The agricultural sector is central to sustaining employment opportunities, fostering economic growth, reducing poverty and improving food security in South Africa. TIA supports the development of technologies and innovations that promote food safety and

security, rural and township development and economic transformation, and that create more resilience to climate change across the agriculture value chain.

This is achieved through investment into strategic national sector priorities and value-chain focused initiatives to support the creation of an enabling environment for technology innovations in agriculture, supporting predominantly the publicly-funded development and demonstration of attractive agricultural technology innovations, facilitating commercialisation of de-risked technologies and improving the diffusion of appropriate agricultural technologies to small-scale and emerging farmers.

TIA has supported a start-up, AgriViro (Pty) Ltd for the development and demonstration of Intellectual Property (IP) developed at the University of the Witwatersrand (WITS). AgriViro (Pty) Ltd has been funded by TIA to develop novel biopesticides for the control of economically important insect pests such as codling moth, false codling moth, African Bollworm larvae, Oriental Fruit Moth, Diamondback Moth, Fall Armyworm, and lepidopteran insects on crops such as peaches, nectarines, plums, cherries, apricots, apples, pears, quinces and nashi. These green and novel biopesticides are suitable for use in organic farming and their efficacy against insect pests in high-value crops has been demonstrated in a controlled environment.

Other innovations in plant health and nutrition, supported by TIA, include the development and commercialisation of adjuvants for the benefit of crop or plant health. iBATECH® is an efficacious antimicrobial natural botanical adjuvant for the agrochemical industry. It is formulated to protect plants against pesticide-

resistant pathogens with antioxidant, antifungal and antibacterial properties. The technology was developed at the University of Western Cape (UWC) and is currently being demonstrated at commercial scale. iBATECH® can be used in combination with agrochemical pesticides, in tunnel settings and can be applied to organic farming. The adjuvant is cost-effective and reduces the dose of agrochemical pesticide required. Furthermore, its application reduces residual pesticide levels in crops and enhances agrochemical pesticide efficacy by reversing pesticide resistance. This is a natural product in line with global trends against the use of synthetic agrochemicals.



Innovations in animal health and nutrition have been supported and funded by TIA for increased health of livestock as well as diagnostic technologies to minimise the spread of zoonotic disease.

TIA funded the development of a Point-of-Care diagnostic test kit and device for early detection of foot and mouth disease (FMD) in livestock that can be used in remote and rural areas. The use of this technology enables the rapid detection of FMD and empowers livestock farmers to quickly isolate affected animals and therefore prevent the spread of the disease. The innovation was developed by the Council for Scientific and Industrial Research (CSIR) and was licensed to a start-up, TokaBio (Pty) Ltd.

Currently, it takes a week or two to receive results from testing laboratories. The Point-of-Care diagnostic kit is a 4IR-enabled device and facilitates a rapid turnaround time for test results. The results are made available in just an hour on a mobile device. The device is also connected to the South African government regulators' database providing live information on the disease status of livestock, thus adding value to the government's livestock disease surveillance programme. The innovation is currently being developed further to include the detection of avian influenza. The early detection of FMD and avian influenza has obvious economic benefits for both emerging and commercial livestock farmers who will adopt this technology. Outside of South Africa, the Point-of-Care technology has been tested in Lesotho, Zambia and Rwanda.

As part of its cluster model, TIA has established three Technology Innovation Clusters in agriculture, namely the Animal Health Cluster, the Beef Genomics Programme and the Dairy Genomics Programme. The Animal Health Cluster is aimed at stimulating and intensifying

technology innovation within the animal health sector to increase the development and uptake of animal diagnostics and vaccines to market. The establishment of this cluster advocated for the participation of various institutions within the National System of Innovation. These include science councils and universities (with seed funding provided by the National Research Foundation (NRF) and TIA for research and development activities), as well as the private sector and key state-owned entities such as the Onderstepoort Biological Products SOC Ltd (OBP).

TIA has also supported the full development of an organic nutraceutical broiler feed enhancer and an antibiotic replacement additive which increases poultry weight gain by 30%. The feed additive was demonstrated in 2016 and the two products were registered for regulatory approval for use in the market in the same year.

A collaboration between two Science Councils, the CSIR and the ARC, for the development of a slow-release biocontrol sheet, to control fungi on produce during storage without affecting the taste or discolouring the produce, was funded by TIA. The technology uses organic means to control phytosanitary diseases, such as *Botrytis cinerea* (grey mould) in table grapes and will benefit exporters of fresh produce from South Africa.

TIA is the implementing agent of the Agriculture Bioeconomy Innovation Partnership Programme (ABIPP) which is a partnership programme led by the DSI and industry. It is a mega-programme

that funds, facilitates and manages multi-disciplinary and -institutional research programmes in agricultural bio-innovation, product and process development, and services. The programme encourages collaboration on national priorities and promotes the global competitiveness of the local agricultural sector through the exploitation of developed technologies and Plant Breeders' Rights.

This programme has recently funded Cotton SA for the procurement of locally-made cotton baler machines, which will be used by small-scale cotton farmers to lower their input costs by between 8 and 12%. This intervention by TIA is aligned with its developmental mandate of supporting the diffusion of technologies to emerging and African farmers for increased participation, productivity and profitability.

TIA leverages partnerships and funding for its investments to derive further value and make a tangible impact. A notable example of this is support provided to the National Agricultural Marketing Council (NAMC) for the "Feasibility Assessment: A value chain analysis of the cassava sub-sector in South Africa" project, to evaluate high starch-yielding cassava cultivars bred by the Agricultural Research Council (ARC) and funded by TIA. The feasibility assessment includes small-scale and emerging farmers in rural and marginalised communities, as well as farmers along the cassava red belt region of Limpopo, Mpumalanga, and Kwa-Zulu Natal. The outcomes of this study will be accessible to farmers and communities for subsistence farming, food production, animal feed, or industrial use, such as the paper industry. The leveraged partnerships in the establishment of this cassava value chain are the Department of Trade, Industry and Competition (dtic), the South Africa Cassava Industry Association (CIASA), and other parties in the value chain.

TIA recognises that the agricultural sector is a key driver of economic growth, most notably the creation of employment, food security for a healthy nation, and several other benefits realised through the agricultural multiplier effect. Its support is provided by funding the development and commercialisation of local innovations, and associated intellectual property, as well as in-bound technologies.



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Our Vision

To be a leading technology innovation agency that stimulates and supports technological innovation to improve the quality of life for all South Africans



Our Mission

To facilitate the translation of South Africa's knowledge resource into sustainable socio-economic opportunities.

Our Values



Teamwork

Together we can do more. Fostering teamwork creates a TIA work culture that values collaboration and co-operation.



Integrity

We strive to do what we said we would, when we said we would do it.



Professionalism

We apply the most appropriate skills, competencies, experience and knowledge of best practices cohesively in conducting our work.



Transparency

We engage in inclusive open communication, and hold each other accountable for our performance and conduct.



Excellence

We will be accountable to all stakeholders to deliver exceptionally high standards of work and performance.



Innovation

We foster a culture where we continually nurture and implement new ideas from our staff and stakeholders that enhance how we do things and deliver services.