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SPIRIT

A MANGOSUTHU UNIVERSITY OF TECHNOLOGY NEWSLETTER



Empowering Engineers

Award Winner Scoops Brand New Car

SRC 2015/2016 ELECTIONS

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FROM THE DESK OF THE
MANAGING EDITOR, MBALI MKHIZELIVING UP TO THE
MUT BRAND PROMISE

Brand MUT has carved its own niche areas and reinvented, re-engineered and innovated the playing field this year.

A few years ago, the Marketing and Communications Department (MarComms) conducted a survey on how the MUT brand is perceived by its stakeholders. Although the results were somewhat brutal, we embraced them and worked on where we had been hardest hit. One notable output of the survey was the 'brand archetype', which emerged from the way the research respondents saw MUT.

The study results showed that if MUT were a person, its brand character would be that of a 'Creator'. To give depth to this result, the agency tasked with this survey posed these questions:

- How would the brand character influence the way the MUT brand thinks, behaves, is represented and evolves over time?
- How would the brand character sync with the longer-term vision of MUT to create something of enduring value?
- How does the brand character match the environment within which MUT operates – a community in transition, which is

striving for social and economic progress?

Thus, the MUT Creator Brand was defined as follows:

- Creators' passion is self-expression in material form. As a creator, one is inherently non-conformist, focusing not on fitting in but on giving voice to oneself;
- Creators are often compelled to innovate, and authenticity is essential to them;
- Creators trust the creative process and believe in the power of imagination; and
- Creators love the process of dismantling old structures and creating new ones.

Fast forward to four years later, and it is evident that the Creator Brand has lived up to its promise. The stories covered in this issue focus on empowerment, sustainability and giving and finding a voice for MUT.

The power of imagination has driven a number of success stories covered in this issue. The story of the Empowered Administrators Conference (EAC) has been told many

times, but the power of imagination in making the EAC even better each year still makes for a compelling read. Stories about giving MUT a voice include how an Engineering professor raised awareness about how a lack of engineers is hampering social and economic development worldwide. It details his partnership with UNESCO and DST in a project of over R1,8 million to show the critical importance of engineering for creating infrastructure to alleviate poverty, accelerate industrial development, enable better healthcare, provide access to education, and develop an attractive environment for foreign investment.

As we wrap up 2015, MUT the Creator Brand's mission must be "continuously sustained through the ability to adapt to change and implement new initiatives for growth."

Mbali Mkhize
Senior Director of Marketing and Communications

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**MESSAGE FROM THE VICE-CHANCELLOR,
PROFESSOR MASHUPYE RATALE KGAPHOLA**

**EMPOWERING
STUDENTS AND
COMMUNITIES ALIKE**

MUT has empowered students, student leaders and learners successfully this term by immersing itself in student and community empowerment initiatives and a social cohesion programme for student leaders.

The student empowerment initiative that has always been closest to my heart is the one that enables our students to get a glimpse of the world beyond: for the first time in our 36-year history, we were able to send a group of student leaders and high achieving students from three faculties on a cultural and academic immersion tour of East Africa.

The tour group made the following encouraging observation: "Having been outside of South Africa was an eye-opener for us. It never crossed our minds how lucky we are to be living in South Africa. Our access to almost everything suddenly seems world-class compared to what we saw as a struggle for resources in East Africa. Despite that, we saw a huge drive towards attainment of dreams by people our age and that is something we will be taking back to the MUT student body."

I am also gratified to witness the Student Affairs Department's ongoing social cohesion programme for student leaders. The Department has continuously sought to broaden

their perspective on leadership, and it was largely as a result of this that the 2015 SRC election process was once again flawless. The prevailing spirit of peace and political maturity showed that as managers, we cannot leave it to the 'markets' to have a successful election campaign. The results also showed that our social cohesion programme over the past five years is something that can be replicated anywhere. I am truly grateful to the enabling stakeholders who ran this year's workshop, such as the National Department of Higher Education and Training (DHET), represented by Mr Chief Mabizela and Dr Phillia Vukea; Manager of Student Governance at DUT Malusi Nxumalo; and our MUT Council member Mr Sifiso Kheswa.

Concerning community empowerment campaigns, the University as a whole has lived up to its mandate of empowering communities. Our greatest coup was being chosen by UNESCO to co-host Africa Engineering Week. MUT pulled out all the stops to ensure that 3 300 learners from across eThekweni Municipality were exposed to various engineering

fields. These learners visited at least 52 exhibition stands where they were exposed to real-life engineering experiences.

It would be remiss of me not to mention the great strides that MUT has taken in empowering high schools, both by aiding their learners to make career choices and by helping high school principals to understand how strategic leadership can yield better results for their schools.

In conclusion, I salute all our hard-working staff, especially the academics who continuously ensure that MUT improves its academic offering. Apart from having launched a new academic programme at the beginning of the year, new ones keep emerging, all with the strategic intent of improving the socio-economic circumstances of our people. Well done to all for the new programmes developed.

Professor Mashupye Ratale Kgaphola
Vice-Chancellor and Principal

**RE-ELECTION OF COUNCIL MEMBERS
ASSURES STABILITY AT MUT**

Strategic programmes are set to continue seamlessly at MUT thanks to the re-election of core Council members, which should ensure that stability and continuity are maintained.

University Registrar and Secretary to Council Mike Naidoo said that the reappointment of the Chair of Council Judge Jerome Ngwenya and the reappointment of his Deputy Ms Diana Hoorzuk augurs well for the University. "For the past five years, MUT has been stable because there has been a combination of new and returning members of Council. There have been no hiccups," said Mike. The two Chairs of Council need to be elected every two years and this year's election was held on 30 September.

Staff members who have joined Council as Senate representatives are Dean of Student Affairs Mr Thami Mchunu and Dean of the Faculty of Natural Sciences Professor Nokwethemba Ndlazi. Both were elected on 9 September. Associate Professor Logan Naidoo of the Human Resource Management Department, and Head of the Department of Economics Mrs Precious Lugayeni will represent academic staff on Council. The new non-academic representatives to Council are Mr Phelalani Khomo and Mr Arthur Nzuza. The academic and non-academic representatives were elected on 25 and 26 August 2015 respectively. They will all serve a period of three years.



MUT Council Deputy Chair, Ms Diana Hoorzuk (above), and Council Chair Judge Jerome Ngwenya (top)

THE FIRST 100 DAYS IN OFFICE

DVC Research, Innovation & Engagements: Charting future challenges and opportunities for MUT

When Professor Zodwa Dlamini joined MUT, the mainstream media, aware that MUT had secured the services of a big name in science, made frantic calls to interview her. However, Professor Dlamini, undeterred by the hype, requested that she be given time to put her master plan together. This is her account of her first 100 days in office.

I started in my position at MUT during the annual winter recess. This meant that I was on campus when most people I needed to touch base with were on leave. The first person I met with was the Dean of Engineering, Professor Senzo Malinga CEM. Professor Malinga brought along a very interesting book about his Centre for Green Technologies. I was impressed by the level of technology development that exists at MUT as this is hardly the case at traditional universities.

Further consultation with the Dean of the Faculty of Management Sciences Gona Govender and the Head of the Department of Mathematical Sciences Professor Alfred Msomi revealed that there were real challenges facing our researchers. One of my immediate decisions was

to organise a research colloquium in which I aimed to engage with all academic departments regarding the MUT research agenda. The colloquium was well attended, with three academic deans setting the scene. The heads of departments (HODs) each gave details of their department's progress and this was adequate to get an indication of what was needed to deliver an appropriate and viable research programme.

I decided to invite experts from the Department of Higher Education and Training (DHET), the National Research Foundation (NRF) and Human Science Research Council (HSRC) to independently and objectively assess our challenges and receive advice and assistance relevant to our challenges. The experts shared with us the existing funding opportunities, and pledged

their support to help us realise the MUT Research Agenda goals of building a research base and providing the requisite expertise. The NRF also requested that the HODs list particular challenges for individuals, especially with regard to staff development and challenges regarding Thuthuka funding, especially for staff over 45 years of age.

Our major challenge is a lack of postgraduate offerings, which are the main third stream revenue source. Staff informed me that they needed to supervise postgraduate and post-doctoral students in order to contribute to building their careers and raising their national and international profiles as they could then publish research outputs resulting from such supervision.

Both an immediate and a long-term solution were required, so I visited my counterparts at well-resourced universities. The result was that our staff with PhDs can now co-supervise Masters and Doctoral students, and also go on sabbatical to upskill. Most of the universities I visited were very excited to partner with us. To date, the University of Johannesburg has undertaken to partner with us on the Human Settlements Research Chair goals, which are funded by the National Human Settlements Department to the value of R10.5 million.

MUT is also forging a partnership with the North-West University (NWU) on a Natural Product Flagship initiative.

Professor Dlamini is the Deputy Vice-Chancellor: Research, Innovation & Engagements. This is a new executive portfolio at MUT. Professor Dlamini is an established scientist, researcher and academic; she is passionate about the upliftment of historically disadvantaged institutions and joined MUT as it presented her an opportunity of contributing to national priorities.



"Providing leadership in research and innovation is the most fulfilling job I can ever have as I am also a hard-core scientist."



Professor Dlamini (second from right) with MUT VC Professor Kgaphola (third from left) and officials from ARC, NRF and DHET



Professor Dlamini (third from left) with MUT and UCT officials

This is an MUT-led multi-institutional programme stretching over a number of continents. Funding has been applied for from the MRC for a non-communicable diseases (NCD) flagship, which will host most of the MUT staff who conduct research in this area. This is set to become one of MUT's Centres of Excellence in the near future.

NWU will also collaborate with MUT staff on a national platform on preclinical drug development. This will see most of the relevant MUT staff taking their research from basic to preclinical and possibly clinical trials. We are expecting to follow the research in this area from bench side (laboratory) to bedside (clinic) and back.

I also led an MUT team to the University of Cape Town (UCT) where we discussed the possibility of collaborating with the Department of Science and Technology (DST) SARCHI Chair on Biomedical Engineering. We agreed to partner in areas of postgraduate co-supervision, staff skilling and post-doctoral exchange programmes. UCT's Department of

Biomedical Engineering committed to assist in enhancing our teaching and learning as well as research in the same area. MUT will host a delegation from UCT soon to refine the details of the partnership.

We are in the process of partnering with other institutions as part of our recently identified four institutional research themes in our Research and Innovation Policy Framework of 2015 for which we are waiting for approval by Council. They are: Agriculture and Food Security, Health, Human Settlements and Renewable Energy.

Using my existing international institutional collaborations, especially with the EU, China, the UK and the US, I am in negotiations to upskill our staff with PhDs in cutting edge research areas. The first one is a two-month training programme for four of our staff at Harvard University in the US. The research areas will include bid data analysis, bioinformatics, health informatics, etc. Academic staff in Applied Mathematics and Engineering will participate in May and June 2016. They will return with a full

research proposal and will continue to collaborate with the Harvard experts. Professor Yuri Quintana, Director of the Health Informatics Institute, coordinates the programme. We will also send post-doctoral students on a six-month schedule to collaborate at institutions in the UK and EU under the proposed MRC-MUT NCD Flagship.

I have had to spend time drafting new research-related policies and reviewing current policies that will drive our research and innovation as proposed by the MUT Research and Innovation Framework. These policies have been submitted and will serve at Council at their December meeting. Some of these documents are: Research & Innovation Policy Framework (new), Research & Innovation Policy (review), Community Engagement Policy (new), Community Engagement Strategy (new) and the Research Collaboration Policy.

I have also proposed an organogram that includes several support roles and critical research professors playing a dual role of overseeing research in their key areas and fundraising. This proposal is also awaiting Council approval.

I have requested that the University assist with office and laboratory space to accommodate the MUT Multidisciplinary Institute (MUT M-MRI). We also need to contribute to empowering our communities, as our Constitution (1996) suggests. I thus led the MRC Board and the MRC in the presentation of the 2014/2015 Annual Report at the recent October meeting of the Portfolio Committee on Health in Parliament.

I also had an opportunity to attend the joint 40th European Society for Medical Oncology/European Cancer Congress conference (ESMO/ECC) in Vienna, Austria, in October. This travel was funded through the NRF-South Africa/Italy International cooperation bilateral research grant.

I am honoured to be part of MUT in our journey to pre-eminence.



FROM THE DESK OF THE DEPUTY VICE-CHANCELLOR: TEACHING AND LEARNING

RECENT ACADEMIC SUCCESSSES AT MUT

Each gain that MUT makes in the higher education landscape of South Africa is an even greater gain for the institution itself, given its disadvantaged past and the challenges it continues to face.

MUT's relative disadvantage within SA higher education

A comparison between MUT and other higher education institutions on the basis of their latest audited institutional (HEMIS) data makes for some interesting reading:

- With a staff/student ratio of 1:40, MUT has the least favourable ratio of all contact teaching universities in South Africa. Vaal University of Technology (VUT) has the next worst ratio at 1:30 – only two points above the national average of 1:28. The least adequate staff/student ratios are found in the universities that serve large numbers of students from the most educationally disadvantaged backgrounds. An improvement in the average staff/student ratio is vital if universities are to meet the needs of the majority of their students. For MUT, this is even more pressing.
- In 2012, only 9% of MUT academic staff members held doctorates, compared with 65% at UCT, 50% or more at Stellenbosch, Rhodes,

Wits, University of Western Cape (UWC) and North-West University (NWU) respectively, and 35.5% on average. The national average is far below the target envisaged in the Medium-term Strategic Framework 2014-2019 (46% of permanent academic staff with doctorates by 2018), and MUT has even further to go in this regard.

- From 2009 to 2013, MUT had no postgraduate enrolments compared to other universities of technology. VUT had the next lowest, at 149, followed by Durban University of Technology (DUT) at 662. Tshwane University of Technology (TUT) had a significant lead with 2 421 postgraduate enrolments.
- A related trend was evident in the total number of research outputs over the same period, where MUT recorded only 19 in 2012 and TUT had 496. Research outputs are calculated on the basis of units allocated for publications in approved journals, books or conference proceedings, and for the research component of Master's and doctoral degrees awarded. MUT's low research

output can be correlated to its low staff complement, the small number of staff with doctoral degrees, and its lack of postgraduate students.

MUT's recent academic successes

Notwithstanding its substantial disadvantage in relation to other institutions, including most other universities of technology (UoTs), MUT can celebrate a number of recent academic successes.

- We have submitted a large number of new programmes for Programme and Qualification Mix (PQM) clearance, CHE accreditation, DHET funding approval and NQF registration. A number of these have already been registered or are pending registration, and in many cases ours will be the first programme of its type to be offered by a UoT in South Africa. These include the Advanced Diploma in Human Resource Management, the Advanced Diploma in Nature Conservation, the Advanced Diploma in Agricultural Extension

and Community Development, the Postgraduate Diploma in Nature Conservation and the Bachelor of Science in Environmental Health. The Master of Nature Conservation has been submitted to the Higher Education Quality Committee (HEQC) for accreditation and will also be the first to be offered among South African UoTs. While the Postgraduate Diploma in Nature Conservation was offered from 2015, most of the other newly accredited programmes will be offered from 2016.

- Over the first two years of a three-year qualification (2011-2013), MUT had the lowest dropout rate (14%) in the entire higher education sector. Cape Peninsula University of Technology, TUT and UWC had dropout rates of over 25%, with TUT rising to 28.1%. The national average in 2012 was 21% – a figure that highlights the need for the majority of institutions to reassess how they ensure success in the first two years. Although we face other teaching challenges, MUT appears to be coping relatively well with regard to student retention.
- MUT had an average pass rate of 80% from 2010 to 2013, the highest among UoTs, followed by DUT at 78%. This success rate is calculated on the basis of the Higher Education Management Information System (HEMIS) credit value for every subject taken and shows the ratio of successfully passed subject credits to the total subject credits taken towards a qualification.
- Two academic staff in the Faculty of Management Sciences, Alex Nabbi and Professor Sandiso Ngcobo, were selected to attend the South African TAU (Teaching Advancement at University) Fellowships Programme, facilitated by the Higher Education Learning and Teaching Association of Southern Africa (HELTASA). This programme aims at enhancing teaching capacity and ultimately

encouraging the transferral of best practices across the academic community within universities. Nabbi was a winner at HELTASA's national Teaching & Learning Excellence Awards in 2014, and Professor Sandiso Ngcobo received a Vice-Chancellor's Teaching Excellence Award in May 2014. He was also named Most Productive Researcher in the Faculty of Management Sciences in November 2014.

- In September, we received the news that Njabulo Gumede, a lecturer in the Department of Chemistry, had been awarded a National Teaching Excellence Commendation by the Council on Higher Education (CHE)/HELTASA for his contribution to teaching and learning in higher education in South Africa. The fact that only six such commendations have been allocated for 2015, makes this an even greater honour.
- There is a concerted effort on the part of many of our staff members to improve their qualifications and teaching skills. Not only are we

seeing an encouraging increase in the number of staff with, or in the process of completing, Masters and doctoral degrees, but there is a pleasing growth in enrolments in the Postgraduate Diploma in Higher Education. What's more, these activities are generating research outputs that also help to raise the profile of MUT in the higher education sector.

While our disadvantaged past has shaped where we are today, it is not the sole determiner of our future. I believe that our diligence and enthusiasm, coupled with a growing confidence arising from an enhanced sense of our academic identity, will yet take us to unprecedented heights. I also see MUT playing an important role in urgent national conversations about quality enhancement in teaching and learning with a view to improving student success.

Professor Marcus Ramogale
Deputy Vice-Chancellor: Teaching and Learning

EMPOWERING SOLAR RESEARCH

Professor Ewa Zawilka, Head of MUT's Department of Mechanical Engineering, is celebrating the news that her research on solar energy has found a real, practical application and will make a tangible difference to the community and environment.

A Durban-based company, KZN Solar, has used a research publication of Ewa's as a benchmark for their solar design. The company is working on the integration of renewable utilities into grid utilities and their design includes solar thermal photovoltaic cells and water security all in one appliance box, contained in one room.

Ewa's research can ultimately result in tangible differences and this may finally result in some real change of heart at architect level. Either way, it is a great improvement on the methodology that was being used by local municipalities.

Well done Ewa, and viva MUT!



THE EMPOWERED ADMINISTRATORS CONFERENCE (EAC)

Four Years of Empowering Office Professionals

The fourth EAC took place at the Gateway Hotel on 3-4 September and attracted both 'old' and 'new' delegates. The mixture of office professionals created a great platform to dialogue about the challenges they face and how they can make administration a millennial career choice.

The career path of administration requires that those who choose it are tenacious, solid, professional and knowledgeable. At the EAC, we share best practice and help our organisations to succeed. We usher in those who are new in the profession and empower all the rising stars, while bringing the skills of experienced administrators up to date as we deal with changes in technology and the demands that this places on administrators' job profiles.

The success of the conference relies to a great extent on business partners and sponsors who help to make it affordable by sponsoring services, prizes and a host of other goodies. The EAC team is grateful to Associated Motor Holdings of Pinetown and ProcessLitho for their sponsorship of a KIA Picanto, which was won by MUT's hard working and techno-savvy office



Delegates at the 2015 EAC

professional, Annalene Maree.

We also thank the other sponsors for their contributions, from the hospitality group to various firms and companies that helped us to deliver a memorable EAC 2015.

MUT supports the EAC each year through a provision in our budget, so that we can deliver on our mission of social responsiveness and provide a truly empowering opportunity to administrators.

Fundraising 101 – EAC Goes CSI

MarComms partnered with SAB (which has sponsored EAC speakers for the last three years) to deliver a Fundraising 101 Workshop for non-profit organisations at this year's EAC.

The three-hour workshop, which ran parallel to the main programme, was led by Dr Olivia Scriven of US-based Partners for Educational Development. She addressed the fundamentals of a fundraising campaign and its various forms – from conventional campaigns involving face-to-face solicitations and written appeals, to increasingly popular online campaigns. Participants explored

the pros and cons of each type, as well as critical success factors and core steps in planning and launching a campaign, including how to find local and international funding sources.

Participants were able to view and discuss real-world case studies of fundraising campaigns launched by NPOs and IHEs, including what worked and why. They were then challenged to develop a draft framework for launching a campaign at their own institutions, based on their specific circumstances, fundraising objectives, resource requirements and overall readiness.

Dr Scriven said: "While some participants entered the workshop with the belief that they were ready to launch a specific type of fundraising campaign, the workshop revealed a wide array of options and forced many to revisit their plans. Many resolved that the best tactic was to share information learned at the workshop with senior leadership and propose options that would prove most effective for their current situations and growth goals."



Shobna Persadh, National Corporate Affairs Manager at SAB

Food for Thought from EAC 2015

During the opening of the EAC, a powerhouse panel of three Durban-based CEOs and one international CEO imparted a wealth of knowledge to conference delegates – knowledge which, as one CEO put it, could one day see some of the administrators hold CEO and other strategic positions.

The CEO panel consisted of Dumile Cele of the Durban Chamber of Commerce, Stella Khumalo of uShaka Marine World, Dr Olivia Scriven of the US-based Partners for Educational Development, and GM of ProcessLitho Sifiso Shange (who was representing CEO Muzi Ntombela). Their key message was that office administrators need to understand that they are not employed in their respective organisations simply to do mandated functions, but are expected to understand their organisation's strategy and how they fit into its value chain.

For Dumile, an empowered administrator is one who is able to THINK for herself (or himself). "If you do not think sequentially, you will not be able to apply theory. You will not be a secretary for the rest of your life if you think your theory through. Figure out your purpose and that of your organisation and your immediate line manager, and align them. The corporate

sector is evolving and a lot is expected from the 21st century administrator. We have long moved from IQ and EQ now to SQ. The ability to manage your Spiritual Intelligence will ensure that you are fulfilled, happy and encouraged to do your job," Dumile said.

Dumile further reminded delegates of the importance of learning to balance one's emotions and knowing when to switch them on or off in the corporate environment. Her parting words for the administrators was that they needed to grasp the fact that every employee in any organisation is a leader, first of themselves, then of others.

According to Sifiso, an empowered office administrator is one who works hand-in-hand with their line manager and represents their image and cultural preferences. This administrator treats and receives their line manager's visitors in the same way they would treat and receive the line manager. Sifiso encouraged the EAC delegates to

take charge of their environment while constantly upskilling themselves.

"In your role as an office administrator, it is important to become socially relevant and understand what is happening in your environment. Know how to operate every tool in your immediate market. Understanding finance and working with budgets is a non-negotiable requirement for an empowered office administrator. Refuse to be a PA for life – know where you are going," Sifiso concluded.

Stella's plea to administrators was that they should understand and respect diversity in all encounters with stakeholders while living out their personal and organisational brand. "You are sitting in very strategic positions within your respective organisations; there is nothing stopping you from progressing to leadership roles.... Office administrators are the first people to know of any new policies and other strategic decisions. If you have a goal in mind, you will use the knowledge strategically towards your career advancement," Stella advised.

Bringing in an international perspective to the panel discussion, Olivia reminded delegates that the first step to being empowered was being intentional. "This involves knowing yourself, taking an assessment of who you are and where you want to be. The general perception is that administration is an easy job; you can't change other people but you can focus on building your own success."

Delegates were addressed by big names in the business of administration. From left: Dumile Cele (Durban Chamber of Commerce and Industry), Dr Olivia Scriven (Partners for Educational Development, US), Stella Khumalo (uShaka Marine World), and Sifiso Shange (GM of ProcessLitho)



Award Winner Scoops Brand New Car

EAC 2015 will be remembered not only for the relevant knowledge imparted by its distinguished presenters, but also for the substantial prizes won by the delegates. The biggest prize for this year was the brand new KIA Picanto, co-sponsored by ProcessLitho and Amalgamated Motor Holdings' Pinetown branch.



An excited Annelene Maree (left) joined by her husband Mike and MD of ProcessLitho Sifiso Shange



Here you go Ma'am! KIA's Zakhele Mthethwa presents the key to Annelene

Annalene Maree, an administrator in MUT's Department of Information Technology and Networks (IT&N), was shell-shocked when Mbali Mkhize called out her name as the winner of the ultimate prize. Annalene has worked at MUT for 27 years. She mentioned a few people who contributed to her success. "I had to continue with my studies when I joined MUT. Now I know quite a bit about IT and am able to help others. My husband, Mike, looked after the children while I was studying.

Julian Thompson (former director of IT&N) helped me a lot with the award application," said an ecstatic Annalene.

Mike Maree could not contain his joy. He danced, laughed and hugged colleagues, while the usually reserved Annalene was dealing with the sudden attention – hugs, a photoshoot with sponsors and colleagues, and being taken to see her brand new car. This was a fitting prize for a couple who have together dedicated 58 years of their adult lives to working for MUT.

Some of the other prizes won

during the gala evening were the Brand Ambassador Award, won by Amanda Gumede of Ithala Development Finance Corporation; the Customer Centric Award, which went to Dikeledi Ndlovu of City Power in Johannesburg; and the Ubuntu Award, scooped by Sindisiwe Ndaba of UKZN.

Annalene also won the Techno-Savvy Award because of her now extensive knowledge of information technology.

"I had to continue with my studies when I joined MUT.

Now I know quite a bit about IT and am able to help others." – Annelene Maree

Profile of an Ultimate Sponsor at EAC

MUZI NTOMBELA

Muzi Ntombela, CEO of ProcessLitho in Durban, is a man with a kind heart. He credits his success and business acumen to his background and to lessons learned from his hardworking parents.

Born in rural Babanangu in northern KwaZulu-Natal, this successful businessman and philanthropist grew up surrounded by poverty in an Afrikaner farming community where his father, a migrant worker, could only be with the family once or twice a year. This informed Muzi's desire to succeed and to do all he could to help others.

It was his passion for education that made it easy for him to accept a proposal from the EAC team to partner with MUT as a Platinum Sponsor for the EAC Awards. ProcessLitho co-sponsored the ultimate prize: a brand new KIA Picanto.



The drive behind Muzi's generosity

Growing up with relatives, Muzi was homeschooled because there were no schools nearby. From the age of 12, his studies were interrupted for three years while he moved from one relative to the next in pursuit of better living conditions. This did not break his spirit; it drove him to want the best possible future for himself and others. He went on to graduate from the University of Natal with a Bachelor of Arts in 1989 at a time when only six percent of their student population was black.

Muzi worked in mediocre jobs to save money and established ProcessLitho in 1993. In 2010, the company moved to a 3 000m² factory to meet growing market demands. Muzi's vision is for ProcessLitho to make an indelible mark on the local market and become the first choice for every business that requires printing. The company currently employs more than 55 people, 90% of whom have been with the company since

inception. It runs ongoing in-house training for staff, and a number have worked their way up to senior positions within the company.

Muzi is also involved in a number of professional and community projects. In April 2015, he was appointed to the KwaZulu-Natal Government's Special Reference Group on Migration and Community Integration in the province. The focus of the working group was to investigate the causes of the xenophobic attacks on foreign nationals and report to the Premier. Muzi is also a Council member at

eThekweni TVET College and an active community developer who is driven by hard work, ethics and dedication.

"I live for the spirit of sharing. I am a child of God and I believe that everything I have is because of God and the prayers of those around me. It is a great honour to establish this relationship with Mangosuthu University of Technology; it is a start of bigger things to come," concluded the family man, who credits his grounded nature to the support he gets from his wife, who is also a successful entrepreneur.

The company currently employs more than 55 people, 90% of whom have been with the company since inception. It runs ongoing in-house training for staff, and a number have worked their way up to senior positions within the company.

EMPOWERING ENGINEERS



Professor Senzo Malinga, CEM (third from left) led the AEW Credo reading

MUT brought Umlazi to a standstill from 28-30 September when it hosted the third Africa Engineering Week (AEW), a UNESCO initiative co-funded by the Department of Science & Technology (DST), the Engineering Council of South Africa (ECSA) and eThekweni Municipality.

About 500 professional engineers and technicians attended to listen to numerous high-powered engineering professionals and gain insight on innovative technologies. Over 50 exhibits were visited by 1 100 learners per day.

For Unesco, Africa Engineering Week (AEW) needed to "increase the visibility of engineering and its role in sustainable development to bring innovative solutions to important continental challenges such as the provision of clean water, sustainable housing and issues around climate change, but most importantly, to

encourage school learners to pursue engineering careers."

For this mission to succeed, a multi-stakeholder team, co-led by Dean of the Faculty of Engineering at MUT Professor Senzo Malinga CEM and Director of Multilateral Cooperation at DST Cecil Masoka, ensured that the diverse team working on AEW operated as one entity and succeeded in pulling off one of the largest events ever held at the MUT campus.

The main focus of the AEW was the importance of engineering in everyday life, and how female learners could be brought into the profession. Professor

Malinga said that the weak educational background of some students enrolling for Engineering courses was another challenge.

Various speakers pointed out how poorly Africa was faring in the engineering sector: There is one engineer for 16 000 people in South Africa, compared with one engineer to 250 people elsewhere in the world. In this regard, Professor Malinga said that more resources have to be made available to teaching departments,

Mampeï Chaba



"Students, approach your government with proposals and solutions. On a personal level, talk to your sisters about engineering. Let's talk engineering in our daily lives."

– Mampei Chaba, Chief Director: Multilateral Cooperation and Africa, DST



Professor Pius Owolawi

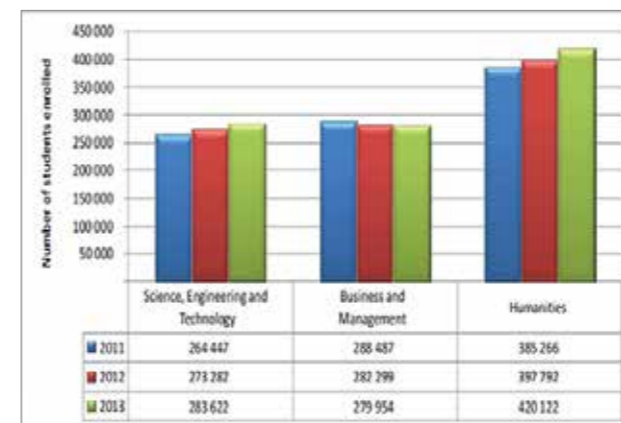
and collaborations from all stakeholders should be encouraged and supported.

A number of presenters felt that the conference offered them a chance to network and update each other on developments in the profession and that it gave them an opportunity to question their effectiveness in teaching and decision-making.

Professor Pius Owolawi, Head of the Department of Electrical Engineering at MUT, gave a presentation on the relevance of engineering and technology and addressed the question of how technology and skills development trajectory would help service our country's future needs.

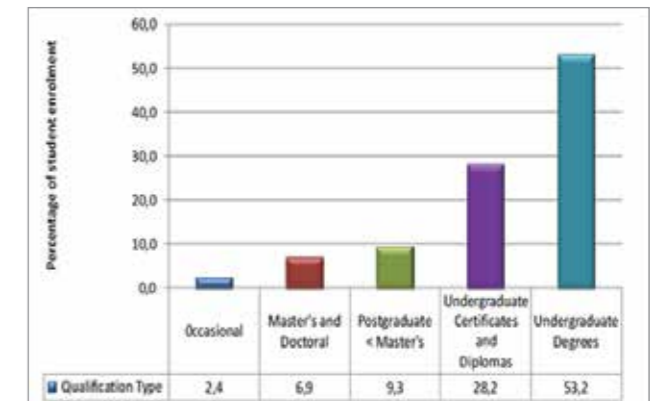
"The National Development Plan 2030 says that South Africa needs at least 33 000 artisans each year. At the moment, the average is just 12 000 a year. And many qualified artisans are older than 55." He added that in South Africa, more than 60% of unemployed people are between the ages of 15 and 29, and that the unemployment rate among youth aged 15 to 34 increased from 32.7% to 36.1% between 2008 and 2014.

Below is an illustration of how Science, Engineering and Technology are faring nationally in terms of enrolment figures. From 2011 to 2013, South African higher education institutions enrolled most students in the Humanities although Science, Engineering and Technology are regarded as scarce skills that need to be vigorously promoted.



Source: 2013 HEMIS database, extracted in October 2014

The very low number of students enrolled in postgraduate studies in Engineering is also a cause for concern, as the graph below shows.



Source: 2013 HEMIS database, extracted in October 2014

Professor Owolawi, who supervises postgraduate students, mentioned that the National Research Foundation (NRF) and the Department of Science and Technology (DST) have both considered the seriousness of the shortage of engineers. Both would like to see 6 000 PhDs a year by 2025, and 3 000 should be in Science, Engineering and Technology disciplines by 2018. He said that statistics show South Africa currently produces doctorates at only one eighth of the rate of the European Union in the 25 to 34-year-old age group. South Africa is also unable to compare favourably with its Brics partners – Brazil, Russia, India and China – who are 'well on their way' to becoming knowledge-driven economies.

Professor Malinga and HOD of Chemical Engineering at MUT Mrs Julia Baah pointed out that one of the difficulties was that learners come to the University under-prepared. Professor Malinga suggested that Engineering-related subjects should be taken at basic school level by everyone. Julia argued that relevant strategies of teaching should be employed at all levels to improve the quality of graduates and reduce the drop-out level. She said that industry requires universities to teach more about 'real world' engineering design and operations, including quality management; to improve coverage of fundamentals; and to cover more material on new developments in technologies.

MUT: A natural choice

Professor Mashupye Kgaphola, the University's Vice-Chancellor, told attendees of MUT's achievements. These include the stories of the late Khosonke Mlangeni, a Mechanical Engineering graduate, who created a machine that tightens and loosens huge bolts. MUT students dominate NPC Cement's annual Egg Protection Device

EMPOWERING ENGINEERS

competition, which is also entered by DUT and UKZN. An MUT student, Zinhle Mabaso, was nominated last year by the South African Geomatics Institute (SAGI) as the best student in Surveying. Professor Kgaphola also told delegates of the role being played by Nomonde Zondi, an MUT graduate, in the building of the 640-bed residence on campus.

“Over the years, we have produced eminent graduates who have made a mark in business. As a young university, we have come to realise that we need to have a stable university. That is why we take steps to develop student leaders. We sent 20 students to Tanzania because we need to achieve the dream of a prosperous Africa through our students.” The Vice-Chancellor said that MUT has the lowest drop-out rate in the whole country, and the highest pass rate among universities of technology. MUT is cementing a campus culture that supports both prosperity and democracy, as seen in the 2015 SRC elections, which made headlines for having no problems.

Green Technology Centre is set for big things

MUT is Centre for the Development of Green Technologies (CDGT) was able to showcase its projects to potential partners and provided interaction with hundreds of learners at AEW.

“We also innovate existing technologies. The Centre’s projects include wave generation equipment and building systems,” said Boniso Ngwenya, a Technology Development Officer at the CDGT. “For instance, the Centre will use technology to fuse PET



MUT Executive Management, accompanied by eThekweni Speaker Logie Naidoo, meet local radio station staff, who broadcast the AEW

fibre with concrete to make it strong and lightweight. The Centre is also investigating integrated solar roof tiles to heat geyser water. The tiles provide heat while at the same time generating electricity. When you buy the tile, you will have bought everything you need to generate electricity,” he said.

Boniso also said that the Centre was encouraging female students to be part of technology and engineering in general. The centre was officially launched this year, but was opened in 2010.

Empowering female Engineering students

One of the AEW’s themes was the removal of the stereotype that engineering is only for men. It was a theme that dovetails with MUT’s own views, starting with its own faculty setup. Two of the Faculty of Engineering’s five departments are headed by women: the Department of Chemical Engineering, led by Julia Baah, and the Department of Mechanical Engineering, led by

Professor Ewa Zawilska. The faculty also has a good balance between female and male students.

Hema Vallabh and Bennitta Senyatsi told participants how vital it was to assist female students to join the profession. Hema is a Chemical Engineer and co-founder of WomEng, an international non-profit organisation that develops the next generation of female engineering leaders. She said that the way children are brought up has to change. “As parents, we still buy dolls for girls, and toy trucks for boys. This suggests to the children what route to take when deciding on their professions.”

Bennitta, the National After-Sales Fleet Manager at Nissan South Africa, inspired delegates with her story. As a young graduate, she noticed that there weren’t many females in the profession. She attended the



Hema Vallabh



University of Johannesburg where she studied Chemical Engineering, and requested to be appointed as a tutor for the undergraduates. She said that one of the requirements to fit into the profession was to be assertive in a positive way, and to continue to prove one’s worth. She has a Code 14 driver’s licence, a fact that surprised male engineers. Having worked for Cummins Emissions Solutions and Mercedes Benz South Africa, she is now the National After-Sales Fleet Manager at Nissan South Africa.

MUT gives engineers their groove

The engineers who descended upon MUT will always remember the University as a place that gave them their ‘groove’. The CEO of ECSA Siphon Madonsela said that one of the resolutions taken at the event would be to officially announce that engineers’ names would be preceded by ‘Engineer’, as is the case with doctors. “But engineers need to be properly registered,” he said. This is

how it is in other countries.” Engineers also agreed that they were going to be part of policy-making forums where they could influence policy. They have been pushed to the side by people who make decisions that did not favour them. In some cases, they have also had to contend with politicians who try to force them to pay bribes to continue their projects.



Siphon Madonsela

“As parents, we still buy dolls for girls, and toy trucks for boys. This suggests to the children what route to take when deciding on their professions.” – Hema Vallabh, Chemical Engineer and co-founder of WomEng

“The name of an engineer must be preceded by ‘Engineer’ as is the case with doctors. ‘Engineer so and so.’”

– Siphon Madonsela, CEO of ECSA

MUT Researchers Leave their Mark in Portugal

Senior lecturer in the MUT Department of Environmental Health Archie Buthelezi presented a poster at the sixth annual International Conference on Medical Geology held at Aveiro in Portugal recently.

The title of Archie's poster was 'Environmental health impact from industrial activities in the vicinity of Umlazi Township, South of Durban, KwaZulu-Natal Province, South Africa'.

In the study, Archie showed the extent to which residents of Umlazi Township are exposed to the industrial pollutants of nitrogen dioxide and ozone; and where to focus efforts and resources to control these exposures. Archie says that pollution reduction is technically feasible, but political and socio-economic conditions are seen to constrain the effectiveness of air quality management. Archie's other paper, 'Exposure to indoor surfaces and airborne moulds in block hostels in Durban Metropolitan, South Africa', is under review and could be published soon.

Archie's paper: 'Carbon monoxide (CO), ozone (O₃) and nitrogen dioxide (NO₂) exposure from vehicular transportation and other industrial activities in the vicinity of Umlazi Township, South of Durban, KwaZulu-Natal Province, South Africa' – has been published by Taylor & Francis in a publication called Transactions of the Royal Society of South Africa. He wrote this paper with Professor Theophilus Davies, a Research Professor in the Faculty of Natural Sciences, MUT. It has already been cited, Archie says proudly.

The theme of this year's International Conference on Medical Geology, of which Professor Davies

is a co-founder, was 'Challenges and seeking solutions to promote human health'. The conference, now in its sixth year, was attended by 125 delegates from 36 countries. MUT staff had a chance to present their peer-reviewed papers to professionals and academics from diverse but related backgrounds. Presentations by MUT delegates were well received and evoked very lively discussions. The long-term impact of their research will arise from the publications that will follow the conference.

Although Archie did not attend the conference in person, his paper entitled 'Environmental health impact of emissions from industrial activities in the vicinity of Umlazi Township, South of Durban, KwaZulu-Natal Province (South Africa)' is one of the six MUT papers that will be published as part of the conference proceedings.

The other MUT papers are: 'The impact of climate change on human health in African coastal cities: a case study from Durban, KwaZulu-Natal Province (South Africa)' by Thobile Zikhathile, a lecturer in the Department of Environmental Health; 'Are micro-nutrient imbalances due to dispersed mineralisation a co-factor in malnutrition in Limpopo Province (South Africa)?' by Xolile Mkhize of the Department of Community Extension; 'Phytoremediation using *Brassica juncea* – a case of Krugersdorp mine tailings and neighbouring soils' by Dr Georgina Arthur of the Department of Nature Conservation; 'The nature and

articulation of ethical codes on tailings management in South Africa' by Thobile Poswa of the Department of Environmental Health; and 'A medical Geology curriculum for African tertiary geoscience institutes' by Professor Davies.

The conference focused on environmental contaminants in health and diseases; environmental toxicology, pathology and epidemiology; climate change and human health; therapeutic properties of minerals and waters; urban medical geology; modelling, mapping and monitoring of environmental hazards; and advances in analytical methods.



Archie Buthelezi



The Vice-Chancellor (sixth from left), addressing student leaders

EMPOWERING STUDENTS

MUT Rolls Out Annual Leadership Programme

MUT Vice-Chancellor Professor Mashupye Kgaphola has indicated that the University will roll out an annual leadership programme, where student leaders will be sent to African countries as part of their leadership training.

"We will use the team that went to Tanzania on 26 September to encourage others. We would like our students to learn more about their mother continent, Africa," said the VC, supported by DVC: Teaching and Learning, Professor Marcus Ramogale.

The VC said that MUT management believed that students had to be given proper lessons in leadership, since the future was in their hands.

"We want to invest in young people so that the country stands a better chance," the VC said.

'Dual Protection' Launched

The 'Dual Protection' billboard campaign, the KwaZulu-Natal Health Department's new weapon in the war against AIDS and unplanned parenthood, was launched at MUT in August.

The MEC for Health in KZN Dr Spongiseni Dhlomo visited MUT and held high-level talks with members of executive management to discuss how the campaign will best benefit students.

MEC Dhlomo believes that since KZN has the highest burden of HIV/Aids, it ought to lead in efforts aimed at creating an Aids-free generation. He told journalists that it was fitting to launch the campaign at MUT as its core focus is on young adults.

"Statistics show that in South Africa, unplanned pregnancies contribute significantly to the high drop-out rate at high schools and institutions of tertiary education. The statistics further reveal that approximately one million babies are born each year, and 8% or 80 000 of them are born to teen mothers. After falling pregnant, most of the teen mothers lose a sense of direction in life and also have a much higher chance of dying from pregnancy-related illnesses," he said.

The Dual Protection approach promotes medical male circumcision and the use of female contraceptive methods such as Implanon, while using condoms during every episode of sexual contact. This ensures protection against both unwanted pregnancies and sexually transmitted infections, including HIV.



The MEC for Health in KZN Dr Spongiseni Dhlomo (holding the microphone) addresses staff, students and community members

MUT Enactus

A Student Organisation Driven by an Entrepreneurial Spirit

MUT Enactus students may have not participated in the Enactus World Cup 2015 held for the first time at the Sandton Convention Centre in Johannesburg on 14-16 October 2015, but their attendance brought about numerous benefits that will form part of their future projects.

Enactus is a global organisation with university chapters in all continents. The various chapters are non-profit entities and exist as platforms through which students can pursue business-based projects. The Enactus World Cup is an annual global competition hosted by the Enactus organisation for student social entrepreneurs engaged in community-based solutions. Through its programmes, Enactus helps students to strike up relationships with corporate organisations in order to secure funding and scale their solutions. Four thousand students from 33 teams took part in the competition this year.

The South African champions, Enactus UniZulu, were supported

by an eight-member MUT Enactus team headed by its president, Xanti Tyaliti. Tyaliti said that attending the World Cup was aimed at helping MUT Enactus acquire innovative ideas and solutions that will help in elevating their projects. "The trip for us was strategic because we gathered tips and ways to execute projects innovatively. We started crucial conversations with students from the Niagara College in Canada and École Mohammadia d'ingénieurs or the Mohammadia School of Engineering (EMI) in Morocco", said Xanti.

Xanti said that students from EMI "really inspired us with their water purification project such that we immediately started talking about partnerships as we are actively

involved in such projects, and we thought of the magnitude and the impact this would have if both institutions could work together."

He said that Enactus MUT has conceptualised a project that looks at the importance of saving water and food in communities for early 2016. "With the current water shortages gripping our country, it's important for us to educate people about saving water and food. Statistics show that 28% of harvested food goes to waste and we want to change that."

Tyaliti said that he hopes team MUT will participate at the 2016 Enactus World Cup, to be held in Toronto, Canada from 28-30 September.



Enactus MUT team at the Enactus World Cup 2015, Sandton, Johannesburg



Top and above: Different teams display their cultures at the Enactus World Cup

Student Leadership Immersion Tour

Hard work, tolerance, entrepreneurship and academic excellence are some of the lessons that student leaders learnt during their recent tour of Tanzania in East Africa.

On 26 September 2015, there was a tangible sense of excitement and adventure among 20 MUT student leaders when they departed for Kilimanjaro Airport on an educational tour. They were accompanied by the Dean of Students Thami Mchunu; Student Development Officer Mthoko Ntuli; Enactus Faculty Adviser Pinkie Khoza; and Accounting Lecturer Bonginkosi Zwane, who also played the role of student leader mentor.

The delegation spent nine days exploring Arusha in Tanzania, Mount Kilimanjaro, Dar es Salaam, Morogoro and Zanzibar. The trip aimed at exposing student leaders to other institutions of higher education in Tanzania in order to engage with, learn from and share best practices with them. MUT was hosted by the Nelson Mandela African Institute of Science and Technology (NM-AIST), and the College of Business Education (CBE).

Highlights of the tour

Upon arrival at NM-AIST, the team met university officials and Jofrey Raymond Kusongwa, a PhD student who had previously visited MUT. NM-AIST – the brainchild of the first President in the democratic South Africa, Nelson Mandela – specialises in Masters and PhD programmes and is one of only a few institutions in sub-Saharan Africa that focuses mainly on postgraduate studies and made presentations on its programmes. The MUT delegation also gave a presentation.

On 30 September, the MUT delegation was welcomed at CBE in Dar es Salaam. It then proceeded to the office of the South African High Commissioner, His Excellency Mr Thami Mseleku, who explained the relationship between South Africa and Tanzania and urged the group to be good ambassadors of the country.

On 2 October, the delegation had an interactive session with officials of the CBE, which was hosted by its Vice-Rector, Dr Msami. The session afforded both parties an opportunity to gain insight into student governance and student services at both MUT and CBE.

The delegation also travelled to Zanzibar, a semi-autonomous archipelago off the east coast of Tanzania. Zanzibar was once a major slave-trade centre on the eastern coast of Africa and a community of Zanzibari origin now lives



MUT Executive Management bid the student leaders and staff farewell



Have a safe journey! Professor Kgaphola says goodbye to a student leader

in Chatsworth. This community's ancestors were rescued from a slave ship and brought to Natal, which was then a British colony.

Other historical ties with Tanzania

The tour of Tanzania strengthened the belief that Nguni-speaking people migrated from the Great Lakes region. The group found it remarkable that despite the fact that there are more than 120 languages spoken in Tanzania, all the language groups speak Swahili as a common language. Learners are taught in Swahili from the first to the seventh grade. As a result, Swahili serves as a uniting language.

The delegation also learnt about how Tanzania contributed to the liberation of South Africa and other

countries in the SADC region, like Namibia and Mozambique. Institutions of higher education were made accessible to students from those countries and the delegation was even shown residences where South African students used to stay at the CBE. Student leaders were fascinated by stories of Tanzania's pivotal role in assisting South Africa to attain its liberation.

Morogoro

On 3 October, the delegation visited a historical site in Morogoro. The premises was occupied by South African exiles when liberation groups were banned in South Africa, and it has been preserved as it was when South Africans occupied it. It has been converted into a university campus known as the Solomon Mahlangu Campus. The premises comprises two schools, a cemetery, a hospital, a library, a dining hall, hostels, houses, offices and a huge meeting venue.

Entrepreneurship

The informal business sector seems to be flourishing in Tanzania. It is fuelled by hard-working people who employ themselves instead of relying on government handouts. In institutions that the MUT students visited, students are offered entrepreneurship courses across the curriculum.

Conclusion

Student leaders all voiced their appreciation of the opportunities, facilities and infrastructure that they have in South Africa. They promised to share their experiences with their colleagues in South Africa and highlight how important it is to value what we have. Furthermore, they were amazed by the resilience of the Tanzanian people and their ability to rise above their challenges.



Fundiswa Nofemela (fifth from right), with the WIL team

Empowering Students for Work Readiness

With graduate joblessness rising and state funding dwindling, universities of technology are confronted by the dual challenge of delivering entrepreneurship education and work-integrated learning to students. This is the challenge MUT is addressing through its various partnerships between industry and the Cooperative Education Directorate.

The Directorate, headed by Fundiswa Nofemela, is responsible for placing hundreds of MUT students in industry. During the 2015 MUT Cooperative Education Careers Fair, Nofemela said that the success of the event could be attributed largely to the solid partnerships the institution has built with industry over the years.

Recently, Professor Irene Moutlana, Vice-Chancellor at the Vaal University of Technology and Deputy Chair of the South African Technology Network (SATN), revealed that SATN's agenda this year would focus on entrepreneurship education. According to Nofemela, "Our ability to create placement opportunities where there were none, and help students to graduate and sometimes proceed to management levels, is our contribution to the empowerment of students."

"We also interface with SETAs and other funding organisations to source stipends for Work Integrated Learning (WIL) students. These grants enable the students to fund their travel to and from their place of work as well as their subsistence."

She said that institutions that assist students with WIL and promote the entrepreneurship agenda play an important role in facilitating work readiness programmes for WIL students. "Our Employability Improvement Programme is a short programme that simulates a plant production line to teach students problem solving, working in teams, managing time, practising good housekeeping, etc. in a working environment. It also gives students an understanding of their role in a team and within an enterprise," she said.

Nofemela indicated that MUT was actively engaging the DHET in reviewing the current WIL programme, which will benefit thousands of graduates who are without jobs. Eubert Mashabane, acting Chief Director for WIL and partnerships at DHET, committed his department to making sure that the current WIL programme is reviewed.

MUT Coordinates Vodacom-sponsored Competition

In support of the projects run by the Faculty of Engineering, and the Africa Engineering Week, Vodacom sponsored a competition for budding young engineers. MUT, in partnership with Vodacom and Edutrade Lasec, invited schools to present science projects at a Science Expo held during Africa Engineering Week from 28-30 September.

Learners' projects were adjudicated by a panel of scientists and academics from MUT in September and the three winning schools – Westville Boys High School, Menzi High School and Zwelihle High School – were awarded Physical Science kits to the value of R25 000 each.

Grade 9 and Grade 10 learners from ten schools presented exhibits on behalf of their schools. Grade 9 learners from Westville Boys' High School presented a metal and wooden bridge; Grade 10 learners from Menzi High School presented a fleeing volcano; and Grade 10 learners from Zwelihle presented a cell phone charger.



"We must all contribute," said Ahmed Motala, CEO of New Africa Education Foundation (right), pictured with a Zwelihle High learner, and Vodacom officials

Menzi High School learners with their educator, Malibongwe Khumalo (second from left) and Vodacom officials



WORKSHOPS AND CONFERENCES

DIPR Hosts Regional HEMIS Workshop

"MUT is gradually positioning itself as one of the leading institutions in terms of compliance reporting," shared Dr Chidozie Nnadozie, Director: Monitoring & Evaluation at MUT's Directorate of Institutional Planning and Research (DIPR) after his department hosted the Regional Higher Education Management Information Systems (HEMIS) workshop on 16 September.

Organised by the Southern African Association of Institutional Research (SAAIR), of which MUT is a member institution, the purpose of the workshop was to explain the nature and scope of HEMIS and to locate it in the broader South African higher education context. HEMIS is a data management tool that ensures that data supplied to the DHET is accurate and reliable.

Addressing over 60 delegates from various universities, Dr Nnadozie said that "data collection/analysis in higher education is vital for many reasons: subsidy allocation, monitoring and evaluation of return on investment, benchmarking, management decision support and pedagogy development."

Welcoming the guests at the workshop, Professor Khehla Ndlovu, DVC: Resources and Planning, spoke on the importance of data management and how it feeds into the development of policy and accurate funding of various institutional projects. He said: "HEMIS' development has evolved from a grouping of initially data management specialists and has over the years included faculty officers, operations managers, human resources officers and administrators involved in collecting and compiling staff and student data for various uses at higher education institutions."

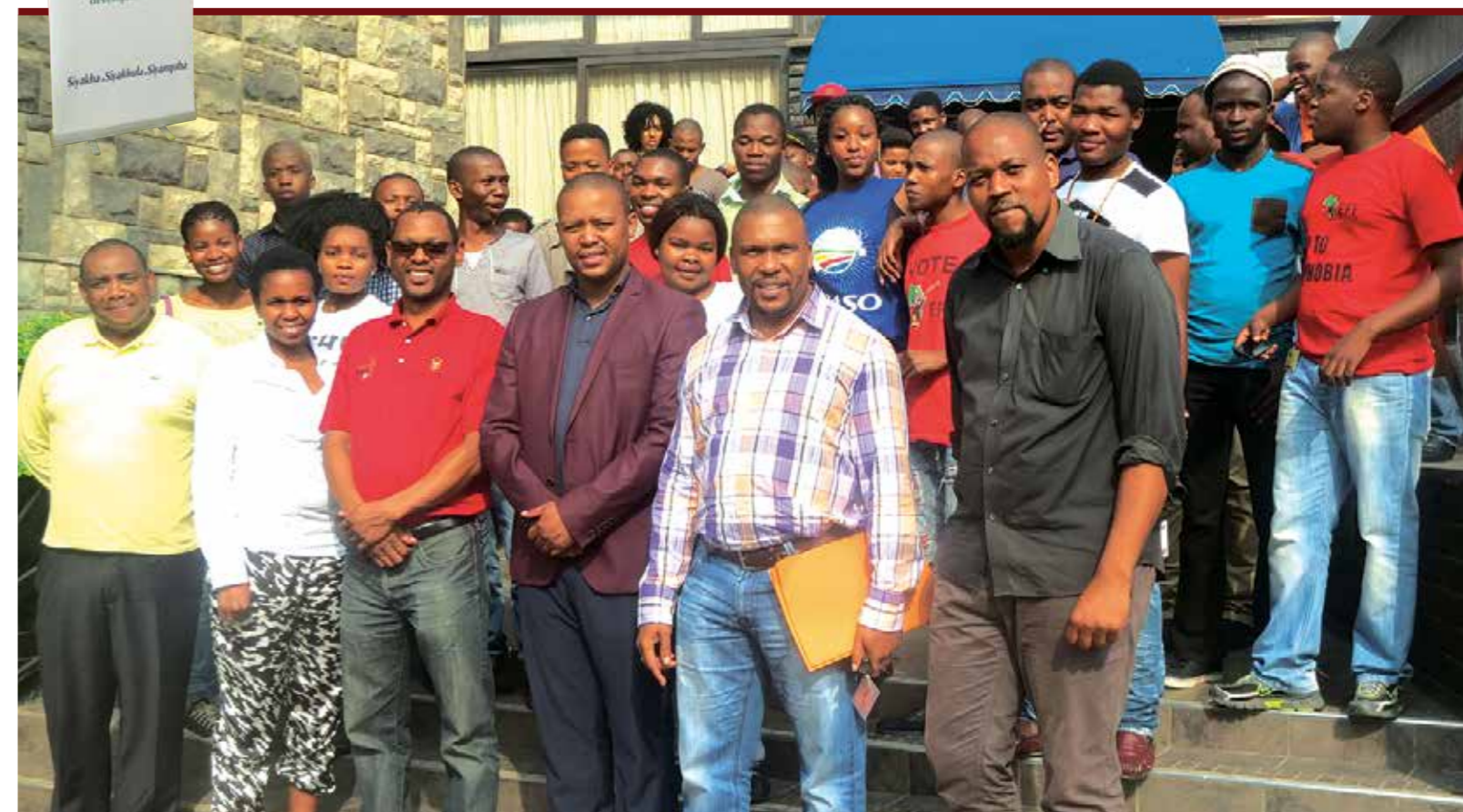
SAAIR's Herman Visser unpacked the need for HEMIS in the higher education sector. "HEMIS provides information for research purposes and for comparison between institutions. It is also important in providing information for systemic planning purposes; it provides information used in the funding of the institution as well as information that can be used for quality purposes."

MUT DVC Resources and Planning Professor Khehla Ndlovu addresses delegates at the Regional HEMIS workshop



SRC 2015/2016 ELECTIONS

Another Winning Strategy for MUT



The MUT Social Cohesion Workshops are supported by management and members of Council. Front, from left are: Mr Sifiso Kheswa (Council member), Dr Phillia Vukea (DHET), Professor Khehla Ndlovu (MUT's DVC, Resources and Planning), Setjhaba Meje (DHET), Thami Mchunu (MUT's Dean of Students), Lindo Khoza (Lindbong Development) and student leaders

MUT's strategy of engaging and developing responsible student leadership has produced yet another credible, free and fair, incident-free student election.

The success of the SRC 2015/2016 elections was largely due to various student party formations, independents, the Vice-Chancellor, the DHET, Student Services and other University departments working together to arrive at shared goals and to collectively and openly manage the process. This shared mission is very rare within the higher education sector as SRC elections often end up in court.

Over the last five years, MUT has delivered credible electoral processes that are aligned to the country's democratic principles. MUT's SRC elections are organised and coordinated by an Independent Electoral Committee (IEC) through processes that are stipulated in the SRC Constitution.

MUT students have an opportunity to elect leaders that are aligned to their main goal of pursuing

their studies and completing their qualifications in time. The SRC Constitution stipulates that SRC candidates should meet particular academic requirements in order to qualify as candidates.

THE ROAD TO ELECTIONS Social Cohesion Workshop

As part of the development of student leadership credentials and preparation



A NASMO student leader promises peace during and after elections

for the elections, student leaders from all disciplines attend the annual Social Cohesion Workshop, which is part of the Social Cohesion Programme.

This year, the Social Cohesion Workshop took place on 29-30 August and was facilitated by Lindo Khoza of Lindbong Development. The student leaders were addressed by Dr Phillia Vukea from DHET. Also at the workshop were MUT Council member, Mr Sifiso Kheswa and Manager of Student Governance at DUT, Malusi Nxumalo.

The Social Cohesion Programme assists in creating an environment that is conducive to elections. It prepares representatives of different organisations by creating a platform where students discuss the basic values of human dignity, equality and liberty, including the right to be heard, and MUT clarifies expectations of commitment to a free and fair electoral process.

The results of the Social Cohesion Programme were evident in the positive behaviour in the build-up to the elections. From rival organisations dancing and singing alongside each other, to various banners flanking walls around campus, students' behaviour reflected the ideals that were agreed on during the Social Cohesion Workshop. In all respects, the elections were a truly commendable achievement for MUT.

Election debates

In order to create a level playing field and allow contesting groups equal access to students, two dates were set aside for open debates. On 9 and 14 September, candidates and representatives of different organisations were afforded the opportunity to air their views on matters of current interest to students.

The day before the elections, the students were addressed by two Members of Parliament: the EFF's Deputy President Floyd Shivambu, who talked to the EFF Student Command, and Deputy Minister of Agriculture, Forestry



EFF Deputy President, Floyd Shivambu, addresses EFFSC



DA leader Dianna Kohler Barnard (second from left) pays a visit to MUT



ANC big gun Bheki Cele (second from right) sings and dances with SASCO students



Above: Students at the voting venue

and Fisheries Bheki Cele, addressed SASCO students. DA MP Dianne Kohler Barnard also visited MUT on the day to encourage DASO students to vote.

The electoral process

Nominations were received from the following organisations: DASO, EFFSC, NASMO, SADESMO and SASCO. Eight students contested as independents. Contesting candidates were required to present their manifestos on 15 September at a well-attended meeting at Seme Hall.

The voting process

To ensure accuracy, students were given a chance to make corrections to the voters' roll two weeks before the voting process began. On 17 September, students descended upon Seme Hall to cast their votes. SAPS and Metro police provided support and only voters were allowed inside the parameter fence around

the voting venue. Outsiders were not allowed on campus, and students were transported to and from their off-campus residences.

The counting process

At the final count, 4 096 votes were cast. There were no objections received and all candidates contesting the elections signed a declaration to indicate their acceptance of the SRC 2015/2016 election results. The elections were declared free and fair by the Chief Electoral Officer.

Audited SRC election results

Voter turnout was 40%, which is very high compared to the national average of 20%. The winner was SASCO, which received 2 870 votes, followed by SADESMO with 903 votes, EFF Student Command with 211 votes, DASO with 70 votes and NASMO with 42 votes. There were 34 spoilt ballots.

Below: SASCO members celebrate after being declared winners



MUT is Creating Future Leaders

“We are here to celebrate our students’ achievements at national level,” said proud Dean of Students Thami Mchunu recently at the Council Chamber, where student leaders from different formations gathered to celebrate student achievements in the last five months.

The event was well attended by students from the University choir, dance, karate, and Enactus – student structures that achieved high honours at different locations around the country.

After their splendid performance in Cape Town, the MUT karate team will send three representatives to Japan in November for the 11th World Karate Tournament. Zamani Lubanyana, Thamsanqa Mngomezulu and Sphamandla Cele are the only ones from southern Africa among the eight students who will represent Africa.

The dance team promised to take the first position next year after placing second this year. Meanwhile, the MUT choir won two trophies and attained first position in the Home Choice category.

MUT Enactus’ entry was the Phumelela Resource Centre Project at KwaCeza in Ulundi. They organised 15 computers and 36 000 books from MUT, Elits, KwaDukuza Community Library and Old Mutual. KwaCeza had no resource centre and learners used to travel long distances to get to a library. Now they are able to gather at a building that MUT Enactus secured through the local authorities. MUT Enactus scored second position because of this project in the Sustainability and People, Planet and Profit category. As a result, they are now ranked fifth internationally.



Achievers! The VC, staff and Enactus students with their trophies



Management marvelling at the choir’s achievement

Right: The many trophies won by students



“Student trophies are a second loot.”

– Vice-Chancellor Professor Mashupye Ratale Kgaphola

ALUMNI CORNER

MUT Helped me to Realise my Childhood Dream



Thembinkosi Mathe

When Thembinkosi Mathe enrolled for his Chemical Engineering diploma, he wanted a challenge. This was brave for a young man who had just matriculated from Star of the Sea High School in Manguzi, northern Zululand.

After graduating, Thembinkosi worked as a Process Technician at SA Bioproducts, eZimbokodweni, south of Durban. In 2007, he joined Sasol as a Process Technologist for the Auto-thermal Gas Reforming Plant and Gas value chain. In August 2011, he moved from Technical (Engineering) to Business and left Sasolburg for Secunda to join Sasol Group Services as an Investment Analyst – a position he held until June this year. He is currently a Business Consultant in charge of implementing the Electronic Marketplace, a supply chain

programme that aims at automating the supply chain process within the Sasol Group.

To this day, Thembinkosi is very grateful to MUT for giving him hope when he thought his dream of becoming an engineer was fading. Financial reasons were the deciding factor; only MUT was within the limited funding he received from a senior evangelist in his church. After completing his diploma, he did a BTech, a Diploma in Project Management and an MBA, which he completed in 2012 from the North West University’s Business School.

When asked how he managed to transition seamlessly from high school to tertiary studies, he said, “It was difficult. I remember I had to work extra hard to catch up. But for me, it was the only opportunity; I had to

make it happen for myself and I had to choose my friends wisely. Tertiary education is always difficult and it needs commitment and hard work. No matter how clever you are, you still need to work hard for your own success.”

Thembinkosi currently mentors young professionals at Sasol and is also a founding member of Ndumo Education Trust in his hometown. The Trust helps needy but deserving students to source funding for tertiary studies and assists scholars with career guidance. He is a member of the Mpumalanga Black Management Forum (BMF), where he is involved in empowerment work.

MUT Alumnus Looks after Anglo American’s R9 billion Portfolio

Mfundo Bhengu (class of 1999) is now Project Financial Manager at Anglo American with the huge responsibility of managing financial affairs for Anglo Invest, a portfolio of about R9 billion a year.

Mfundo knew from a very young age that a Diploma in Cost and Management Accounting was the right choice for him and that MUT was his ideal institution. “I’m responsible for financial management, financial modelling, financial reporting and implementation of internal control systems and measures. What is interesting is that 98% of my job is what I learned at MUT. All my other qualifications are just an addition to the very firm foundation I got from my Cost and Management Accounting Diploma,” said Mfundo.

More than 15 years later, he

remembers the battle he and other classmates had against the stereotype that Cost and Management Accounting was the most difficult qualification. They organised an Imbizo and managed to pull together giants in the field of accounting who supported their initiative, which in the long run opened a number of doors for the University’s Accounting students.

He is very conscious of the challenges of unemployment in South Africa. He believes that all those who can make a difference must contribute. He is currently working with Diepsloot Youth in Action (DYA), a non-profit organisation to make opportunities available for unemployed graduates through internships and bursaries.

In his personal capacity, he is also giving back to the youth in his home village, Umzinyathi, north-west

of Durban. He financially supports a number of learners who are doing well at school but who are struggling financially. Some of these learners are writing Grade 12 examinations. Mfundo says that he is looking forward to supporting them to go to university next year.

Mfundo, a father of two, is very proud of MUT, an institution that not only gave him a quality education, but was also the place where he met his wife Hlengiwe Bhikisha, who is also a very successful accountant. Mfundo thinks that his wife has achieved more than he has.



Mfundo Bhengu

MUT Former Student Provides Hassle-free Drinking Water

Our former SRC treasurer and Chemical Engineering graduate, Felix Kunene, is now a very successful entrepreneur who runs a water purification and water solutions company called Waterman Swaziland.

Established in 2010, Waterman Swaziland is divided into three divisions – a bottling division, which provides a premium brand of alkaline mineral water for general drinking; branded water bottled according to clients' specifications; spring water, which is sourced from the famous Sibebe mountain, the second largest granite rock in the world; and the leasing out of water dispensers to corporate clients and households.

There is also a technical division that specialises in water treatment and waste water treatment, which provides solutions for recycling and reuse of water. This makes it a responsible and environmentally aware business. Finally, the retail shop has inhouse water purification equipment, allowing the public to access water solutions and quality bottled water.

Felix has achieved six awards for his outstanding work, which includes entrepreneur of the year awards; most innovative business award; a best SME award, and a number of excellence awards. "We have broken a lot of barriers. We were the first water company in Swaziland, 100% black-owned, in the most expensive shopping centre in Swaziland. We have created more than 25 job opportunities from our inception, bearing in mind that

Swaziland is a small economy and has a population of less than a million.

The major highlight in his professional journey was the Swaziland Standards Authority (SWASA, a parallel to SABS in South Africa) recognising him for being part of setting the country's water standards for bottled water.

"My qualification has really worked for me; it directed my professional path in a huge and meaningful way," said Felix. Felix added that while at MUT, he started scrabble as a sporting code. He was a member of AIESEC and was SRC Treasurer. He said that it taught him leadership, accountability and teamwork.

Felix is also a father of two and husband to Zanele, whom he met at MUT. He attributes a lot of his success to the support of his wife, who selflessly allowed him to resign from a well-paying job to establish the business.

Good water! Where Felix treats his water



Felix Kunene



Alumnus Empowers Female Electrical Engineering Students

Some universities can afford to do more for their students and communities because of the support they receive from their alumni, and MUT is one of them.

Former Electrical Engineering student, Sicelo Xulu, as MD of City Power in Johannesburg and President of the Association of Municipal Electricity Utilities (AMEU), invites top-performing, final-year female Electrical Engineering students to the Association's annual meeting. The travel and accommodation costs for the trip are covered by the Association.

In his letter to Dean of the Faculty of Engineering Professor Senzo Malinga, he said: "This will allow the students to familiarise themselves with macro issues and challenges facing the industry. They will also meet with industry experts who are

conceptualising and developing innovative solutions that will help the industry to mitigate some of these challenges." For Sicelo, it is imperative that final-year students investigate what the industry requires in order to gain a foothold and start carving a niche for themselves.

This year's lucky students were Zamalotshwa Primrose Nqayi, who is doing her final year in Electrical Engineering (Process Instrumentation); Thabile Dlamini, a final-year student in Electrical Engineering (Telecommunications); Thandolwakhe Shabangu, who is doing her final year in Electrical Engineering (Heavy Current); and

Ziyanda Ngqunguza, who is also doing Electrical Engineering.

The all-female group was part of the 'Women in Electricity launch', which addresses the empowerment of women in Electrical Engineering. They also interacted with electrical engineering professionals and policy makers and learnt about alternative energy sources, among many other things.



Sicelo Xulu

Our Alumni are Transforming the Landscapes of Swaziland

At the forefront of all the major developments taking place in Swaziland towards achieving its vision 2022, a programme that aims to turn it into a first world country are MUT alumni at Inyatsi Construction.

The company employs a sizeable number of MUT graduates, who are stationed all over Swaziland. Merica Vilakati, Civil Engineering class of 2005, and Crispin Gwebu, Civil Engineering class of 2004, have achieved a lot in a space of just 10 years at Inyatsi Construction.

Merica Vilakati's journey

Merica, a humble gentleman who holds memories of his three years at MUT dear, is currently a site agent at a major sewer line construction and is responsible for managing the entire project – finances and personnel, ensuring that the project team delivers on time while also getting the best out of the project.

This is not Merica's only project though. He is also managing the construction of platforms for the International Convention Centre, a R134 million project. His other recent major projects include the King Mswati III International Airport, which was officially opened in March 2014.

"I am very fortunate to have studied at MUT. There is something about the MUT Civil Engineering qualification! You constantly relate back and realise that the qualification is so relevant. You see all the things we were taught in class bearing fruit on a daily basis," said Merica. He believes that exposure to diverse cultures at MUT made him develop a deeper understanding of people with different cultures. He wishes he could have stayed longer.

The relationships built at MUT have provided him with a strong network of mentors who contribute to each other's success through respecting



Merica Vilakati and Crispin Gwebu

one another, regardless of whether a peer is now your boss. The greatest joy for Merica is that his current position allows him to empower young Civil Engineering students from local colleges through mentoring and placement. Some of these students have secured permanent employment after a year or two under his supervision.

To unwind, our Swaziland alumni gather on weekends and challenge each other on the soccer field. This was attested to by a glittering trophy displayed in Merica's office.

Crispin Gwebu's journey

After completing his in-service training at Inyatsi Construction, Crispin was appointed full-time and worked his way up in the company. Crispin is now a senior surveyor, a challenging position that carries a great deal of responsibility and accountability. Crispin works closely with engineers, making sure that all quantities are computerised. He manages other surveyors on site and shapes and updates drawings, taking into consideration the information from engineers.

Crispin's view of work is philosophical. "Work does not cease; there is always new, innovative ways of doing things. It is important to catch up with technology. My MUT qualification has broadened my knowledge in engineering theory and practical. As a result, it was not tough to adapt to the work environment. I'm achieving a lot with my MUT qualification; it has given me a strong foundation."

Crispin's professional profile boasts a long list of successfully completed projects. He was involved in the construction of the airport runway, the Nhlanguano and Woodlands townships, and the Lusip Dam in Nhlanguano. One project he is most proud of is the sewer line project, which was completed in September last year, and where he had taken an MUT intern to be part of the project from inception to completion.

Crispin believes that every opportunity, big or small, afforded to students makes a huge difference, taking into consideration the challenges of work integrated learning and unemployment.



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