Central University of Technology, Free State

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Highlights

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Acting VC's message

Acting Vice-Chancellor and Principal, Professor Alfred Ngowi

Dear CUT community

Warm greetings to you all

As we are about to sum-up the first semester of our 2022 academic year, I must admit that it has been one of the challenging times with all the student uprisings brought about by the NSFAS issues. Nevertheless, our university is determined to support students' success in their studies, and to guide staff to achieve their full potential. As management, we are working tirelessly to normalise the situation and bring balance to the university.

We have noticed that the vast majority of our students are prepared and eager to successfully complete the first semester and we commend them for their commitment. We also understand that it is challenging to adjust to venue-based assessment after having to cope with the blended approach necessitated by the Covid-19 regulations, but unfortunately, CUT is a full contact institution and not a distance learning institution, and therefore does not have the authority to accredit examinations that are not done in accordance with the university status as a full contact institution, and failure to adhere to this will directly impact the NSFAS funding status and potentially rob our students' brighter future.

Despite numerous challenges arising from periodic student protests at CUT and across the sector, the university remains a university of choice to many as we welcomed approximately 4 677 first-year students. This is after receiving approximately 192 327 applications (equating to circa 41 applications per available spot) for undergraduate programmes.

The university held the first- in- person 2022 Autumn graduations since the strike of COVID-19 Pandemic. A total of 3798 (2 981 from Bloemfontein Campus and 817 from Welkom Campus) graduated including 14 master's and 4 doctoral candidates. The university further conferred an honorary Doctorate Technologiae in Mechanical Engineering to Dr Cornelius Johannes Hansen in recognition of his entrepreneurial drive and the outstanding contribution he has made to the nano fuel technology.

As we sail towards 2030, it is particularly exciting given that, right here at the university, we see positive developments in the face of these challenging circumstances. It is abundantly clear that CUT is becoming increasingly responsive to the needs of various communities that it has the privilege to serve and support.

We strive to be at the forefront of innovation. In doing so, we advanced the use of new technologies that will empower our communities and improve the lives of ordinary people in the region.

The university acquired a new ceramic printer which was installed by Lithoz GmbH - a world and industry leader in ceramic 3D printing from Austria. The new 3D ceramic printer is the first of its kind, not only in the country, but on the entire African continent. This is an exciting moment of innovation and entrepreneurship at the university's Centre for Rapid Prototyping and Manufacturing (CRPM). It is an important step towards the growth of ceramic 3D printing as an established manufacturing technology in healthcare solutions. The university will also use the machine to increase the research output and innovations in areas considered essential to the country's strategic growth and development agenda. With the acquisition of this new technology, the CRPM will not only stay ahead of some leading universities but will also stay abreast of where and how new technologies will be unfolding in the near future. CUT continues to be a leader in creating niche products and solutions in medical Technology through 3D printing technology

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In April this year, the Department of Higher Education, Science, and Innovation officially launched the Medical Device Additive Manufacturing Technology Demonstrator Project (MedAdd). The project has brought small businesses and the university's Centre for Rapid Prototyping and Manufacturing together to manufacture medical devices with the aim of reducing South Africa's reliance on costly imported medical devices that many hospitals cannot afford. The ceramic printer is related to the Medical Device Additive Manufacturing Technology Demonstrator (MedAdd) Project.

Furthermore, the university has established another centre of excellence - The Centre for Quality of Health and Living (CQHL) in the Faculty of Health and Environmental Sciences in a quest to improve prevention, diagnosis and treatment of illness in Free State. The new establishment is a state-of-the-art Biochemistry and Tissue Culture facility envisioned to apply new knowledge to drive improvement in the prevention, diagnosis and treatment of illness that maximises healthy outcomes for the people. Our aim is to work together with communities and have interdisciplinary collaborations to deal with specific issues and develop life impacting solutions.

As an engaged institution, we are eager to partner with all our stakeholders towards the realisation of Vision 2030. Our vision is to forge new alliances within the Southern African Development Community (SADC) region. The university welcomed a newly formed partnership with the National University of Lesotho, Lerotholi Polytechnic, Lesotho College of Education, and Motheo TVET College to collaborate on various initiatives of common interest. We also visited the Great Zimbabwe University to further strengthen our consensus on new areas of collaboration and future exchange visits. The programme is aimed at sharing existing opportunities and experiences in all areas of MPhil/M.Ed. and D.Ed/DPhil related research, share resource mobilisation knowledge and techniques.

The university also collaborated with Aston and Loughborough Universities in the UK in a scheme which aims to improve Africa's entrepreneurial and technical skills. The three institutions are working with the university and two South African wheelchair manufacturers to improve their products and business operations to the next level.

On 27 and 28 June 2022, the National Student Financial Aid Scheme (NSFAS) hosted a summit in partnership with the university to create a platform for consultation with universities, technical and vocational education and training (TVET) colleges, and critical stakeholders in the student accommodation sector. The summit served as an important platform for government, universities and partners to explore sustainable solutions, conditions and guidelines for student accommodation accreditation.

On a lighter note, the university is committed to promoting a healthy lifestyle through sports development for students and staff. In April 2022, the CUT Golf team participated in the University Sports South Africa (USSA) Golf Tournament that took place at Paarl Golf Club, Western Cape. The team ended third on the overall team standing, with Mojalefa Xaba, the team captain, taking fourth position on the individual standing. The CUT choir obtain position two in both African and western pieces at the Gauteng Choral Music Association (GACMA) Choral Eisteddfod in Fochville, Gauteng Province. The CUT's solar car team "Seilatsatsi" will be participating in the 2022 Sasol Solar Car Challenge. The challenge is known for its ultimate test of technology and innovation, where both local and international teams showcase their ingenuity through their solar car design. The competition will take place in September this year.

The university continues to support our alumni for the purposes of deepening a lifelong relationship between the university and its alumni, through opportunities that promote interaction and engagement with the university.

As a university, we continue to strive for the best in teaching and learning. I, therefore, take this opportunity to convey my appreciation to our employees and students for the critical role they have played and remaining focused on our priorities. Together we can achieve more!

Kind regards / Ditumediso tse mofuthu / Vriendelike groete

Prof. Alfred Ngowi
Acting Vice-Chancellor and Principal

CUT's MedAdd is bridging the gap for medical device companies

CUT's MedAdd is bridging the gap for medical device companies

Attendees touring the CUT's world-class Additive Manufacturing facilities.

CUT is the leading South African university in the application of additive manufacturing to produce customised medical implants. However, the impact of this expertise and resources on the development of a medical device manufacturing industry has been limited, mainly due to a lack of equipment specifically for medical device manufacturing.

The Department of Higher Education, Science, and Innovation officially launched the Medical Device Additive Manufacturing Technology Demonstrator Project (MedAdd). The project has brought small businesses and the university's Centre for Rapid Prototyping and Manufacturing together to manufacture medical devices with the aim of reducing South Africa's reliance on costly imported medical devices that many hospitals cannot afford. MedAdd is available for small companies to industrialise new products, de-risking their innovative development before fully-fledged commercialisation. In addition, through MedAdd students, researchers and industry personnel will be able to advance the required skills to develop this new technology and new industry.

In addition, through MedAdd, students, researchers and industry personnel will be able to advance the required skills to develop this new technology and new industry.

DSI provided the financial support to the tune of R 97 million through Technology Innovation Agency (TIA) to the university, which houses the Product Development Technology Station (PDTS), to provide technical support to Small Medium Enterprises (SMEs) in terms of solutions for services and training.

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

Dr Gerrie Booysen, Director: CRPM, Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, Dr Rebecca Maserumule, Chief Director: Hydrogen and Energy Department of Science and Innovation, Mr Luan Adams and Ms Princess Moshoane, (Beneficiaries of MEDADD Project), Dr Tate Makgoe, Free State MEC for Education, Dr Vuyisile Phehane, Executive: Bio-Economy at Technology Innovation Agency and Cllr. Matthew Rantso, CUT Chairperson of Council

CUT and TIA innovative partnership yields a unique 3-in-1 design for the wheelchair industry

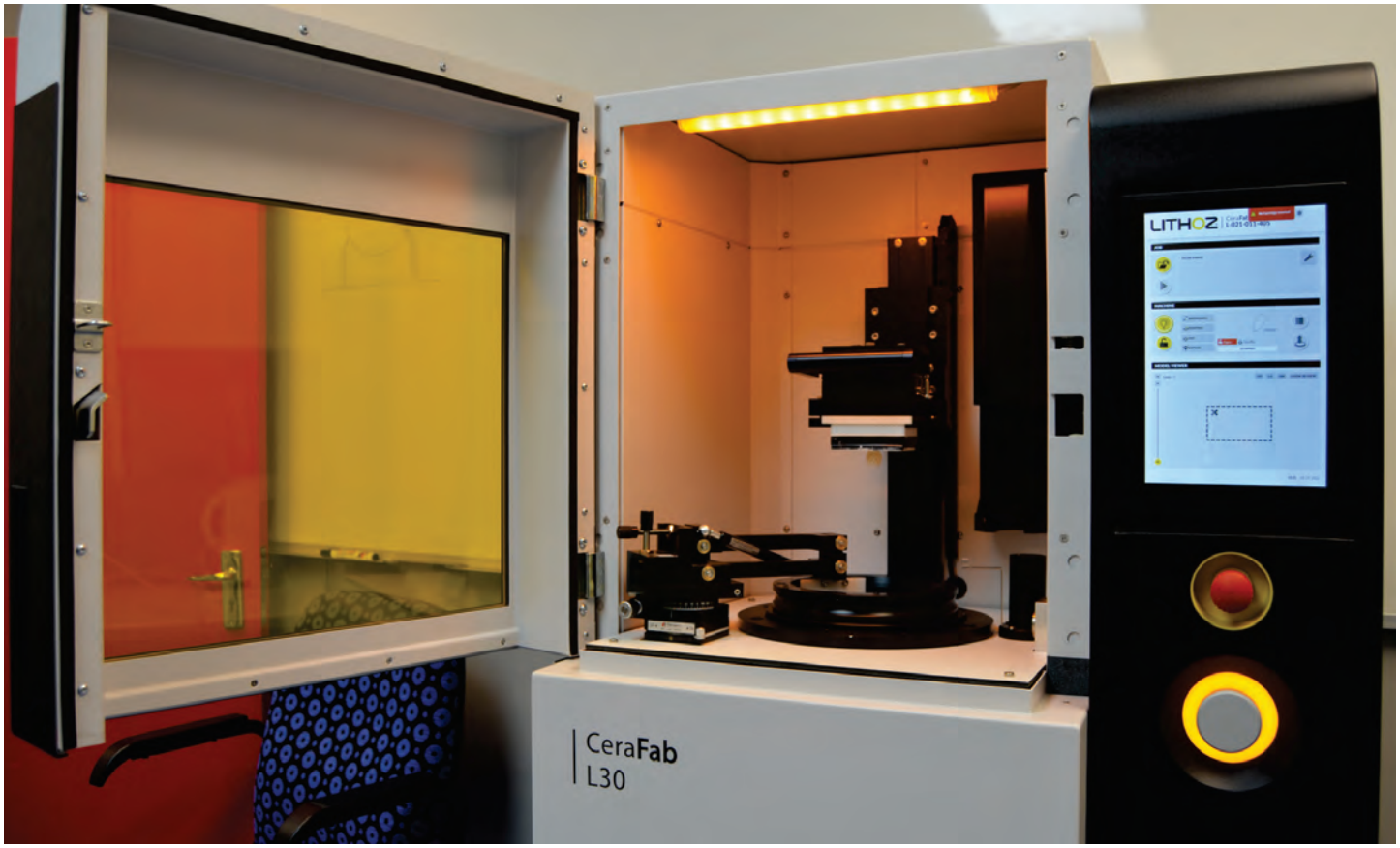
The BODOR Laser cutter T230A: One of the machines utilised to build the 3-in-1 wheelchairs.

The Product Development Technology Station (PDTS) wheelchair project commenced in 2018 with optimisation of the design brought by the client through SAB funding to the value of R250 000. Due to high demand, the centre later applied for funding from Technology Innovation Agency (TIA) amounting to R650 000, for the development of manufacturing jigs and production, leading to commercialisation.

The centre received wheelchair production machines funded by MedAdd, a Department of Science and Innovation (DSI) project. The machines are envisioned to increase productivity and accelerate the turn-around time for mass production of these wheelchairs. Since the inception of the project, the team managed to build about thirty (30) wheelchairs. The design is a 3-in-1 wheelchair that allows users to experience a standard indoor wheelchair and a free wheel/hand bike attachment for outdoor use all-in-one. The attachments also enable long-distance travelers to move swiftly through rough terrains. The wheelchair can also bend and be disassembled easily to allow the users to travel using public transport. The centre has since collaborated with MUCCP Community Health Centre to test the wheelchairs and has also donated a few to the local community in the past year.

In their elaboration about the project's future, both Katlego and Mzwake indicated that the wheelchair project would stay with the PDTS for a while. They will be manufacturing all the tubing and sheet metals.

Africa's first ceramic 3D printer installed at CUT



The CeraFab Lab L30 ceramic 3D printer installed at CUT.

Lithoz GmbH, a world and industry leader in ceramic 3D printing based in Vienna, Austria, has recently installed a CeraFab Lab L30 ceramic 3D printer at the Central University of Technology, Free State (CUT).

The acquisition of this new technology aligns with the university's Vision 2030 of the university to become a leading African university of technology, shaping the future through innovation. The machine is the first ceramic 3D printer installed in the entire African continent, representing an important step forward in the growth of ceramic 3D printing as an established manufacturing technology in healthcare solutions.

The university will also use the printer to increase the research output and innovations in areas considered essential to the country's strategic growth and development agenda. The machine is envisioned to democratise first-class healthcare possibilities and treatment in Africa, for Africa. The Lithoz printer was acquired through the Department of Science and Innovation's Medical Device Additive Manufacturing Technology Demonstrator (MedAdd) project to bring about social and technological solutions in the region. The machine is funded by the Department of Science and Innovation (DSI) and housed inside the ISO13485 accredited Centre for Rapid Prototyping and Manufacture (CRPM), where it will be used as an important tool in providing access to this ground-breaking healthcare technology to benefit ordinary people who may not have access to private health facilities.

Dr Johannes Homa, CEO of Lithoz, said he is very proud to have "successfully brought the ceramic 3D printing access to the African continent for the first time", citing it as "a real milestone achievement for Lithoz and the ceramic 3D printing industry worldwide".

The installation coincided with the MedAdd Launch, which was attended by the acting Deputy Director-General of the Department of Science and Innovation (DSI), Dr Rebecca Maserumule and the Free State Education MEC, Dr Tate Makgoe; underlining the importance of the arrival of LCM 3D printing as a key technology to enable a new dimension of innovative and patient-specific healthcare solutions.

CUT's PDTS is shaping the future through innovation

PDTS built the sensory integration room for a special school in Bloemfontein.

Sensory integration body roller, sensory integration scooter board, non-assistive patient transfer and a patient standing frame.

The Product Development Technology Station (PDTS) is one of various commercial and academic research centres of excellence, units and groups which provides an important platform for social and technological innovations and solutions. Funded by the Technology Innovation Agency (TIA), the centre continues to contribute positively to businesses and communities through its social and technological innovations.

PDTS is involved in product design, prototyping and short-run production. In collaboration with local businesses, the PDTS team can develop new ideas into products or improve existing products with detailed engineering. In this way, they support businesses and individuals through the entire new product development process.

The station uses first-class engineering expertise and specialised prototyping equipment from the Centre for Rapid Prototyping and Manufacturing (CRPM). They use innovative technologies such as CAD designs, Finite Element Analysis, Rapid Prototyping and Reverse Engineering to provide services suited to customers' specific needs. PDTS and CRPM are also assisting in manufacturing the much-needed hospital equipment such as oxygen connectors and splitters to increase the capacity of the hospitals.

The centre has since developed sensory integration equipment for therapy in collaboration with the University of the Free State (UFS) and South African Institute for Sensory Integration. This includes projects such as non-assistive patient transfer developed for a hospital in Bloemfontein as well as a sensory integration room for a special school, also in Bloemfontein.

The drive to improve prevention, diagnosis and treatment of illness in Free State sees CUT establishing a facility that specialises in biochemistry and tissue culture

The state-of-the-art Biochemistry and Tissue Culture facility at the newly established Centre for Quality of Health and Living (CQHL) in the Faculty of Health and Environmental Sciences.

CUT's Vision 2030 endeavours to create a harmonious community conducive to applied research, teaching, and learning. CUT has commercial and academic research centres, units and groups which provide an essential platform for social and technological innovations and solutions.

The university has established yet another centre of excellence - The Centre for Quality of Health and Living (CQHL) in the Faculty of Health and Environmental Sciences. Led by Prof. Tshepiso Makhafola, Director and Assistant Dean: Research Innovation and Engagement, the new establishment is a state-of-the-art Biochemistry and Tissue Culture facility. The centre is envisioned to apply new knowledge to drive improvement in the prevention, diagnosis and treatment of illness that maximises healthy outcomes for the people, with results that create a societal return on investment with lifelong dividends.

Asked about the drive behind the centre's establishment, Prof. Makhafola said, "the objective is to broaden the scope of expertise in the two-focus areas of clinical research and basic scientific medical research. It is also to establish long-term collaborative partnerships with pharmaceutical and biotechnology industries and the government to develop a comprehensive and translational health research programme."

"As one of CUT's pockets of excellence, the idea behind establishing these centres is to have a research and innovation hub that will address and respond to real-life challenges. Our aim is to work together with communities and have interdisciplinary collaborations to deal with specific issues and develop solutions. We are moving away from just producing research papers but instead bringing about research that will have an impact. We believe that these centres will be among those entities that will bring about innovations that could later be commercialised and be able to create new industries as we move forward," said Prof. Samson Mashele, acting Deputy Vice-Chancellor: Research Innovation and Engagement.

The centre has since partnered with the Clinical Research Investigator Site Management Organisation (CRISMO) to develop clinical research opportunities in the Free State region and contribute to the advancement of science and clinical research. The partnership aims to provide education and training in research and related skills, especially for postgraduate and undergraduate students, thereby enhancing the faculty's academic programmes.

CUT Entrepreneurship Development Unit offers a new and existing chance for entrepreneurs to hone their skills

L-R: DESTEA MEC, Honourable Makalo Mohale and CUT acting Vice-Chancellor and Principal, Prof. Alfred Ngowi, unveiling the plaque at the CUT Entrepreneurship Development Unit (CUT-EDU) launch.
Working alongside government and various stakeholders CUT-EDU is a continuation of the university's efforts in conceiving innovative solutions from which our communities stand to benefit. Attendees at the CUT-EDU launch.

CUT officially launched the "Entrepreneurship Centre of Excellence" named CUT Entrepreneurship Development Unit (CUT-EDU) on 3 June 2022. The unit offers post-graduate studies, including MPhil in Coursework or Research up to a doctoral level in entrepreneurship management and monitoring and evaluation for the 2023 academic year.

The CUT-EDU is an exciting, and significant centre which will not only benefit the institution and its participants but will help the province, which is working towards promoting wealth creation and equitable wealth distribution for economic transformation.

"The government support has been meaningful to the success of our efforts in conceiving innovative solutions from which our communities stand to benefit. This launch is a living example of what we want to achieve with our ideas. We welcome the participation of our banking sector, Mangaung Chamber of Commerce and Industry, Black Management Forum, Free State Legislature, and Provincial Government. We believe that this centre will bring the university, government and industry together in planning and investing resources collaboratively to drive the implementation of entrepreneurship education forward in this Province," said Prof. Alfred Ngowi, acting Vice-Chancellor and Principal.

MEC for the Free State Department of Economic, Small Business Development, Tourism & Environmental Affairs (DESTEA), Makalo Mohale, stated that CUT's endeavours in knowledge and human capital development should be aligned to improve the lives of the people of the Free State. "The successful launch of this critical centre places the this university in a favourable position to take advantage of new opportunities and speed up implementation of plans for their Vision 2030. It is my hope that this unit will create a critical strategic position which will lead the university's academic position into the future of innovation and entrepreneurship education for higher education in this country," said MEC Mohale.

The CUT-EDU programmes equip participants with skills to start and grow businesses and become self-dependent while producing astute entrepreneurship consultants, educators, scholars, and legislators. CUT's Faculty of Management Sciences has some renowned entrepreneurship experts with extensive entrepreneurship research portfolios and teaching experience who will be sharing this expertise with would-be entrepreneurs and entrepreneurs in both the formal and informal sectors, at various stages of their business development, from start-up to high-impact growth.

"Our hope is that CUT-EDU will graduate into an entrepreneurial hub which will form one of the cornerstones that will fill into CUT's vision 2030. CUT is not for us, it's for you, this university belongs to you and through the creation of this unit, we would like to extend a hand of support towards the province, the municipality, and the community at large. This is our attempt to contribute towards creating, supporting, and developing entrepreneurs to the benefit of creating employment and the growth of the Free State's economy," said Prof. Albert Strydom, Dean of the Faculty of Management Sciences.

In addition, these programmes will emphasise entrepreneurial scholarship, theory, and applications through entrepreneurship teaching and research. The unit will also offer short-learning programmes, especially for young people and women to use innovative education and technology in entrepreneurship and other socio-economic development-related fields.

CUT collaborates with UK Universities to improve wheelchair design and manufacture in Africa

Wheelchair design is being improved, and African entrepreneurs with disability are getting support from Aston University product design experts and CUT engineers. Senior lecturer in product design, mechanical, biomedical & design engineering, Dr Timothy Whitehead, is leading the team to apply their expertise under the Innovation for African Universities project.

CUT has collaborated with Aston and Loughborough Universities in the UK in a scheme which aims to improve Africa's entrepreneurial and technical skills. The three institutions are working with the university and two South African wheelchair manufacturers to improve their products and business operations to the next level.

One of these is Able Manufacturers, which has created a three-in-one chair with adaptable wheels for off-roading in the many rural areas with limited paved roads. A standard wheelchair can't cope with mud, uneven roads and overgrown vegetation, but the removable third wheel helps users overcome such rough terrains. As a result, people with disability can travel to previously inaccessible areas, increasing opportunities for and access to potential employment.

Wheelchair design is being improved, and African entrepreneurs with disability are getting support from Aston University product design experts and CUT engineers. Senior lecturer in product design, mechanical, biomedical & design engineering, Dr Timothy Whitehead, is leading a team to apply their expertise under the Innovation for African Universities project with CUT in Bloemfontein.

"CUT's collective AM capabilities in the design and manufacture of patient-specific implants and other assistive devices have undergone impressive strides and our goal is to widen the scope of research in this arena significantly, and form deeper alliances with medical professionals and institutions", said Prof. Deon de Beer, Chair of DSI/merSETA in Innovation and Commercialisation of Additive Manufacturing at CUT.

Company owner Schalk van de Merwe added that a core part of the project will be to use Aston University's expertise in design for manufacture and industrial design to help Able Manufacturers improve the current chair design. He said: "It is fantastic to work with the universities on this project. These chairs are a lifeline for many people living in rural areas."

The second project is to support the development of a new, more affordable rugby wheelchairs to encourage more athletes and children with disabilities into the sport. Currently, it is costly to import these chairs to Africa, resulting in an automatic barrier to a sport which can support physical and mental health and rehabilitation. Real Steel Wheelchairs was started by Jared McIntyre, a rugby player in a wheelchair to work with skills providers to train differently abled people to make the chairs and offer them valuable employment.

Dr Whitehead and design research assistant, Rebecca Leatherland, who are based within Aston University's College of Engineering and Physical Sciences, visited the two wheelchair manufacturers to understand their challenges and barriers to business development. Interviews, group workshops and observations were conducted to gain knowledge and understanding local issues. "We are delighted to share our knowledge, experience, and research with African entrepreneurs. This project will help improve the lifes of wheelchair users here and help boost employment opportunities for them. We are supporting two upcoming wheelchair manufacturers to improve their designs and create educational and workshop materials for future differently abled entrepreneurs. We also had an opportunity to meet-up with the business owners in person and learn first-hand about their challenges, which we aim to help them overcome."

In addition, the team will provide support on upskilling and offer business and technical opportunities to the wider disabled community in South Africa, Kenya, Ghana, and Nigeria. The project has been funded through the British Council's Innovation for African University scheme. It also includes Loughborough University, which aims to improve Africa's product development and entrepreneurial skills by following a user-centred approach. This implies that locally available skills and technology platforms within the TIA-funded Product Development Technology Station (PDTS) and Centre for Rapid Prototyping and Manufacturing (CRPM) will join forces with the UK partners to support local needs.

CUT signed MoU with three Institutions of Higher Learning from Lesotho to transform the education system and embrace African centered knowledge

From left: Prof. Dipiloane Phutsitsi, Principal: Motheo TVET College, Dr Dzimba, Rector: Lesotho College of Education, Prof. Spirit Tlali, Rector: Lerotholi Polytechnic, Mrs Liteboho Maqalika-Lerotholi, Registrar: National University of Lesotho and Prof. Alfred Ngowi, acting Vice-Chancellor and Principal.

The Central University of Technology, together with Lerotholi Polytechnic, National University of Lesotho, Lesotho College of Education and Motheo TVET College, signed a Memorandum of Understanding (MoU) with the intention of working together to transform the education system as well as develop and design curriculum values inherent in Se-moshoeshoe.

Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, said the collaborative partnership will foster and facilitate the advancement of knowledge and the philosophy of King Moshoeshoe I and his legacy, not only to the Basotho nation but to the entire Southern African development community and the African continent. "Most importantly we need to find a way of integrating the Basotho history and the Se-moshoeshoe philosophy into our curriculum and forge collaborations with the higher education sector in Lesotho for purposes of advocating the development of Sesotho as the language of teaching, learning, and research. This approach is critical not only to preserve the language but also to forge cross-border collaborations for the entire higher education framework. Apart from the memorial lecture series there are a few initiatives that will be persuaded through the MoU, and that will include, among others, collaboration activities that are aligned to student and staff mobility, collaboration on research projects, joint curriculum development and the alignment of the programme and qualification mix, as well as the exchange of learning material. I hope that this signing will only be the beginning of greater things to come from this partnership."

Prof. Spirit Tlali, Rector: Lerotholi Polytechnic, said they are excited to be part of the collaboration. He said the reason they decided to be part of the collaboration is that the idea of decolonisation of education goes beyond the historical part of education.

Prof. Dipiloane Phutsitsi, Principal: Motheo TVET College, said that higher education is a very highly contested terrain and to be talking about Africanness and decolonisation of education is an imperative move. "As an institution, our contribution with yours will go a long way. Our participation in this partnership would be along the lines of skills development, enhancing research and development, and knowledge contribution. This would also enhance the operations of both universities and colleges. Curriculum development and the exchange of learning material are part of the learning process," she said.

Dr Dzimba, Rector: Lesotho College of Education, said "the desire to develop our curriculum into our language for the next generation to understand is important to us. This document must be a change in that we need to walk the talk as leaders. We are happy to be amongst the participating teams, particularly in research and curriculum development. Of paramount importance, it will be appreciated that as we move forward, we will begin to write modules in Sesotho."

Mrs Liteboho Maqalika-Lerotholi, Registrar: National University of Lesotho, said each university will benefit from the partnership. "As academics, we know how important it is to research and publish. Our research and publications will now focus on what we are and who we want to be. The Se-moshoeshoe campaign must now drive our curriculum and everything we do, including teaching and training."

Enactus village FA project brings hope to the locals

The community of Gladstone, Thaba Nchu have planted 2 hectares of potatoes as part of the Enactus CUT Village Fa (Cop Farming) Project.

At Gladstone village: Potatoes are being packaged and prepared for distribution to different markets. The project has supported the beneficiaries in becoming commercial farmers.

Enactus CUT students are working with the youth in Thaba Nchu through Enactus Village Fa (Crop Farming) Project to improve the local economic development of their village, and to assist the community to produce crops that will meet the required standard by the commercial market.

In July 2021, the team participated in the Virtual National Competitions, winning numerous awards and advancing to the final round. In addition, the team presented one innovative project called Village Fa, which aims to decrease urbanisation, eradicate poverty, stimulate employment, generate income, and promote sustainable development and food security.

Enactus CUT has partnered with the university's Community Engagement Unit, Interstate Bus Lines and Patriot Vision in Action (PAVA)- an NGO from Lesotho. Project Fa saw the birth of the Green Golden Grey Cooperation, a farming enterprise with 14 beneficiaries from Gladstone village.

To kick start this venture, the team chose potatoes as their primary crop because potatoes are profitable and are a strategic food security crop. In addition, they are a multi-seasonal crop with low input costs and guarantees returns on investment.

The intended mission of stimulating local economic activities and building sustainable communities in the Free State province and beyond has been accomplished as local farmers are now enjoying harvest time. The enterprise is currently harvesting an anticipated 24 000 kilograms of potatoes. The project has assisted the beneficiaries in becoming commercial farmers as the potatoes are currently being distributed to different markets.

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Enactus is the world's largest experiential learning platform dedicated to creating a better world while developing the next generation of entrepreneurial leaders and social innovators. Enactus CUT comprises of young student leaders involved in valuable community engagement in various communities.

When elaborating on the progress, Kabelo Makhetha, Project Manager, said "When we first arrived here, we noticed that the locals have land and the motivation, but they don't have resources. And for someone to be a successful farmer, they need to be enabled. We also noticed that there was a reservoir two kilometres from the potential land, but it does not capture all the rain water as it is supposed to, and most of it ends up into the nearby streams. We realised that the community needed water tanks to assist in this regard. Progress was made and potatoes were ploughed on that virgin land. We managed to expand the project from small scale farming to commercial farming," said Makhetha.

Nkosinathi Palole said he was hesitant when he first joined the project, but with time, he saw the value of learning from one's elders and applying their knowledge and wisdom to improve one's life. "My father has been part of the Village Fa Project for quite some time but I never really understood exactly what he did until I sat down with him, and he explained the true value of farming and being part of the legacy that our older generation are building for us," said Palole.

David Ske, Village Fa Project Deputy Headman, added that it has been encouraging to see the youth taking part in this project and making a meaningful contribution in their community.

Community Activist, Tsholofelo Motlogeloa, encouraged the youth of Gladstone to look for opportunities within their communities. He added that many villagers leave their homes to live in urban areas, when there is a lot to achieve here at home.

It is harvest time at the Green Golden Grey Cooperation. The enterprise is currently harvesting an anticipated 24 000 kilograms of potatoes. The intended mission of stimulating local economic activities and building sustainable communities in the Free State province and beyond has been accomplished as local farmers are now enjoying the fruits of their hard labour.

Enactus CUT hosts worm farming expo to create awareness on the importance of worms in sustainable farming

Yanelisa Giyose, 22-year-old Enactus President: Yanelisa said at first, she feared worms until they became part of her life. Now she is proud to be called mother of worms.

Maraka Lefera and Abang Thulo, Advanced Diploma: Human Resources student showcasing the worm population to locals who attended the expo. The type of worm is called the red wiggler.

In June 2022, Enactus CUT hosted the 2nd worm farming expo at the Welkom Campus following the successful one at Bloemfontein in May 2022. The Enactus CUT has ventured into a unique market of worm farming to create awareness on the importance of worms in sustainable farming. The team is the first to farm worms in the Free State and are eager to introduce it to the entire province.

Asked what prompted them to consider worm farming, Enactus CUT President, Ms Yanelisa Giyose, said that poor soil conditions at their Village Fa project saw them going back to the drawing board and finding ways to mitigate the challenges faced with poor soil conditions at the farm. "In one of our farming projects at the Glenstone farm, we struggled with producing good crops because the soil content was not conducive, our crops did not meet the commercial market standard and harvest was low. We started with the watermelon, followed by the butternut but the harvest was so low, and crops were not commercially worthy, so our pilot crops failed. After going back to the drawing board, a lot of research was done and that's where the worm farming initiative came about," she said.

According to Bright Hlungwani, the team started with just one bag of red wiggler worms and the worm population has since multiplied and now they have more than 10 bags and intend re-selling 60kg back to the owner. "This is the best method thus far and I am planning to take the knowledge back to my village in Limpopo because farmers there are suffering the same fate as the Glenstone farmers." He also added that nurturing worm is humbling and highly profitable.

Business Advisory member, Mr Ephraim Tshobeka dubbed 'grandfather of the worms', said that since he started the worm farming process, he has become addicted. "Our new methods of farming are depleting everything that is left so with this project, we are trying to find solutions in using sustainable methods of farming to preserve what is left of our land. Our fight is against poverty because soil enables us to secure food and we are doing that for our future generations. We are preserving this land so that it can be used and re-used by generations to come. Another important reason to venture into worm farming is to create employment, nurture the soil and encourage organic ways of farming." He added that worm farming a lucrative business to run.

To get started, the team got funding from Harmony Gold mines and Ford Foundation. The project started in March 2022 with just 60kg of worms from Agribusiness Corner, Co-founders of worm farming from KZN, and three months later, the worms have tripled.

Regional Jewellery and Diamond training collaboration envisioned to bear fruits

Standing, from left: Mr B.S. Masitsa, Executive Chairman of Cloud 10 Solutions and Mr E.L. Holmes, Lecturer and Jewellery Coordinator at CUT. Seated, from left: Ms M. Barnard, Head of the Department of Design and Studio Art at CUT and Ms D. Sengoara, Executive Director of Cloud 10 Solutions.

CUT Department of Design and Studio Art (DDSA) signed a Memorandum of Understanding (MoU) with the Kimberley International Diamond and Jewellery Academy (KIDJA) in Kimberley as well as Cloud 10 Solutions in Welkom. The MoU is envisioned to provide support and strengthen the capabilities of all three entities to provide a piece of highly specialised knowledge and assistance to diamond and jewellery students as well as trainers and lecturers.

This unique collaboration aims to create a cross-dependent platform in the jewellery industry, including the amalgamation of jewellery design and manufacturing, diamond cutting and grading, IT support and 4IR technological innovations. The training of Jewellers and diamond cutting specialists has provided alternative career opportunities for talented youths in the light of ailing mining activities in the Free State and Northern Cape, subsequently feeding an emerging jewellery and diamond industry with capable graduates. Through this MoU, the parties will exchange valuable research supporting curriculum development, facilitate staff and student exchange and initiate collaborative projects.

"In this partnership with DDSA, KIDJA, we look forward to re-purpose our facility, previously known as the Virginia Jewellery Hub. Through this collaboration, new opportunities will arise for young people in our district to pursue jewellery design and manufacturing short courses, internship programs, and incubation opportunities for graduates looking to start new businesses," said Mr Masitsa, Executive Chairman of Cloud 10 Solutions.

Cloud 10 Solutions is a young Dynamic ICT Solutions provider in Welkom, focusing on Smart Mobility Application Solutions, Internet Solutions, and research and development through various socio-economic business and citizen-focused technological development programs.

In 2014, all of CUT's Art and Design programmes, including the Jewellery School, merged into one unique multi-skilled qualification where students can specialise in various design majors, including jewellery design and manufacturing. The aim was to harness and extend students' knowledge, skills, and creativity with a critical idea-driven approach across graphic design, fashion design, jewellery design, fine art and photography, coupled with a unique technology approach.

A Diploma in Design and Studio Art at CUT is a qualification across the design and art spectrum that features a comprehensive multidisciplinary view where students are encouraged to pursue, debate and prioritise real-world issues as innovative persons.

The legacy of King Moshoeshoe I is remembered at the memorial Inaugural Lecture held at CUT

From left: Morena Ntsane Mopeli, Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, Chief Moremoholo Motebang Mopeli of the Ba-Koena ba Mopeli, Qwaqwa, Free state, Morena Tsholo Mopeli and Dr Sally Dzingwa, Institutional Registrar.

On 07 April 2022, the Central University of Technology, National University of Lesotho, Lerotholi Polytechnic,Lesotho College of Education, and Motheo TVET College came together to celebrate the legacy of King Moshoeshoe I and his ethical leadership.

Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, said that the king Moshoeshoe I lecture series will be one of the most important calendar days in the institution's life. "This annual event signifies an important milestone in the history of the Central University of Technology together with the University of Lesotho, Lerotholi Polytechnic, the Lesotho College of Education from the kingdom of Basotho as well as Motheo TVET college. It is a great honor for CUT to host this inaugural lecture in remembrance of King Moshoeshoe as the founder of the Basotho nation."

Prof. Tefetso Mothibe, former Vice-Chancellor: National University of Lesotho, Keynote speaker and the first speaker in the series of king Moshoeshoe I memorial lectures concentrated on the issues of Se-moshoeshoe, which he said CUT should embrace in its journey to curriculum renewal, Africanisation and decolonisation.

He said that as Africans we need to first look back for us to move forward and acknowledge the wealth of knowledge that was created by our ancestors. "I really appreciate, acknowledge, recognise and promote the positive and constructive African knowledge, heritage, and contribution of the African ancestors created before the period of destruction. The current education system hardly recognizes that this rich knowledge, science, and technology heritage ever existed. They are hardly included in the curriculum, and it is about time we appreciate this positive heritage/data and include it systematically in the curriculum of all African schools as well as colleges and universities."

He indicated that the demand to change the education policy in Africa often receives a lukewarm reception. He argued that this close approach must change in order to include the African knowledge and heritage to design new models that prevent dependence and encourage creativity and innovation by students.

"The negative narrative emanating from a destructive period should be changed. It is thus very essential that knowledge production is built on the foundation and values that Africans have left behind."

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He said that the African past contains rich resources of knowledge that is highly relevant for today and tomorrow and that is why this positive heritage, history, and data must be resurrected. "This is the knowledge that all Africans must be exposed to and grow up with. This can be achieved by systematically putting the knowledge and values in the curriculum. Morena Moshoeshoe bequeathed us with the legacy of education. In it, he saw many benefits that through education, his beloved Sesotho language would be preserved."

In giving her response to the lecture Dr Moleboheng Mohapi, Director: Ditsong National Museum of Natural History, said that the decolonisation of education starts with accepting that the current education system in most institutions is still colonial in nature and that the need to decolonise education is also applicable to museums as producers and disseminators of knowledge. "Many museums are not transformed. Their collections and research activities are indicative of these facts. If we don't start at universities, centers of learning, and museums, our societies will continue to be untransformed. Leadership should be the cornerstone of such transformation. If leaders don't do it, who is going to make them do it?"

She further added that decolonisation of education requires that the bearers of knowledge to document it so that there are source documents for those who are willing to renew their curriculum. "I, therefore, implore all academics to document indigenous knowledge and publish it. If we fail to produce textbooks and articles detailing our African knowledge, then the status quo will remain. There is so much knowledge that Africa has to share with the rest of the world," she said.

The event was graced by the presence of Mr Bereng Seeiso, High Commissioner at Lesotho High Commission, Mr. Kutloano Lerotha, Lesotho Consulate Officer, and Chief Moremoholo Motebang Mopeli of the Ba-Koena ba Mopeli, Qwaqwa, Free state.

Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, Prof. Tefetso Mothibe, Former Vice-Chancellor: of the National University of Lesotho and Dr Sally Dzingwa, Institutional Registrar.

MoU solidifies continued development of 4IR and 3D printing collaborations between CUT and Maluti TVET College

Areas of collaboration include experiential training (WIL), infrastructure and human capital support, and the donation of a new 3D printer which was part of the demonstration.

At the signing of the MoU is Ms Izette van Heerden, Maluti TVET College Chief Financial Officer; Mr Motlalepula Tsotetsi, Maluti TVET College Principal; Prof. Alfred Ngowi, CUT acting Vice-Chancellor and Principal and Prof. Sam Mashele, CUT acting Deputy Vice-Chancellor: Research, Innovation and Engagement.

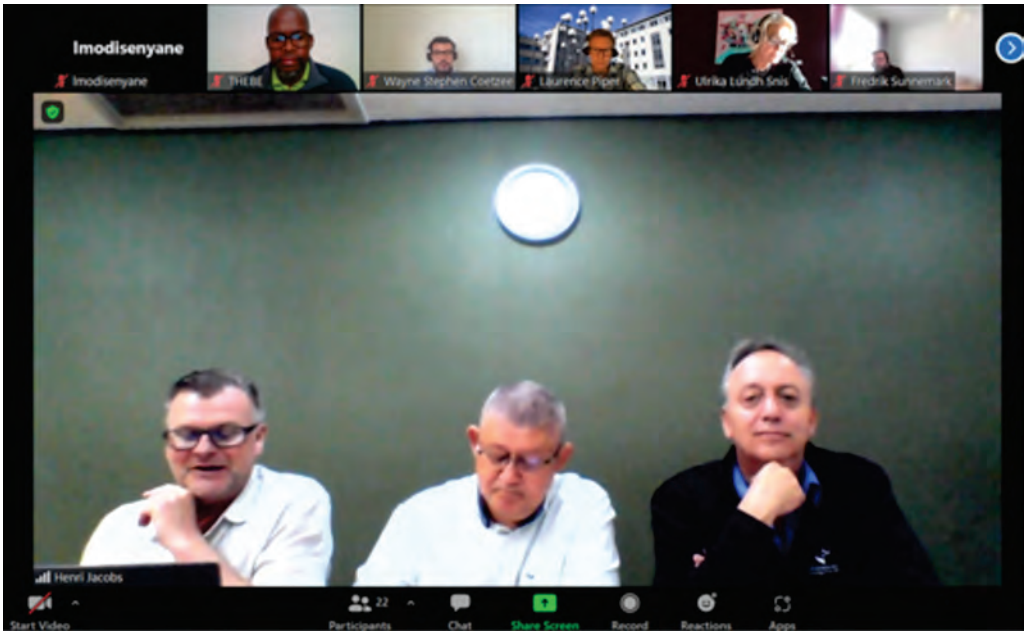
CUT continues to solidify joint collaborative engagements that have been established with its counterparts. The signing of a Memorandum of Understanding between CUT and Maluti TVET College is a continuation of the partnership that the university has had with TVET colleges in the province for many years now.

Over the years, many cooperation programmes have been established between the two institutions, especially within the Faculty of Engineering, Built Environment and Information Technology, but not excluding other faculties within CUT. Not only have the two institutions shared cordial working relations but they have also supported the activities of each other very positively. Last year, CUT saw an improvement in STEM enrollment figures through its partnerships with TVET colleges.

CUT acting Vice-Chancellor and Principal, Prof. Alfred Ngowi, stated that for the university, signing of the MoU is a continuation of broader objectives. "Going forward, we will be engaging in mutual collaboration with the college to allow the Faculty of Engineering, Built Environment and Information Technology, The Centre for Product Development and Manufacturing and Product Development Technology Station to conduct experiential training and research for the college staff and students using our state-ofart machinery. We commit to acquiring 3D printers when and where possible for the college so that the lecturing staff can develop a greater appreciation for this technology and expose the college students to product development processes through additive manufacturing. Over a hundred hours will be dedicated to the college as part of our support," Prof. Ngowi said.

Principal of Maluti TVET College, Mr Motlalepula Tsotetsi added that when the concepts of 4IR and 3D printing became popular, they initially didn't make sense until they collaborated with CUT. "Our relationship has solidified over the years, and I know when I ask to bring my team over, we are always welcome. We have seen the impact that CUT has had in bringing the TVET sector closer and we appreciate this initiative. From the programme deliveries that we already have, there are landmarks of 4IR, and we should be introducing a robotics programme in the coming years. All of these requires us to work closely with the front-runners, in this case, CUT will assist our lecturers so that we can deliver as expected," said Tsotetsi.

CUT expands its collaborations with Sweden's University West



From left: University West Professor Per Assmo, (also an extraordinary Professor at the University of Western Cape), Mr Leolyn Jackson: Director: CGE and Dr Henri Jacobs, Director: WIL & Industry Liaison.

The Central University of Technology and the University West in Sweden, held a digital workshop to expand and strengthen their long-standing relationship and further discuss other collaboration opportunities. The partners agreed to cooperate with one another towards the internationalisation of higher education, extend the effective and mutually beneficial cooperation as well as develop academic and cultural exchange in research and other areas.

In February 2020, the two universities signed a Memorandum of Understanding (MoU), with the aim of establishing a co-operation in the field of doctoral education in Work-Integrated Learning (WIL). Progress has been made in which two staff members at University West have enrolled for a PhD in WIL (the first of its kind globally), joint research on WIL and co-presented on WIL at SANORD and SASUF conferences.

Mr Leolyn Jackson, the Director of CUT's Center for Global Engagement (CGE), said that the workshop's purpose is to further discuss what and how they can extend CUT and University West collaborations. "We would like to hear about the exciting work currently being done between University West and the University of Western Cape, what is possible for CUT, and how best the three universities can develop and invite other players."

Further collaboration opportunities that were discussed include WIL mobility of staff and students, virtual learning or webinars, joint supervision, curriculum development, development of WIL as a field of study in SA, co-host conferences, socially directed technology and innovation, socio-resilient infrastructure and creating a WIL hub.

"There are summer and winter schools as well as short learning programmes that our students can do either virtually or face to face; and going forward, we would like to have joint projects in research, joint supervision, or joint degrees, but most importantly, we want to look at how we can create a societal impact hub. We must start formalising it so that all three of us (CUT, UWC and University West) can have a common understanding of where we would like to take this when we adopt the whole notion of internationalisation. We should also improve on what we currently do in collaboration with our partners," he added.

Professor Per Assmo, also an extraordinary Professor at the University of Western Cape, said that the collaboration between the University of Western Cape and CUT is at different levels. He mentioned that they have a collaboration called the third part PhD student programme, where two PhD students from CUT are now participating in their doctoral programme through Sweden. "We can have research collaboration, which has been done previously through seed funding South African Sweden University Forum (SASUF). We also have a master's programme in WIL that is open for international students and is offered online. The good thing here is that through bilateral agreements, if South African students are from either CUT or UWC, they are automatically exempted from tuition fees, so it becomes free. Then we have an intention placement at undergraduate and graduate programmes which is another possibility. I also see a possible future collaboration in Work-integrated mobility for staff and students," he said.

CUT and Provincial Government collaborate to find solutions on how researchers can solve current service delivery challenges

From left: CUTis Chairperson, Ms Matseliso Mfanta, MEC for Finance, Ms Gadija Brown and acting Deputy Vice-Chancellor: Research Innovation and Engagement, Prof. Samson Mashele. CUT CiviLab applies their research to pothole repairs for faster and better results: Research is also focused on repairing the potholes, as these factors can cause pothole repairs to go wrong, such as potholes being filled without being cut or cleaned.

In the beginning of the year, the Central University of Technology met with the Provincial Government leaders to revive the already existing partnership and discuss CUT's innovative research outcomes that could potentially assist the province in addressing some of the challenges faced.

Progress has been made since the discussions and CUT has embarked on several innovative projects to address these challenges. One such project sees partners Civil labs, CUTis and industry working together to develop a road safe pothole repair method - a time-saving remedy to repair damaged roads caused by ageing and moisture that enters the underlying soil layers. The newly developed method has been implemented in Bloemfontein and Boshoff to improve the conditions of the roads.

In partnership with CUTis, the CiviLab is currently working with private companies and have devised a solution called the Road Safe Pothole Repair Project Method. The time saving and easily applied remedy for shallow, damaged roads at depths of seventy-five to one hundred millimetres caused by ageing and moisture that enters the underlying soil layers.

The CUT CiviLab repair method is one of the methods the institution continues to apply technological solutions to provide a positive social impact in the community.

"What we're focusing on mainly are smaller potholes, which are usually repaired using cold mixed asphalt material and where larger ones can be repaired more effectively using hot mix asphalt, which we want to sort of veer away from. So here are the capabilities of Hot Mix Asphalt. One, it's a constant mixed supply that needs material and heavy plant. And this is quite costly in some situations, the working of up to one hundred and thirty-five degrees Celsius, which is dangerous in many cases. They are also climatic considerations which have been mentioned before, such as the heavy rains we've been having this year," said Mweemba.

Mweemba added that this method is only temporary and cannot withstand everyday heavy traffic loads. "It is affordable and easy to apply, but it is temporary and only lasts a season. Usually, this comes off within about six to three months," he added.

CUT and the Princess Gabo Foundation aspires to create a SMART Village in Thaba Nchu

Princess Gaboilelwe Moroka-Motshabi, Founder of the Princess Gabo Foundation and Prof. Samsom Mashele, acting Deputy Vice-Chancellor: Research, Innovation and Engagement at the signing of the MoU.

The Central University of Technology has signed a Memorandum of Understanding with the Princess Gabo Foundation and partners with the intention of creating a SMART Village in Nogas Post, Thaba Nchu. This initiative is one of the many ways the institution works to improve societal challenges by bringing technological solutions to the community.

Princess Gabo Moroka is the traditional leader of this village, which is approximately 20KMS away from Thaba Nchu CBD. In her previous visit to CUT, Princess Gabo was highly impressed with the university's innovative projects and CUT being involved in a Smart Campus initiative. Based on CUT having the skills and technology, Princess Gabo invited the delegation to Nogas Post to explore the possibilities of creating a SMART Village.

"Nogas Post is part of the 42 villages that we have in Thaba Nchu. A rural community that is very disadvantaged and forgotten, if one could say that; but this is also an opportunity for us to bring the change that we want to see. Letting the people take ownership in bringing sustainable development to their areas. So, when we speak about this concept it's really about all of us coming together and holding hands and trying to come up with a model that can be easily duplicated to other disadvantaged, rural communities," said Princess Gabo Moroka-Motshabi.

Challenges faced by the community include among other things; lack of education facilities, health care systems, facilities for early childhood development, no shops, security issues and lack of infrastructure. Other issues include crime, stock theft, and lack of water supply.

Mr Dirk Hanekom, CEO of Agri All Africa; Mr Barend Uys, Afriforum Head of Intercultural Cooperation; Ms Jeeva Munsamy, CUT Deputy Director of Community Engagement; Princess Gaboilelwe Moroka-Motshabi, Founder of the Princess Gabo Foundation; Prof. Samsom Mashele, acting Deputy Vice-Chancellor: Research, Innovation and Engagement; Dr Patrick Manditereza, EWSeta Chair at CUT and Mr Kagisho Mmetseng, CUT Institutional Advancement Officer.

Dr Patrick Manditereza, EWSeta Chair at CUT Faculty of Engineering, Built Environment, and Information Technology, added that Nogas Post was selected as a community project regarding the use of renewable energy via water, wind, sunshine, or cow dung. As it is, renewable energy is a multidisciplinary field which means that participation is open to everyone from CUT.

Due to its capacity, expertise and being in the forefront of technology and innovation, CUT plays a pivotal role in creating a SMART Village. This includes offering the Nogas Post community skills development in renewable energy that would afford the candidates opportunities for employment and create a healthier environment.

"As a university, one of our pillars is to engage our communities to try and find solutions to some of the challenges they are facing. Our aim is to have a positive impact in our society, and that's what we stand for as a university," said Prof. Mashele.

CUT and the University of Botswana forged a SADC collaboration

CUT and Botswana delegates who formed part of the discussions at the Bloemfontein campus.

The University of Botswana is no stranger to the Central University of Technology, the two universities have collaborations in research and academic thematic mobility of staff and students. Since the signing of their MoU, Work-Integrated Learning has been the pinnacle between the two.

On 24 and 25 February 2022, CUT welcomed a delegation from the University of Botswana led by the Vice-Chancellor, Prof. David Norris and his entourage - acting Deputy Vice-Chancellor: Academic Affairs, Prof. Richard Tabulawa, Director Legal Services, Mr Benbella Rwelengera, Director Institutional Planning, Mr Richard Neill, acting Director of the Centre for Academic Development, Dr Gomotsegang Pule, the Director of Information Technology, Mr Canaan Mathendele, the Senior Executive Assistant, Mr Moeng Segaetsho, Executive Assistant, Mrs Matshediso Zungu and acting Dean for the School of Graduate Studies, Prof. Jotia.

In his welcoming address, Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, emphasised that by the year 2030, CUT would be a leading University of Technology shaping the future through innovation, and one of the tools to achieve that is through digitisation. "There is no possibility that we can be a leading African University of Technology when we are only operating in the Free State. We know that to be a leading University of Technology, we have to be digital. We have started the journey of digital transformation which has three focus areas - ICT strategy, data strategy, and the digital skills development strategy."

Prof. Ngowi also highlighted that although the university envisions going digital, there are things that cannot be put on the cloud and cannot be digitised, hence it is essential to come together and collaborate with other institutions. "Things such as Work-Integrated Learning and sports cannot be digitised, we want to be able to share resources and get students from Botswana to come to South Africa and get exposure in the South African industry and vice-versa. The other possible area to tap into is sports, we know that Botswana has great sporting facilities, so we will look into leveraging the partnership and sharing resources. We are happy to share with you what we are doing at our institution, and I believe that by working together, we can go far."

The Vice-Chancellor of Botswana University, Prof. David Norris, expressed his excitement with what he has seen and heard primarily because the mission and vision of CUT are similar to what they want their university to achieve. "Your vision and mission are totally in sync with what we have at our university. There are many areas of commonality and synergy that can be the foundation for collaborating."

Prof. Norris mentioned that the Botswana economy is grounded on diamonds, so having a jewellery school can benefit their country. "I am very impressed with the CUT's jewellery design infrastructure. There are many other areas where I see synergy. I am also enthralled by the seamless efficiency and effectiveness of your processes. The internationalisation of the curriculum is something that we can do together, and we are excited and have learned a lot from you," he said.

Higher Education during the pandemic – CUT expert part of the symposium panel

On 28 June 2022, a group of higher education experts participated in an online symposium discussing student and staff experiences during the pandemic under the theme: *Implications for planning, funding, and quality assurance.*

Panellists included delegates from the Central University of the Free State (CUT), the University of the Free State (UFS), Nelson Mandela University (NMU), University of Johannesburg (UJ), Sefako Makgatho University (SMU), University of the Western Cape (UWC), University of South Africa (UNISA), members of the Council on Higher Education (CHE) and Universities of South Africa (USAf).

The Covid-pandemic flung society into uncharted territory, and the higher education field was no exception. Institutions resorted to emergency practices to accommodate the pandemic regulations that restricted movement and gatherings. Most South African universities are by nature contact institutions, relying on face-to-face facilitation for teaching and learning. Measures to complete the academic programme via an online and blended approach were implemented with varying degrees of success.

While initially met with resistance, many students indicated that they prefer a blended and/or online methodology. Even though this can be viewed as the future of higher education, it is accompanied by a unique set of challenges, including funding for digital training, access, and infrastructure.

Dr Gary Paul, Deputy Vice-Chancellor: Resources and Operations, was among the panel members and contributed to the topic of funding and financial implications related to and arising from blended learning and digital literacy. He observed that institutions must radically rethink operating models to enhance financial sustainability, institutional viability, and resilience.

"The best way to make money is to save money," he said. Hence, he suggested that single-person offices must be revisited, as well as the constant adding to on-campus infrastructure. "Investing in off-campus infrastructure makes more sense to pursue infrastructural growth that can be repurposed and sold at profit when it is no longer needed."

Dr Paul further mentioned that cost-saving measures like virtual and augmented reality modes of academic delivery, negotiating more competitive data pricing with mobile network operators, and diversifying income streams could all be used to fund the required digital infrastructure and training needed for a blended approach. He highlighted that enhancing employees' digital literacy in itself is a measure that could enhance organisational performance as recent research studies found that digitally literate employees are more self-efficacious and deliver improved performances. Of particular significance, in the context of digital literacy, he pointed out that digital literacy correlates very strongly with organisational agility.

This symposium highlighted important considerations necessary to align the South African higher education environment to global competitors and peers. The challenges and solutions unpacked by this event will pave the way to further discussions and ultimately workable policy alternatives. The CUT is proud to be an active player in the critical discussions at this level.

The impact of COVID-19 on teaching and learning in higher education: CUT lecturers shares their teaching experience during the pandemic

Dr Thandi Gumede, Lecturer in the Faculty of Health and Environmental Sciences.

When COVID-19 pandemic struck, it brought extreme disruptions on the higher education sector and changed the approach of teaching and learning drastically. This shift brought shockwaves and a lot of challenges and uncertainties to the students and lecturers in the higher learning sector. For some, the sudden change forced adjustments in teaching and learning, while for others, the change came at a greater cost of adjusting to internet connectivity glitches, virtual meetings, extended academic programmes and others.

Despite these challenges, Dr. Thandi Patricia Gumede, Chemistry Lecturer in the Faculty of Health and Environmental Sciences, was among CUT academics, who pushed on to contribute to teaching and learning. She took her time to share her teaching experiences during the pandemic, where she said circumstances caught them unprepared and forced them to experiment with online teaching and learning and how she learnt to adapt and respond to the challenge. She highlighted that the sudden change came unexpectedly but left them with valuable lessons that they will always embrace. She further said that the experience also taught them that one must not be too comfortable in all they do "The situation forced us to explore other methods- digital platforms, to accommodate the new ways of doing things. Honestly speaking, online teaching was not easy. However, the unwavering support from our e-learning team made it possible for us to develop digital and pedagogical tools to teach effectively in remote settings. The e-learning team was available to assist us from 8:00 to 16:30- Monday to Friday. They assisted us in understanding the key features of online platforms, using appropriate teaching methods and technology, monitoring students' engagement and progress in lessons, designing interactive learning activities, as well as setting online tests and assignments, we are grateful for that," she said.

Gumede mentioned that the unexpected online teaching method taught her that learning can take place anywhere. "As a lecturer, I learnt that I need to be versatile and be prepared to teach in any mode presented before me by any unforeseen situation (online, hybrid, face-to-face). I also learnt that I should be able to incorporate all these teaching methods even post COVID-19. This whole experience has taught me the importance of technology even though it is not sufficient or even reliable to facilitate remote learning. Regardless of the learning modality and available technology, as lecturers, we still play a critical role in clarifying some concepts that students might find complicated in pre-recorded lessons. The experience has also taught me that on-going teacher professional development is key."

She also indicated that COVID-19 has opened doors for a lot of positive things in her career. "I enjoy working from home more and I am much more productive when I am working from home. I managed to produce more research outputs and human capacity development as compared to when I am working on campus every day."

Asked whether the university supported her during these trying times, Dr Gumede said "indeed, the university provided the necessary support needed during the pandemic. We had staff development training workshops from the e-learning team such as the lockdown training eThuto 000, as well as the eThuto lecturers support, WhatsApp group etc. They also provided us with some helpful tips on how to stay in touch with students when they could not get to campus. They also made provision for data as well as providing working tools to support our students."

Online, hybrid, or face-to-face teaching? Gumede emphasized on hybrid "because a hybrid class adapts better to student learning styles than a fully online or a fully face-to-face class can. For example, auditory students may benefit from the ability to rewind prerecorded lectures, while visual learners can study slides at their own pace. Meanwhile, students who benefit from face-to-face classes can still connect with their lecturers and fellow students."

She said that although this new method of teaching brought some positive results for her, she also encountered challenges along the way. Some of the challenges she experienced include unstable internet connection, load shedding, limited/insufficient data for students which resulted in low-class attendance, inadequate computer labs and lack of computers/laptops access. "Teaching chemistry concepts requires drawing of chemical structures, and mechanisms, to ensure that all students are following, and no one is left behind but doing this online was a challenge. First you have to deal with students who are copying from one another, and who do not totally understand anything you are trying to explain to them."

When asked how she would have handled the situation if she was the Vice-Chancellor of this university, Dr Gumede said that she would recommend the hybrid learning mode rather than full online learning. "I would allow half of the class to attend on-campus and the other half online. I believe that this was going to allow students to participate equally, no matter their circumstances."

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When sharing her thoughts about the 4th Industrial Revolution and whether the university is there yet, she said that 4IR is about changing opportunities for real human connection, learning, and growth. "I do not think we are there yet. However, we are evolving into the 4th Industrial Revolution. For example, our institution has now the digital body temperature scans in some buildings. This limits human connection, however there are still things that robots cannot do, so at the end of the day, people are still needed to do some work," she concluded.

Another lecturer in the Faculty of Health and Environmental Sciences shared her experience of teaching and lessons learned during COVID 19. She explained that she learned a lot as the methods of engaging with students had to change and she had to adapt to these transformative changes.

"The pandemic introduced new methods of teaching and learning. We needed to learn fast to use new technologies, I was not used to using ZOOM and Microsoft teams, but I had to learn quickly. The situation taught me to always expect the worst, to be well prepared, and be proactive rather than reactive. I have realised that it is important to know your students and their challenges, because it may seem logical for a lecturer to do something in a certain way, however, the student experience can be quite difficult. In a nutshell, I would say that for me personally, nothing much has changed, just the mode of teaching and assessment, which I adapted easily."

With the disruptions brought by the pandemic, CUT came to play and provided the necessary support to ensure that teaching and learning continue. "Colleagues from the e-learning section went to great lengths to prepare training videos and live training sessions, not only with Blackboard but with functionalities in PowerPoint which were new to me. Now I use those skills to make my presentations more interesting. There are great applications available to enhance teaching such as, osmosis videos that are directed at medical professionals, but unfortunately, many of these videos are only available when you subscribe and pay in US dollars."

Asked whether she will opt for online, hybrid, or face-to-face teaching and why? She said she would go with a hybrid method as many students still struggle to concentrate when lectures are online and requested face2face teaching. "However, currently, class attendance remains poor, both online and physically. If I had to choose between working from home or face-to-face /onsite teaching I will opt to work from home any time, I now have a home office with everything I need, however for the sake of the students, I will continue with face2face facilitation."

She mentioned that the social isolation was the worst to cope with and she is glad that they can now be more on campus, and she is delighted to see her colleagues again. "Although I had challenges with having to teach from home in isolation, I was able to stick to my regular office hours schedule with some overtime to learn new technologies. Another challenge I encountered was having to use my own cell phone to make calls to students/stakeholders, but I understand that it was not feasible for CUT to give lecturers a cell phone allowance."

In conclusion, she said "If COVID taught us anything is that the 4IR was with us for some time already, as lecturers and students we were just caught off guard. Emphasis was still placed on compulsory class attendance that is according to the calendar and for DHET funding, they required that we send in the attendance registers for the students, thus moving over to on-line facilitation which was somehow a challenge for many, especially students. Unfortunately, most of the students were not properly prepared for the challenges of fully fledged on-line facilitation. Many students only have a smartphone and I tried to put myself in their shoes, it is no fun at all to receive tuition on a 15 X 7 cm little screen."

CUT Professors inaugurated into full professorship

Prof. Samson Mashele, acting Deputy Vice-Chancellor, Innovation Engagement and Research (right) congratulates Prof. Tshedi Naong on this achievement of reaching full professorship status.

CUT celebrated the milestone and conferment of full Professorship titles to Prof. Tshedi Naong, Lecturer and Business Administration Professor and Prof. Kanzumba Kusakana, Head of Electrical, Electronic and Computer Engineering Department, for their outstanding research work.

The presentation of an Inaugural lecture is a significant milestone in the academic career of a full professor. It provides a platform to share past research and spark new debates that will bring solutions to the current challenges.

During his Professorial Inaugural Lecture held on 10 February 2022, titled "Culture eats strategy for breakfast, lunch, and dinner-people centered approach a panacea for leadership conundrum", Prof. Naong highlighted on the role of organisational culture to organisations, the relationship between culture and strategy, organisational culture and competitive advantage, managing and creating distinct cultures, founders influence on culture and empirical results. He said that strategy is not an event, but a long-term process and journey that takes time to be realised. He also mentioned that culture plays a pivotal role in the development of strategy, but more importantly in strategic implementation. He further explained that culture is one of the key drivers of strategy and that it trumps strategy every time. "This is really a mammoth task; it is not an easy job to do. If we agree that a strategy is something that takes a long time, we can then say it is quite a huge exercise," he said.

In conclusion, he said that effective alignment of culture and strategy provide a means of getting people to work together to reach a common strategic goal and achieve an organisations vision. "Culture is a glue that combines and influences managerial views which in turn, affects recruitment, resources allocation, management, and organisational design."

From left: Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, Prof. Kanzumba Kusakana, Head of Electrical, Electronic and Computer Engineering Department and CUT's Registrar, Dr Sally Dzingwa.

Prof. Kanzumba Kusakana presented on Optimal energy management of hybrid multisource energy systems using the political, operational, economic, and technical approach on energy efficiency- simply called the POET approach. He shared his research and academic milestones as well as introducing new ideas with the intention of conceiving and developing innovative solutions. He further elaborated on the entire POET component of energy efficiency as well as the optimal management of hybrid sources of energy system using the POET approach. He explained the acronym POET as: P-performance efficiency, O-operations efficiency, E-equipment efficiency, and T-technology efficiency.

"With the optimal operation control of hybrid, we have different renewable energy resources, which we would like to control in a way that we reduce operational cost to maximise the renewable energy. In terms of optimal operation of a hybrid renewable system with hydro pump storage, we looked at renewable energy and storing energy using water. The third project, which is optimal energy in water heating, cooling and air conditioning systems, aims to minimise the electric elements energy usage that is coming from the grid and maximise the free energy that is coming from the sun. Our last project, optimal peer-to-peer energy sharing between prosumers- is aimed at sharing energy amongst peers. If everyone has some solar PV when they generate electricity and they don't use it, they can sell it to their neighbour instead of the neighbour getting power from Eskom."

When summing up his presentation, Prof. Kusakana said that an optimal control approach is a powerful tool that can be used to solve energy management problems. Optimal control and POET are applied to the energy management of hybrid multisource energy systems. "We did that using mathematical modelling and simulation and the main objective was the operation cost while we try to minimise the operation cost and maximise renewable energy resources." he added.

With over 300 publications in journals, conference proceedings, and book chapters, his current research looks at small-scale renewable power generation as well as optimal energy management, which supports the UN Sustainable Development Goals. He is currently an Associate Editor for the IET Renewable Power Generation Journal (Impact factor 3.93); the Journal of Energy Storage (Impact factor: 6.583). He is an NRF rated researcher with an H-index of 29, and his work has thus far been cited more than 3 000 times.

In his congratulatory message to the professors, Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, said that a Professorial Inaugural Lecture is a full academic function in a university calendar and is hosted to acknowledge and recognise academics as researchers of note in their respective fields. "This is an occasion of significance in any academic staff member's career at any university. The lectures are an important intellectual discourse for our academics to analyse the past and the present, so that the university community and partners can debate the future of the higher education sector in this digital technology age occupying our centre stage in transforming teaching and learning, as well as our research innovation and engagement."

R 2.9 billion allocation for student housing announced during NSFAS Summit held at CUT

NSFAS hosted the National Student Accommodation Summit in partnership with CUT on 27 and 28 June 2022 to create a platform for consultation with universities, TVET colleges and critical stakeholders in the student accommodation market.

The Summit is a forum for exploring suitable solutions, conditions, and guidelines for student accommodation accreditation. NSFAS is expected to develop a sustainable NSFAS Student Accommodation framework and effective instruments for the Post School Education and Training (PSET) to overcome the above challenges.

In his welcome address, Prof. Alfred Ngowi, acting Vice-Chancellor and Principal said, "I applaud NSFAS for its sterling work to ensure that academically excellent and financially deserving students gain access to higher education without hassle." He further said that government alone cannot fulfil this responsibility. He appealed to industry experts and business to hold hands with the government and find sustainable solutions for the future of our young people.

In his keynote address, Dr Blade Nzimande, Minister of Higher Education, Science and Technology, said that Treasury had allocated R 2.9 billion for the much-needed infrastructural improvement of student housing within the sector. His department will provide about 16 858 beds to eleven universities. The minister further said that this is significant progress but still far from enough in terms of what is needed. In addition, more space is required to expand the existing student accommodation.

NSFAS is playing a critical role in terms of funding tuition fees of students in universities and TVET colleges. Since its establishment, it has grown into a vital intervention programme that plays a crucial role in supporting the education of young people from disadvantaged backgrounds. It remains a beacon of hope for many young people who may not otherwise have an opportunity to realise their dreams. Over the years, the fund has helped so many young people across the country to gain access to higher education and achieve their goals of changing their lives, families, and communities.

Aspiring studentpreneurs provide innovative solutions to real-life challenges

Studentpreneurs who presented their innovative projects to a panel of judges, with them is Dr. Izabeth Conradie (second from right) Manager: Idea Generator and Dr. Michelle Erasmus (third from left kneeled) Senior Lecturer: Maths/Physical Sciences.

Entrepreneurship education and development have become an intrinsic part of CUT's teaching and learning. Being among the first institutions to include a strong entrepreneurial focus in academic programmes, the university is recognised as a leader in entrepreneurship education.

On 22 June 2022, the i-GYM held the Mathematics, FEBIT Competition where students were invited to submit and present their innovative projects to a panel of judges. About 100 ideas were submitted and those with a potential to solve real-life problems were selected for presentation. Through these programmes students are equipped with problem-solving skills and their perception of innovation is enhanced.

Selected students were afforded an opportunity to present their five minutes innovative projects to a panel of judges who not only adjudicated but advised and guided them on where to improve on their invention and presentation skills. Of the 13 presented projects, only five best innovations made it through. The winning teams included Mandisa Adonis who claimed 1st position for her Trolley 360 idea, Muller Kotze who came in 2nd for his Leak-proof taps idea, Ntokozo Langa who came in 3rd place for inventing a Reusable/disposable female Urine Collector holder, Tankiso Selemela, Atamelang Keitebetse, Tshepang Moselesele and Tshediso Motleleng who took 4th place for their Hand clap activated toilet flush invention, and Josh Arnold and Kieran Tyler Warley who took the 5th spot for their project- The Easy-Flushy, for the home installer. The top 5 innovations each received R1000 (as individual or group).

A panel of judges consisted of Deputy Director: PDTS / CRPM: Shelley Mona, Lukie Van Staden, Business Manager: iX Engineers from Gqeberha, and Prof Yali Woyessa, Associate Professor: Civil Engineering.

CUT academic wins excellent oral presentation at the 2nd International Conference on Power Engineering

Dr Sandile Phillip Koko, Senior Lecturer in the Department of Electrical, Electronic, and Computer System Engineering in the Faculty of Engineering, Built-Environment, Information Technology (FEBIT), presented a paper at the 2nd International Conference on Power Engineering (ICPE 2021) that was hosted in Nanning, China. Koko was among numerous presenters from different countries around the world, who were also presenting their electrical engineering research papers.

After the conference presentations, his oral presentation was selected as the best one of the conference as certified by the board of directors. He presented a paper entitled "Optimal battery sizing for a grid-tied solar photovoltaic system supplying a residential load: a case study under South African solar irradiance". The paper has since been accepted for publication in the high impact Scopus Elsevier Journal of Energy Report. The Manuscript Number: EGYR-D-22-00605.

2022 Autumn Graduations held

2022 Autumn Graduations at the Welkom Campus where 817 graduates recieved their hard earned qualifications.

The Central University of Technology hosted its first in person 2022 Autumn Graduations since the strike of the COVID-19 Pandemic in 2020. A total 0f 3798 (2 981 from Bloemfontein Campus and 817 from Welkom Campus) graduates including 14 master's and 4 doctoral degree candidates proudly ascended the stage to receive their much-deserved qualification.

Acting Vice-Chancellor and Principal, Prof. Alfred Ngowi, congratulated the graduates for their achievement. "A graduation is one of the most important events in a person's life. It is the pinnacle of a student's academic pursuits and the outcome of three to four years of toiling. Some take longer for a variety of setbacks that confront us. We know the struggles that students must overcome to reach the finishing line, and for that we take off our hats," said Prof. Ngowi.

Four doctoral degrees conferred at the 2022 Welkom Campus Autumn graduation ceremony




The university hosted the Chancellor's Doctorandi Dinner to celebrate the achievement of four doctoral candidates. The soiree is considered a showcase event of the highest prestigious standard, where the achievement and the academic prowess of the newly crowned doctors are celebrated and acknowledged for their contribution to the advancement of CUT as a true center of learning.

The newly capped doctors are Doctor of Communication in Language Practice: Dr Phumzile Masala; Doctor of Education, Dr Mmamore Babedi; Doctor of Philosophy in Management Sciences, Dr Lucien Lezar and Doctor of Education, Dr Mkhumbulo Ndlovu.

In her congratulatory statement, CUT Chancellor Madam Justice Mahube Molemela congratulated the new Doctors and challenged them to apply their knowledge to solve post-COVID-19 problems and to reach out to their communities who need much support under the current circumstances. "As an institution with a vision to be the leading African university of technology, we strive for the quality and determination you have displayed through your hard work. I am excited about the Welkom Campus' output under very strenuous circumstances. This indicates Management's support, academic staff's resilience, and tenacity to progress irrespective of the challenges you had to face. As you begin this new chapter in the journey of your lives, remember to plough back into the communities that you come from and lift others as you rise," said the chancellor.

CUT supports the career drive of general workers all the way to graduate success

From left: The two graduates, Mme Aletta Mhambi, CUT cleaner who obtained her Diploma in Office Management and Technology and Mme Ruth Mothae, former general worker, grounds and gardens and a proud Office Management and Technology diploma holder.

Two Central University of Technology general workers, Ms Aletta Mhambi and Bafedile Ruth Mothae, are a true reflection of 'humble beginnings to great endings.' The duo started as humble general workers with only a dream, desire, and enthusiasm to turn their livelihoods around and stand a better chance of qualifying for better jobs. Today they stand out as proud graduates with a qualification in their hands. Through the support and opportunity presented to them by the university to develop and grow personally and professionally, they made their life-changing decision and enrolled for the Diploma: Office Management and Technology. On 09 May 2022, their dreams were realised when they were amongst the 3 798 graduates who walked the stage at the 2022 Autumn Graduations.

Ms Ruth Mothae performing her duties as a general worker, grounds and gardens.

Mme Aletta Mhambi performing her daily chores as a cleaner.

CUT's safe and accessible environment sees Galeboe Thabiso obtain his second qualification at the 2022 Autumn Graduations

Galeboe Thabiso is proud CUT graduate. He received his second qualification: Advanced Diploma in Applied Management certificate.

CUT is eager to create a safe and accessible environment for all students on campus, including those who are differently-abled. Every student is equally important and must be treated with the respect and dignity they deserve.

"You are not limited because of your condition. If you have a dream chase it and do not be afraid of what society will say. Remember, you are on this earth for a purpose," those are inspirational words from Galeboe Thabiso, a CUT graduate living cerebral palsy condition.

On 09 May 2022, this 32-year-old gentleman from Boshof proudly walked the CUT Boet Troskie stage to collect his Advanced Diploma in Applied Management certificate. "I am very happy that I managed to make it to the finishing line! I must say that walking onto that stage made me feel like nothing is impossible. This is my second qualification, and I am proud of myself."

Thabiso mentioned that his condition is a congenital disorder of movement, muscle tone, or posture due to abnormal brain development, often before birth. "I was not born like this, unfortunately, when I was a baby, I fell and had a mini-brain stroke that affected my left-hand side at the age of two," he said.

When sharing his academic journey, he said that as a person with a disability, he found the institution to be very supportive and easily accessible. He never had any struggles moving around campus, even during exams. "I am very pleased to say that I never had any challenges accessing any facilities around campus. Because of my condition, I am a bit slow and during exams, I would be given extra time and at times, do oral examinations. The institution catered for my needs, and today I stand proud as a graduate!"

Galeboe also mentioned that they had to attend classes online during the lockdown, which he was sceptical about but turned to enjoy them in the end. "When we were informed that classes will be online, I was a bit skeptical, but like the rest of the world, we had to adjust. I enjoyed the online learning more than I expected. It was fun, I must say. I never experienced any challenges; our lecturers were always accessible. My overall experience at CUT has been nothing but awesome!"

CUT honours nano fuel technology contributor at the Autumn Graduations in Welkom

Dr Cornelius Johannes Hansen, entrepreneur and outstanding contributer to nano fuel technology.

CUT conferred an honorary Doctorate Technologiae in Mechanical Engineering to Dr Cornelius Johannes Hansen in recognition of his entrepreneurial drive and the outstanding contribution he has made to nano fuel technology. A well-known businessman, property developer and entrepreneur, Dr Hansen is the founder, co-owner and Executive Chairman of the Naf-Tech Energy Company. Hansen obtained his Baccalaureus Procurationis (BProc) degree from the University of Pretoria in 1980. He started with his articles during the third year of his BProc studies and completed these within the allocated two-year time frame. He was admitted as an Attorney of the Supreme Court of South Africa in 1980, and in 1996, he was awarded Right of Appearance in the Supreme Court of South Africa.

Dr Hansen is the impetus behind Naf-Tech, a novel, South African innovation. This unique fuel combustion enhancer was developed to lower fuel consumption and contribute to the national commitment to a sustainable future by reducing greenhouse gas emissions, whilst also making the product available to the public at an affordable price. Over many years of national and international research and development, the company has scientifically proven that Naf-Tech significantly contributed to reducing emissions and Volatile Organic Compounds (VOCs), lowering fuel consumption and maintenance cost, as well as improving power output.

Naf-Tech is used by various companies, some of which are listed on the JSE. The Naf-Tech innovation is manufactured locally in strict adherence to national and international regulatory standards. Naf-Tech is registered with the United States Environmental Protection Agency and has product liability cover underwritten by Lloyds of London.

As a result of Naf-Tech Energy's breakthrough innovation in the field of nano fuel technology, the company was invited to deliver research papers at various events, including the 2017 Nano technology and Energy Symposium, the 2016 Southern African Energy Efficiency Convention, and the South African Innovation Summit. Naf-Tech's international exposure in terms of R&D, and export, extends to various countries in Africa, including Zimbabwe, Botswana, the Democratic Republic of the Congo and Nigeria, as well as the Middle East (Iran and Teheran), South America and Europe. Further international expansion is in progress. Building on the success of Naf- Tech's flagship Diesel Combustion Fuel Enhancer, the company has successfully developed a product line, and further Naf-Tech products are currently in development.

"In this rapidly changing world of innovation and technology, we are seeing a great reliance on technology to solve environmental problems globally, and Dr Hansen's breakthrough innovation is what we aim to achieve with our applied research outputs, and we are certain that he will play a critical role in support of our ongoing dialogue on the role that the university can play towards the sustainable development goals agenda which has now put the spotlight on the universities' rankings", concluded Prof. Ngowi.

Dr Hansen has been serving as a member of the Committee D02 for Diesel, Petrol, and Petroleum Gasses of the International American Society for Testing and Materials (ASTM) since 2008. This committee plays a significant role in setting international petroleum standards for 53 countries worldwide, including South Africa.

SABC CEO and Alumni shares his leadership lessons with graduates

SABC CEO and CUT Alumni, Madoda Mxakwe delivered the keynote address on Leadership at the 2022 Autumn Graduation Ceremony, held in Welkom.

SABC Chief Executive Officer and the Central University of Technology Alumni, Madoda Mxakwe delivered the keynote address at the 2022 Autumn Graduation Ceremony. Focusing on leadership, Mxakwe began by listing all the great leaders the CUT has produced over the years who have positively impacted society.

Having been privileged to live and work in different communities, Mxakwe has applied all these lessons to realise his achievements. "I've been privileged to lead diverse teams with various orientations and the lessons that I will share with you today are insights that are uniquely mine, but anybody can apply them. These lessons are meant to provoke your thoughts, challenge you and evoke something very deep in the recesses of your soul, and prepare you for whatever journey you are pursuing academically in your various corporate life or business," said Mxakwe.

He highlighted that success takes time. "I know I'm talking mostly to a generation that wants things instantaneously, everything has to be now, but this model of success does not last. In my journey I've found that you will be nurtured and hidden for many years before being unleashed into prominence or popularity, because as young people, you need to know this; you need to build your character, fortify your faith, create shock absorbers for all of life's challenges that you will inevitably encounter. In the corporate sector, we want people that have been able to build key core functional capabilities. We live in what we call- the vocal world, and in order to thrive in that world, we need professionals and executives that have been properly equipped to deal with these problems," he added.

Mxakwe encouraged the graduates to ask themselves 'what more can they give', which will help to separate them from ordinary graduates in their field. "People say opportunity loves preparation. When it comes to preparation, you have no clue about what lies ahead thus you have to be the most prepared and well-read person in the room because you just never know when that opportunity will come your way. Secured, matured and strong leaders surround themselves with people that know better them."

"If you really want to build a legacy that will uplift this and the next generation, you have to build things that will take the community, your career and our country to the next level. In this country, we need people of solid values, so what should direct you is your moral compass. Integrity is key for where we are and where we're going as a country," he concluded.

Disability Unit launched to create a conducive environment that supports and enhances learning for students with special needs

From left: MEC For Social Development, Ms Mamiki Qabathe, and Prof. Alfred Ngowi, acting Vice-Chancellor and Principal, officially opened doors, welcoming staff and students to the Disability Unit.

From left: Prof. Macalane Malindi, CUT Senior Lecturer, Ms Martie Miranda from HEDSA, Mr Mohau Manyarela, Senior coordinator student academic support, MEC For Social Development, Ms Mamiki Qabathe, Prof. Alfred Ngowi, and Prof. David Ngidi, Deputy Vice-Chancellor: Teaching and Learning.

The Central University of Technology is committed to promoting diversity on campus among students to create equal educational opportunities for students with disabilities. The university offers a conducive environment to support and enhance learning for students with special needs.

The Disability Unit boasts an upgraded and fully equipped centre. The unit also serves as a central resource and a starting point for coordinated support for students with disabilities to create an inclusive environment, which encourages students to be independent and cope with their daily activities on campus.

The centre is highly supported by the Supplement Instruction (SI), an academic assistance programme that aims to enhance academic support and interventions towards student performance and retention; barriers that might prevent them from fulfilling their potential, improving building access as well as arranging for conversions during exams. Through the undying support provided by the centre, several disabled students have since graduated successfully.

19 May 2022 marked the 11th Global Accessibility Awareness Day (GAAD). On this day, CUT raised not only awareness but also launched a disability unit to accommodate and cater for the needs of differently-abled students.

The purpose of GAAD is to get everyone talking, thinking, and learning about digital access or inclusion of people with different disabilities. Through the disability unit, CUT has made tremendous strides in supporting them to achieve their best academically.

Prof. Alfred Ngowi, acting Vice-Chancellor and Principal said that the Global Accessibility Awareness Day focuses on the issues of accessibility and inclusion of the differently-abled people who have disabilities and impairments. "The disability awareness day is an integral part of achieving and spreading awareness in the disability community. The notion of digital disability and inclusion also aligns with the upliftment of the CUT to create a healthy environment for learning."

Masego, who is also a beneficiary, said that she is fortunate to be part of the Disability Unit as it has given her a different perspective on life. "It has developed my interpersonal abilities and created a conducive environment for other students. Because of this, students can transform into butterflies," she said.

She also added that the institution has created an inclusive environment by accommodating students' individual needs to integrate into university life. "I am pleased that CUT understands that people with disabilities need human, medical, and educational support. It is through the intervention of the university that I can pursue my studies without fear. It restored my vision of a future with no limits but plenty of opportunities."

Nthabiseng Molongoana, from the Association for Persons with Disabilities (APD) Free State, said that the partnership with the disability centre will provide accessible accommodation for students with disabilities. As students with disabilities, we applaud the university management for all the efforts and roles played in ensuring our success. As graduates with disabilities, we are saying that gone are the days when we will get to a university and apologise for our disability because nothing is wrong with us. Still, everything is wrong with the society we live in. Let us make it possible, let us partner with anybody that can assist us in bringing accessibility for the graduates with disabilities."

In his keynote address, Prof. Malindi encouraged students living with disabilities to be brave when facing challenges. "Your life has a divine purpose to it, nothing can take away the meaning, purpose, and worth your life has. Remember, you were created for a purpose. You may not know the real purpose of your lives, but believe me, we are all constantly searching for the meaning of our lives. You are not the only ones who wonder about the worth of your own lives. We all have struggles in our lives, and we attain victory because there are people who support and encourage us. So, thank you for refusing to be put aside and congratulations for standing to be counted."

He further commended CUT for opening the unit to ensure that the support needed is received. "I congratulate all the organisations that champion the course and the rights of people with diverse needs. To the CUT and all the partner organisations present here today, you are the salt of the earth, you are the light of the world. Thank you for agreeing to be useful vessels."

Ms Martie Miranda from HEDSA, Mr Andrew Milner from Editmicro, and Mr Mzwake Moqhaisa from PDTS also gave brief presentations on their contribution and support towards the establishment of the centre.

CUT Cycling Club takes part in 2022 Cycle Lab Maluti Double 90 in Clarens

The university is committed to promoting a healthy lifestyle through sports development for students and staff. The cycling club is one of the sporting codes intended to contribute to this initiative, while also serving as a launch pad for the country's future sport stars.

12 CUT Cycling Club male members who took part in the 2022 Cycle Lab Maluti Double 90 in Clarens on 09 April 2022. Back row: Enos Seatlholo, Jonathan Stanfley, Dr Gary Paul, Donovan Morapedi, Benito Kroutz, Justin Colbert, Nathan de Wee and Egan Koeberg. Front: Ashley Bengell, Olebogeng Kgengwe and Dingane Lethuping.

Idah Maujane Tukulu, postgraduate student from Phelindaba, Bloemfontein- City of Roses, is one of the few female cyclists among thorns. She joined the CUT cycling club because she has always been interested in the sport and this was the perfect opportunity for her. The fun and energetic cyclist said she is excited to be part of the club. Her other hobbies include running, hiking, and church. Idah also enjoys hikes with the Bloem Social Hiking Club.

CUT Golf team placed 3rd overall in USSA Golf Tournament

The CUT Golf team participated in the University Sports South Africa (USSA) Golf Tournament that took place at Paarl Golf Club, Western Cape, from 11 to 13 April 2022. The team ended 3rd on the overall team standing, with Mojalefa Xaba, the team captain, taking the fourth position on the individual standing. The CUT Golf team from left: Dimitrio Tieties, Darian Fortune, Jaco Anderson, Manyarela Mohau (Team Manager), Thabo Seekoei and Majalefa Xaba (Team Captain).

CUT Golf Captain wins the 2022 Mangaung Open Champion title

CUT's Golf captain Mojalefa Xaba came out tops after winning the 2022 Mangaung Open Champion title at the Mangaung Open Tournament held on 19 and 20 March 2022 at the Bloemfontein's Schoeman Park Golf Club. The 28-year-old Information Technology student from QwaQwa won a trophy and a few tour bags. The golfer has been playing the game for 19 years. The Mangaung Open is a tournament organised by the Mangaung Golf Association (MGA) for all golf players in and outside the country. This tournament plays over two days, and the overall winner is determined by his/her gross score. The vision of MGA is to maximise the participation of black golfers to unearth and advance talent. Pictured from left: Mojalefa Xaba, CUT Golf Captain and the 2022 Mangaung Open Champion showing off his well-deserved trophy. Mojalefa Xaba with the sponsor, Mr Thando Majola, Absa Bank Regional Manager: Home Loans.

FNB CUT Ixias participate in the 2022 varsity cup competition

CUT Ixias stay in Varsity Cup despite winless 2022 season

The Central University of Technology rugby team better known as CUT Ixias took part in the 2022 varsity cup competitions. Although the Ixias did not win this season, but they remained in the top tier of Varsity rugby for 2023, avoiding the dreaded relegation drop to the Varsity Shield for next year. Congratulations to FNB CUT Ixias, securing their place in the premier Top 10 - Varsity Cup 2023 competition.

FNB CUT met FNB UJ in a thrilling first match of the season: On 14 February 2022 FNB CUT Ixias and FNB UJ played their first 2022 FNB Varsity match in Bloemfontein drawing 44 all in round one of this year's competition.

Free State Derby – UFS Shimlas beat CUT Ixias to remain top on the log: FNB Shimlas secured the bragging rights after a convincing victory over FNB CUT Ixias in the annual FNB Varsity Cup Bloemfontein Derby that took place on 28 February 2022. FNB UFS Shimlas fought back from a 10-0 deficit to beat the FNB CUT Ixias 48-27 in the derby.

CUT BFN Choir shines at the GACMA Eisteddfod

The CUT Bloemfontein campus choir made the institution proud by reclaiming its collective flagship position at the Gauteng Choral Music Association (GACMA) Choral Eisteddfod in Fochville, Gauteng Province. The choir secured silverware by achieving position two in the African piece as well as maintaining the same in the Western piece.

CUT alumna Masello Mokhoro puts her agricultural knowledge to practice

CUT alumna, Masello Mokhoro took her agricultural knowledge and skills to practice. She is now an entrepreneur and owner of Starlicious Enterprises. Her daily tasks include overseeing the general management of her business as well as handling the animals, feeding, and vaccinating livestock.

Masello Mokhoro, is a 23-year-old CUT alumna and a businesswoman from Bultfontein, a small town about 100 km north of Bloemfontein. She is the owner and co-founder of Starlicious Enterprises, which has been running for four years to date. Her business is an agribusiness, rearing day-old broiler chicks till six weeks and pigs for consumption.

Asked how she landed in the previously male dominated sector, Masello said that things are slowly opening up for female farmers especially black females and she chose to take that opportunity and couple it with her knowledge and skills acquired from CUT. "My determination and dedication to my studies led me to where I am today. Agricultural Student Organisation AgriSO), CUT's Peer Mentoring Programme and the Idea GYM (I-GYM) played a huge role in my career development. These programmes gave me hope and helped me realise and enhance my leadership and communication skills and, networked me to the amazing people who have also turned into my mentors. Currently, I am running part of my business in my backyard, and I am content because I can be hands-on-deck on my livestock as well as oversee my day-to-day responsibilities at home," she said.

She matriculated at Rainbow High School in Bultfontein and graduated her Advanced Diploma in Agricultural Management - Cum Laude in 2020. "I have always wanted to be a veterinarian (Vet), so being in agricultural business and having to take care of my livestock brought me closer to my dream and I am grateful," she added.

CUT Alumni flourishes in the world of art

Reuben Masithela, a former Graphic Design student said he has always enjoyed art as it is an expressive and therapeutic medium for him to escape whatever he is going through and never realized that it was a talent. After high school, I decided to study IT because it seemed like a better career move financially, but that only lasted a year because I knew that my passion was in art and design. The 34-year-old is currently living in Sandton, Johannesburg, where his career in graphic design and the digital space developed to its full potential.

"My art career only started at the end of 2020 during the global pandemic. I spent a lot of time alone in my apartment, which was frustrating. Until I decided to get myself a sketch pad and start drawing again. One thing led to another, and I started exploring with different mediums. I found joy and peace again in the process of creating, I shared my work on social media and friends and family encouraged to do more. In 2021, I took it upon myself to fully develop this lost love, which was found again, I had my first solo exhibition in November 2021 and it was a great success! From then on, more opportunities came my way, and I am thankful."

The highlight of his career includes working on big brands like NBA Africa, Old Mutual, Momentum, Neotel, Nandos and FNB as well as becoming the Head of design at a respected PR agency in Johannesburg. Another breakthrough is having an international footprint in the digital design realm when he officially started working remotely for overseas brands in America, Europe, and other parts of the world.

"I am grateful that the university prepared me for the hard work that was coming in my graphic design field, and I have learnt great skills to fine-tune my drawing, digital drawing, research, creative thinking and much more. All these skills impacted positively on my career. I am a proud CUT Alumnus and I raise that flag up high."

Former CUT student takes the shine at the SA's national Sony World Photography Awards

Bongani Tshabalala's award-winning image is titled 'Montsho'.

CUT alumni and self-taught photographer Bongani Tshabalala, took the shine at the South Africa's National Sony World Photography Awards 2022 in the Portraiture category of the Open competition. The National Awards program is an initiative set up by the World Photography Organisation and Sony to support local photographic communities worldwide, with 61 countries taking part this year.

Although Tshabalala studied Mechanical Engineering, he never gave up on his dream of becoming a professional visual artist. A self-taught photographer, whose contemporary style narrates stories about African people, Tshabalala is driven by creating a more diverse picture and inspired by the stories and faces of his subjects. He usually aims his camera at subjects other than himself, in high focus and sharp contrast between dark and light, framing with artistic agency unique and engaging depictions of South African male beings. Tshabalala uses his place of birth as an inspiration to tell current stories happening in townships. His subjects are often people he discovers on the streets and finds interesting.

As one of the winners from 61 countries, Bongani Tshabalala's image was part of an exhibition at the Somerset House in London in April this year.

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