

# CUT Annual Report 2013

# Vision

By 2020, Central University of Technology, Free State, shall be an engaged university that focuses on producing quality social and technological innovations in socio-economic developments, primarily in the central region of South Africa.

# Mission

In aspiring to fulfil its vision, CUT:

- Delivers high-quality appropriate Science, Engineering and Technology (SET) academic programmes supported by applied research;
- Engages with the community for mutually beneficial development;
- Promotes access with success in attracting potentially successful students and supports them to become employable graduates;
- Attracts and retains expert staff and supports their development and wellbeing; and
- Forges strategic partnerships.

# **Core Values**

customer service | integrity | diversity | innovation | excellence



## CUT LEADERSHIP CHARTER

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Excellent, quality and inspirational leadership is the cornerstone of any successful organization. This value-based leadership charter sets out areas in which managers should lead by example and demonstrate appropriate behavior to the rest of CUT community. At all times, it is expected of all managers to live by institutional and progressive societal values and exhibit the expected behaviors when discharging their duties.

### I SHALL:

•	provide	vision	and	direction;
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- manage the unit or division I am responsible for;
- develop my unit or division;
- manage performance of my subordinates;
- develop people and subordinates;
- develop students;
- engage with internal and external communities;
- communicate regularly and effectively.

This leadership charter should be read and practiced in conjunction with CUT's motto, vision and mission and its core values as reflected below.

Research and Development Plan (2014 to 2020)         Technology and Innovation         Research Innovation Forum (RIF)         Teaching and Learning Activities         Statistics         Statistics         Student headcount data for 2013         Enrollments by population group per major         field of study         Success/pass rates by major field of study and         population group         Student performance and full-time equivalents         (FTEs) across the major fields of study by gender         Undergraduate and postgraduate student	70 75 78 79 79 79 79 80 82 82
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## THINKING BEYOND





This annual report provides an overview of the work conducted by the Central University of Technology, Free State (CUT) and all its divisions as part of their contributions toward the realisation of Vision 2020, and also serves to provide further details of what was achieved thus far.

The report also reflects on the achievements of the university, with special reference to the following strategic sets: Building a strong foundation, the academic projects of the university, and establishing partnerships for its advancement. Through the launch of our Vision 2020 last year, I am certain that our commitment to strategic partnerships with government, business and industry, as well as with universities both in South Africa and abroad, laid a solid foundation upon which the socio-economic

which demanded resilience to overcome these challenges. development of the Central region can be fully realised. For the purpose of this report, it is important to note 2013 is now history that the university has put behind itself. that the period under review coincided with the roll-out of Vision 2020. It was a period of exciting growth and change As we look inwards to reflect on our challenges and for CUT, during which students and staff were encouraged setbacks. let us honour and celebrate the contribution that to explore innovative ways of making the university a CUT each and every one of our internal and external partners above the rest. We encouraged them to have faith in our have made towards the realisation of our vision amidst constitutional democracy and, most importantly, to stay these difficult times. Some may have done so in small yet focused on teaching and learning to make CUT an meaningful ways, whilst others have gone the extra mile. institution that stands for honesty, integrity and determination

We must therefore acknowledge that the year 2013 was the period in which we were able to overcome many of our challenges and set new records for the university. We have been enriched through our various experiences; some of

Dr Boet Troskie Chancellor



To our government, business and industry partners, your commitment to our partnership is greatly appreciated. We look forward to 2014, which will bring with it new challenges and new hope.

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## MANAGEMENT

Message from the Chancellor



Dr Sylvan Seane Chairperson of CUT Council

t gives me great pleasure to give an overview of CUT's performance during the course of 2013 which records the achievements of the university against our mission. During the year under review, Council was able to provide an important governance oversight role amidst adversities which confronted the university. Through the support of staff and students, the university succeeded in attaining most of its planned activities.

We have witnessed remarkable strides towards the operational efficiency at CUT. The University continued with the filling of key positions in the approved organisational structure with shrewd eye on employment equity and representation. The three executive posts will be filled by early next year. The financial state of the university across various divisions has been growing strongly in real terms; putting CUT in a better position to deliver more on its core business as a University of Technology. We have witnessed greater improvement in the financial management of the university budget.

During the year under review, expenditure remained within parameters set by Council. Council is pleased to announce a new Resources Allocation Model (RAM) which was introduced this year. The University believes that this model will ensure a more efficient allocation of resources and linkage between planning and budgeting. The new financial year will see the implementation of this model across the university. In terms of our facilities, Council is committed to creating world class infrastructure for the university. Developments around the two campuses bear testament to that commitment with tangible improvement of quality academic life of our students and academic staff alike. It is important to note that the cost of the university salary bill has been huge concern for some time now and was edg-

ing on 75% of the total of subsidy and tuition fees. Council's transformation agenda that new Vice Chancellor and Prin-We also sought to uphold strong educational values and continued to provide our students with the highest levels of cipal and his management team were mandated to pursue teaching and qualifications. CUT did not allow the situation since 2007 consisted of several objectives; namely the total reorganization of CUT to ensure the University was living to impact their continued development of the university and within its own means; designing a new vision and consolsome sterling initiatives took flight during this difficult time. idating its strategic and operational plans and associated As we put these events behind us, we will focus our attention processes; improving the university's financial management on building a stronger foundation and partnerships for realisystems; reviewing and streamlining its policies, procedures zation CUT's Vision 2020 of becoming the "isle of innovation" and processes to make them fair, equitable and effective. that contributes social and technological innovations to our regional and national development agenda.

Over this period management was able to translate these broad objectives into tangible and implementable programmes. Considerable progress has been made with regards to the implementation of these set objectives mentioned above. I can safely report that the budget proportion for salaries have been reduced from 75 %to 61 %, which is still below the 62 % maximum set for all universities.

I also would like to thank Vice Chancellor and Principal, management, staff and students for their commitment to improving our targets. This report sets out the unqualified audited financial statements in respect of CUT for this financial year. In this regard, we are grateful for the work of all parties in compiling these statements.

## MANAGEMENT

#### Message from the Chairperson of the Council



#### **Prof Thandwa Mthembu** Vice Chancellor and Principal

n line with the university's vision of becoming an agent for innovation and socio-economic development in the Central region and South Africa as a whole, this report highlights institutional achievements during the vear 2013.

The year 2013 marks the end of the foundation phase (2010-2013) of the implementation of our Vision 2020. The institution have made considerable advances with regard to building a substantial and firm foun-

dation. The university has been repositioned and its executive portfolios restructured towards achieving its strategic objectives, as set out in Vision 2020.

One of the university's initiatives that was spawned by Vision 2020 was the Strategic Transformation of Educational Programmes and Structures (STEPS) process. Remaining true to our tradition of addressing national needs, the STEPS process has been central in transforming our curriculum to ensure that it speaks to the requirements of the 21st century. Through STEPS, the institution reviewed curriculum content and methods of teaching and learning delivery. Considerable development has resulted. Working closely with the Department of Higher Education and Training (DHET) and the Council on Higher Education (CHE) to enhance the quality of its higher education system, nine new innovative programmes were approved by the DHET in 2013, four of which were registered with CHE to be offered in 2014.

Research and innovation is the second pillar of our mission as a university. In 2013, our total external research income exceeded R7.6 million. This, together with a number of projects in community engagement, underscores that the steps the institution are taking in becoming an engaged institution and active partner in socio-economic development is beginning to vield results.

CUT. like other higher education institutions in South Africa. needs to balance the imperatives of building a globally competitive institution with the demands of being responsive to local and national needs. In South Africa, the public education and training system faces serious challenges in producing students who are adequately prepared to undertake studies in Science, Technology, Engineering and Mathematics (STEM) programmes, which play such a critical role in the development agenda of the country. The institution is committed to make a leading contribution to solve this problem in the Central region; hence, the establishment of the Schools Advancement Academy (SAA). The Schools Advancement Academy,

which was officially launched in 2013, provides support to were consolidated. Debt collecting has improved significantly. At the end of September 2013, the outstanding debtors' schools in the Central region through its various projects. and, predominantly, the extra classes that are provided to book was 42.43%, compared to September 2012, when it school learners thorough the Saturday, Winter and Spring was 49.80% of the debit charged. In the years ahead, the Schools. In addition, through our Educator Mentorship and challenge will be related to the containment of the salary Development Program (EMDP), the institution strive to budget; the prudent investment in the academic project, esimprove the knowledge and teaching competencies of edpecially in human resources capacity, equipment and infraucators in Science, Technology, English and Mathematics. structure; as well as to managing expenditure. Furthermore, a Resources Allocation Model (RAM) has been developed Beyond the Central region, the institution are exploring opportunities for international strategic partnerships that will conwith a view of ensuring more efficient allocation of resources tinue to build upon in the next phase of the implementation of and also of strengthening the linkage between planning and budgeting. The model was tested in 2013, has been partially Vision 2020. In 2013, our internationalisation strategy was launched to consolidate extensive international partnerships implemented in 2014 and will be in full operation in 2015. and networks and leverage resources to strengthen the institution's capacity in its core responsibilities. Our internation-Our staff and students demand better resources and a more alisation strategy has been operationalised through the escomprehensive and decent infrastructure as required of a tablishment of the International Office, whose staff assumed modern institution of higher learning. The provision of worldduty at the beginning of 2014. In 2013, 3.8% of our student class infrastructure remains very high on our agenda. Over complement consisted of international students. In order to the past three years, over R250 million has been invested ensure a diverse student body that will enhance the learning in various key facilities for our students. The university is grateful to the DHET and Council for their contributions toexperience of all our students, our objective is that, by 2020, at least 10% of our students would be international students. wards this investment. The institution now have six state-ofrecruited from the rest of the African continent and beyond. the-art buildings as part of our academic infrastructure, two of which are at the Welkom campus and for which we spent Whilst this report highlights the progress the institution has a total of R60 million.

made in realising the goals of Vision 2020, it is important Further development is continuing on both campuses to proto take into account the factors that play an important role vide for improved academic infrastructure and residential in the success of the institution. Financial management conbuildings, following an additional R314 million investment by tinued to improve in the year 2013, wherein our preliminary the DHET and our Council for the period 2012-2015. For all financial results were positive. Expenditure remained within the success. I am indebted to all stakeholders for the strong the parameters as set by Council, and financial reserves support and the respectable growth we have experienced.

## MANAGEMENT

#### Message from the Vice-Chancellor and Principal

My heartfelt gratitude goes to the DHET for its continued commitment to supporting CUT, and I look forward to an exciting period in the institution's transformation.

## Strategic Direction for CUT

### Strategic set 1 | Building a Strong Foundation

(internal values, relations, and organisational design and transformation)

Building a sound foundation is an essential part of progressing towards the Vision 2020. A number of initiatives have been undertaken towards this end. They are highlighted in the following five performance indicators:

- 1. Improving "fitness for purpose" through institutional re-organisation and redesign
- 2. Equity and excellence, growth, and development
- 3. Creation of a culture conducive to excellence, debate and innovation
- 4. Improving relations between academics and students and amongst different CUT community groupings
- 5. Transformation: Priority operational projects to improve fitness for purpose

#### Strategic set 2 | The Academic Project

The year 2013 was another year in which notable progress was made in the academic portfolio in terms of aligning the academic project with Vision 2020. The academic project is the sole reason for CUT's existence. The importance of offering quality programmes in teaching and learning, and also in research and innovation, cannot be over-emphasised. There are six objectives under this strategic set, as indicated below:

- 1. Instituting a learner-centred approach to teaching and learning
- 2. Enhancing Science, Technology, Engineering and Mathematics (STEM), but with a human consciousness
- 3. Ensuring the supply of quality STEM enrolments
- 4. Introducing vocational pedagogy and post-school education as a research niche or area of scholarship
- 5. Creating a critical mass in research and teaching
- 6. Enhancing technology-orientated research and innovation

### Strategic set 3 | Partnerships, Institutional Advancement

CUT relies on focused and purposeful strategic partnerships in order to achieve its Vision 2020. The university also needs external support in order to ensure that the graduates and innovations that are produced are aligned with industrial and developmental goals. This will improve the effectiveness of the academic project in attaining and sustaining socio-economic outcomes and impact through increased, highly focused, intellectual products and delivery.

- 1. Improving partnerships: The choice of business and industry as primary partners in broader societal development
- 2. Strategic partnerships with business, industry and government to contribute towards sustainable socio-economic development
- 3. Advancing internationalisation
- 4. Building strategic partnerships that contribute to institutional advancement and community engagement

### Achievements in 2013 Strategic set 1 | Building a Strong Foundation

#### Performance Indicator(s)

A logical, coherent and productive administrative management system; organisational efficiency in costs and operations; a support-staff structure in place; full complement of support staff at executive and middle management level; and greater investment in the academe.

#### Achievements

- The re-organisation in terms of placement of staff at CUT continues to foster a function-based rather than a Peromnes levels P8-P16 is complete. This last phase of task-based administrative system, so that fewer resources the re-organisation and restructuring exercise signals that could be used. As a consequence of this approach, the university managed to keep its operational and capital exthe whole university has been right-sized to fit within our means. Indeed, CUT continued to hold the salary expendipenditure at 25% e 6% of its revenue. ture to a maximum of 62% of the revenue in 2013.
- It supports initiatives that are geared towards achieving the With regard to salaries, the academic-to-support-staff ratio goals of Vision 2020 through its strategic development fund, which is equivalent to 20% of its revenue. Although was 59:41 in favour of academics in 2013. By December 2013, we managed to fill all the executive positions: the student debt is still a problem at CUT, its management is new Registrar was appointed in September 2013, while improving. At the end of December 2013, the outstanding the positions of Deputy Vice-Chancellor: Resources and debtors' book was 12.31%, compared to December Operations and Executive Director: Strategy Execution Unit 2012, when it was 19.64% of debit charged. This is an would be filled early in 2014. improvement in the rate of collection of 7.33 percentage points which will continue to tighten the University's debtrecovery measures.

#### Performance Indicator(s)

Implementing an equity and excellence project to grow the number of staff from designated groups and fast-track their development trajectory; earmarking funds for staff development and programmes; and stabilising student equity in terms of access and success.

#### Achievements

- The 2013 achievements included the development and approval of a policy framework that would help the university to attract and retain talent. The talent management policy and the recruitment policy and procedure have been fully consulted with stakeholders, and have been approved by the university's Management Committee (Mancom). Council is due to approve these in 2014.
- CUT spends a considerable amount of effort in ensuring that its people participate productively by contributing their "crazy ideas" towards achieving the university's Vision 2020. The implementation of a number of exciting strategies and programmes, aligned with Vision 2020 and aimed at empowering the university's staff and students, continued in 2013.
- Programmes addressing the twin challenge of equity and excellence were implemented under the Higher Education and Leadership Skills Academy (HELSKA) umbrella, namely the Stars of Academe and Research (SoAR) for young aspiring academics who are being nurtured, and the Leaders in Education and Development (LEAD) for the staff and other Free State leaders. The SoAR programme is an in-house 'grow-your-own-timber' strategy that has brought highly qualified talent into the academic and research corps. Four master's students who completed their studies in 2012 were absorbed by the Academic Division in 2013, while two master's and three PhD students, who are scheduled to complete their studies in 2014, will be brought on board in 2015. R9.7 million was earmarked for general staff development projects from the strategic development fund.

The staff equity indicators also improved somewhat in 2013. More African individuals were hired, which narrowed the gap between the number of black and white employees. In 2012, the ratio of black-to-white employees was 58:42, whereas in 2013, this improved to 61:39.

#### Performance Indicator(s)

Planned institutional engagements and debates; regular communication about strategic and institutional culture issues; and planned engagements at executive and senior management levels.

#### Achievements

- At management level, the Mancom planning workshops The Vice-Chancellor, through a series of communiqués, addressed a broad range of topics relating to institutional provided a platform for the discussion of strategic issues ethos and emerging developments. related to CUT, as well as the monitoring and evaluation of institutional priorities and their implementation.
- Further, the university communicated and engaged with • The A-Team, a group of innovative staff and students who both external and internal partners through its official publication, Gratia and Mirror. Five knowledge-sharing participated in projects associated with Vision 2020, attended the November 2013 Mancom Planning Worksessions in which executives and senior managers participated and shared perspectives on issues of management shop. This group played an important role in creating and administration, were also held. innovative solutions for the university. Towards the end of 2013, the Aesthetics Cluster started implementing an Artifacts Project at the Bloemfontein campus, which saw a Furthermore, the Institutional Forum meetings provided a number of sculptures erected on campus. platform for discussion on pertinent transformation issue

#### Performance Indicator(s)

The university's expectations for behaviour, especially on the part of lecturers, encompassed in the Leadership Charter; implementation of the Charter through workshops with staff and messages in communiqués; and the management of tensions with unions to ensure the continual development of students.

#### Achievements

• Management continued to have good relations with the • As part of the SRC's induction programme, the Vice-Chanunions in 2013. Salary negotiations for 2014 were concellor conducted a leadership training session with SRC members. Furthermore, the Vice-Chancellor conducted cluded without any major disruptions. As indicated, the communiqués issued by the Vice-Chancellor's Office have two training sessions in March 2013 with the organensured that information is regularly communicated, which isations and sub-structures that serve under the Student has contributed towards bridging the information gap be-Parliament. The Vice-Chancellor and Principal also facilitattween staff and students. ed training sessions with the SRC and SRC affiliates from 60 student structures. Amonast others, these workshops helped to inform these student formations about institution-• CUT was at an advanced stage when it came to phasing al and national governance and management systems and out its post-retirement medical aid liability, which has been operations in the higher education sector. The Vice-Chana major balance-sheet burden for many years. Through a cellor and Principal also participated in student leadership negotiated process, the majority of in-service staff who had retained this benefit post-2000 have accepted a voluntarv development by facilitating a leadership workshop for the outgoing 2012/2013 SRC, as well as the newly elected buy-out as of November 2013. 2013/2014 SRC senior management in the month of October.



#### Performance Indicator(s)

A well-developed and agreed-upon broad framework for transformation of all the elements of CUT's core business; and the idea of transformation to transcend issues of race, gender and appointments, but to also focus on the quality of its core business, outputs and outcomes working towards the accomplishment of Vision 2020 and relevant strategic plans.

#### Achievements

- The transformation project at CUT is multifaceted in that it is aimed at redressing past inequalities; contributing to a new social order; meeting pressing national needs; and responding to new realities and opportunities. The report by the Ministerial Committee on "Progress towards transformation and social cohesion and the elimination of discrimination in public higher education institutions", also known as the Soudien Report, was released in 2008 at the time that CUT had already developed a transformation framework to address the goals of White Paper 3.
- In response to the Soudien Report, CUT made it known that it had, in 2008, adopted a transformation framework vision, entitled "Year 2020: Vision of the transformation agenda". The transformation framework provided a foundation to some on-going developments within the university that were highlighted in the Soudien Report. The university's response to the Soudien Report should be seen as an extension of its commitment to transformation. CUT has made significant progress with regard to addressing some of the recommendations of the Soudien Report.
- In 2013, CUT's Employment Equity Plan 2014 2018 was approved by the Department of Labour. This essentially means that, from 2014 onwards, there is already a clear plan against which to implement employment equity.

- In terms of curriculum development, the successful implementation of the Strategic Transformation of Education Programmes and Structures (STEPS) process is an integral component of transformation at CUT, which has resulted in nine new programmes being approved by the DHET in 2013. Furthermore, the core curriculum was finalised and incorporated in all new undergraduate and revamped programmes. The core curriculum comprises of the following modules, namely: Academic Literacy and Communication Studies; Numeracy; Digital Literacy; and Success Skills. Furthermore, the university has introduced a list of graduate attributes or competencies that are incorporated into its core curricular programmes (see section).
- With regards to staff development, funds have been made available for staff development and the mentoring of black staff members to take up senior level positions. In terms of the provision of accommodation for students, for the period 2012 to 2015, the DHET has allocated R314 million that is to be invested in more academic infrastructure and student residences. Of this amount, R117 million has been set aside for the construction of residences on the Welkom and Bloemfontein campuses – around 500 beds at the Welkom Campus and 250 beds at the Bloemfontein campus.

#### Strategic set 2 | The Academic Project

#### Performance Indicator(s)

Consolidated use of distributed and e-learning technologies and materials; the provision of training and exposure to the relevant techniques; and improved student support facilities.

#### Achievements

- Hand-held gadgets known as "clickers" were introduced in some classes in 2013; particularly for use in large classrooms. The system allows students to provide feedback promptly and maintain anonymity. It further computes and presents class results graphically and immediately.
- · Amongst other tools used to determine lecturers' performance, is an assessment by students. In this regard, the Centre for Teaching and Learning implemented an online • An Active Learning Centre (Smart Classroom) – the first of system for the evaluation of teaching and module content its kind in SA universities – was commissioned and opened in the Hotel School in the Faculty of Management Sciencat CUT. A total of 538 online student evaluations were conducted and feedback reports submitted to academic staff es. This allows lecturers and students to actively engage during the reporting period. The advantage of using an with one another using the latest educational technologies. online module is that the survey data is immediately A total of 178 video clips/recordings were produced and available for analysis and reporting. integrated into teaching and learning during the year.
- The complete student database was imported into e-Thuto (Blackboard), and activated for use by students. A total of 896 courses were provided through this medium. A total of 227 lecturers have also been trained in using the Learning Management System (Blackboard). Lecture rooms have also been equipped with the most recent audio-visual aids.
   CUT has committed to integrating Work-integrated Learning (WIL), and its sister variants, such as Service Learning into every new programmes. To this end, a total of 35 programmes include WIL, and are aligned with HEQF requirements.

#### Performance Indicator(s)

Ensuring a clear preference for STEM; then Business, Commerce and Management (BCM); and finally Humanities, in that order. This is in line with the Minister's headline enrolment target for CUT of 50% STEM; 28% BCM; 14% other Humanities; and 8% Education (with 5% being postgraduate enrolment); and the development of four research niche areas in STEM.

All lecture rooms on the Bloemfontein and Welkom campuses have been equipped with data projectors. More than 134 video conferences were supported in 2013.

#### Achievements

- In 2013. CUT's enrolment headcount was 13 303 students, of which 5 789 students were enrolled in STEM.
- This means that 43.5% of the total student headcount in 2013 was in the priority area of STEM, a figure that is below the target of 49.5% for 2013. The university is

taking steps to improve its enrolment in STEM. In this regard, a student recruitment strategy that focuses on the STEM fields will be implemented in 2014.

• The postgraduate student enrolment headcount was 6.6% in 2012, but increased to 5% in 2013.

#### Performance Indicator(s)

An increase is sought in the number of STEM-qualifying school leavers in the Free State (through a partnership with the Free State DoE) and feeder schools; and funding to support Free State learners who excel in Mathematics and Science.

#### Achievements

- CUT and the Free State Provincial Government collaborated on projects aiming to increase the supply of STEM-qualifying Grade 12 learners. Through CUT's Schools Advancement Academy (CUT-SAA), learners of the region are supported to improve their success rate, while educators are equipped to deliver on learners' educational needs and expectations.
- The Saturday School, Winter School and Spring School projects, all under the auspices of CUT-SAA, target the learners directly, whereas the Educator Mentorship Development Programme (EMDP), also part of CUT-SAA, focused on developing educators' skills.
- CUT's Saturday School Project grew in leaps and bounds. As in previous years, the grade 12 learners of the project managed to achieve a 100% pass rate in the 2013 National Senior Certificate (NSC) examination. Five of these learners managed to obtain an average aggregate of 80% • Telkom Foundation's sponsorship made it possible for the in the final exam, compared to three in 2012. Pertaining to Mathematics, learners who participated in the project obtained seven distinctions, while there were ten in Life Sciences, two in English and seven in Physical Sciences, CUT is particularly grateful for Standard Bank's sponsorship of the Winter School to the value of R1 million.
- The number of learners of the Saturday Schools Project that enrolled in Engineering and Science-related fields of study at CUT over the years is well over 140. Some of the former Saturday School learners have enrolled in Medicine, Law, Engineering, and Science courses at other institutions country-wide. It is evident that the project is certainly delivering on its mandate with many positive outcomes that not only benefit the Free State Province, but also the rest of the country.
- The pilot run of CUT's Educator Mentorship Development Programme, which is financed by the Telkom Foundation. reached its final stage at the end of 2013. The project certainly had a great impact, as most of the participating teachers showed a total turnaround in their commitment towards their work in general, and learners in particular.
  - acquisition of 26 laptops, 12 data projectors and 12 projection screens, as well as 3 photocopiers aimed at the three primary schools that participated in the programme. These items, along with other teaching aids such as wall charts, books and educational toys, were handed over to the school principals and the chairpersons of their

governing bodies at a special event hosted at CUT. These schools also received mobile laboratories and libraries durina 2013.

• The difference that this project made at the three participating primary schools has motivated the Telkom Foundation to sponsor the project with a further R4.45 million over the next two years. The three new primary schools

#### Performance Indicator(s)

The development of a common approach and language on curricula and pedagogy of sectoral and professional programmes and qualifications of UoTs and FET colleges.

#### Achievements

- Furthermore, CUT has embarked on a process to develop The focus during 2013 was to advance discussions about the type of graduates CUT wishes to produce; the articulation pathways for students from the FET college distinctiveness of CUT graduates from Further Education sector for implementation in 2013. To this effect, CUT and Training (FET) graduates and those from other convensigned an MoU with 4 FET colleges and FSPG on 6 June 2013, with the aim of strengthening the collaboration tional universities; and the role of CUT in contributing to between the FET sector and CUT. This agreement is challenges in the region. Through networks and collaborations with researchers and scholars on vocational and intended to bring about collaboration between CUT and FET colleges in the area of Science, Engineering and Techprofessional pedagogy, the university was able to develop nology. This collaboration also provided effect to the solutions and deeper analysis of these challenges. leading provisions of the amendments of the Act governing FET scholars such as Professor Michael Young of the London Knowledge Laboratory; Professor Leesa Wheelahan from colleges, and the establishment of common admission the University of Queensland, Australia; and networks with requirements between CUT and FET colleges in the three Finnish Universities of Applied Sciences (Haaga-Helia, province. Hamk and Laurea and Tempere) collaborated with CUT to enable these partnerships to enable quality of education of • As a result of the MoU with the FET colleges was signed. Also, Manufacturing, Engineering and Related Services CUT students.
- SETA (merSETA) came on board; resulting in the creation of the merSETA Chair in Science, Engineering, In September 2013, CUT hosted a colloquium facilitated by Prof. Michael Young on the development of a common Technology and Mathematics (STEM). This collaboration is approach and language on curricula and pedagogy of CUT's response to the need to broaden the pool of graduates in gateway subjects that are key to national and sectoral and professional qualifications of UoTs and FETs. In addition, Prof. Ntshoe published an article on curricula and regional development. The Chair has three foci relating to the STEM field: i) continuous professional development pedagogy of professional and sectoral qualifications of (CPD) and upgrading of FET lecturers' qualifications; ii) the UoTs. provision of access programmes for FET college students, and iii) the development of women in Engineering.

that will participate in the second phase of the project are Heide Primary School, Monyatsi Primary School and Karabello Primary School, Teachers from these schools are very keen to participate in the new project. The Feeder School Bursary Programme, which was initiated in 2010, continues to attract a pool of best-performing students to whom bursaries are awarded annually.

#### Performance Indicator(s)

Establishing a critical mass of senior professors, professors and senior lecturers in selected research and teaching areas; using restructuring and operational savings to create a strategic fund for such scientists/professors, their laboratories and postgraduate students; and enhancing the current research thrusts and niche areas through partnerships and new staff.

#### Achievements

- In 2013, a total of 29 full-time academic staff were appointed, excluding secondary appointments, comprising of HODs and department managers. CUT had a total of 25 academic departments in its four faculties.
- The number of PhD holders on CUT's teaching/research staff increased by 22.2%, from 72 in 2012 to 88 in 2013, while the number of those with master's degrees increased

by 0.9%, from 114 in 2012 to 115 in 2013. At the end of 2013, 30.2% of teaching/research staff were in possession of a PhD degree, and 39.5% in possession of a master's degree. As a result of the university's efforts, CUT has the highest percentage of doctoral-qualified staff amongst UoTs in South Africa. All these efforts help to improve the quality of teaching.

#### Performance Indicator(s)

Identifying strategies to enhance this area; recruiting senior scholars in technology-focused areas; developing modules with a technology and innovation focus; enhancing the technology focus; and establishing links between academic products and business/industry.

#### Achievements

- The SEDA Agricultural and Mining Tooling Incubator (SAM-TI), is a business incubator for small, medium and micro enterprises (SMME) in South Africa's tooling sector of the mining and agricultural environments. CUT, in collaboration with SAMTI, is training the incubator tenants in the essentials of mechanical workshop practice. Additional workspace, which became available through the reallocation of facilities, has recently been allocated to SAMTI, enhancing its capability to expand its offerings. In line with the emerging strategy, the university has established a number of new programmes based on its niche that respond to the development needs of government, business and industry.
- In 2013, CUT earned 54.33 credits from accredited articles, compared to 52 credits in 2012.

- Documentation regarding the roll-out of Vision 2020 Innovation and Incubation Programme and the TIA seed funding initiatives aimed at stimulating and enhancing innovation activities by students and staff, has been compiled.
- With regard to intellectual property, the Technology Transfer Office is now fully functional. Two patents and three designs have been submitted for registration.
- As part of the university's Research and Development Capacity Development Programme, four research managers have been appointed. In addition, a review of the research professorships has been completed. This will go a long way to help to increase research and innovation outputs.

### Strategic set 3 | Partnerships, Institutional Advancement

#### Performance Indicator(s)

CUT, as a technology-oriented institution, developing technology that is relevant to business and industry needs; and turning innovations and inventions into products useful to society.

#### Achievements

- CUT's Centre for Rapid Prototyping and Manufacturing CRPM plays a vital role in the reconstructive surgery of (CRPM), and the DST-supported Product Development state-dependent patients who suffer from severe facial disfigurement due to cancer and traumatic accidents. Technology Station (PDTS) continue to engage with business/industry. The scope of Additive Manufacturing Additive Manufacturing technology was used in eight surgical procedures during 2013, including patient-(AM) technologies of CRPM has been expanded through the acquisition of a new multiple-plastic AM technology, specific titanium implants, pre-operational planning models and prototypes for ear-replacement surgery. A programme providing an opportunity for the enhanced education and training of CUT students, as well as transfer of this new was launched in conjunction with the Medical School of the technology to industry. Furthermore, PDTS funded by the University of Pretoria to assist predominantly needy Technology Innovation Agency (TIA), assisted hundreds of patients in government hospitals. SMMEs in becoming globally competitive, by providing them with the technological support they need to design and • South Africa is the second largest supplier of raw titanium manufacture innovative new products. material in the world, and as such, titanium-related
- with the technological support they need to design and manufacture innovative new products.
  The NRF also awarded CUT an equipment grant under its Research Infrastructure Support Programme (RISP) for a new state-of-the-art Objet Connex<sup>™</sup> 350 3-D printing machine.
  South Africa is the second largest supplier of raw titanium material in the world, and as such, titanium-related research is a strategic priority for government and industry. No beneficiation of raw titanium to secondary products is being done in South Africa at present. Given CUT's ability to manufacture directly in titanium, as well as its participation in the national Titanium Centre of Competence, the university is playing an important role in this strategic area.

#### Performance Indicator(s)

Nurturing a symbiotic relationship between CUT and government and its agencies (DST and DTI/SEDA as the forerunners at national level, along with the Free State Provincial Government, the various municipalities and SETAs); and various programmes introduced to support provincial and local governments.

#### Achievements

- CUT coordinates a series of projects in partnership with government at local, provincial and national level, as well as in several partnerships with business. Together with the Department of Science and Technology (DST) and the University of the Free State, CUT has formed the Regional Innovation Forum Free State (RIFFS) in May this year. RIFFS aims to create strong systems of innovation by bringing together stakeholders from various segments in the . Finally, the establishment of the CUT Institute for Continuing innovation value chain. CUT is the custodian of RIFFS, which together with local innovators, will help the region in developing innovations and making a sustainable improvement to local competitiveness and growth.
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- Faculty of Engineering and Information Technology has joint partnerships and collaborative projects in various areas, such as (1) the IT Hub in Welkom; (2) the Contractor Development Programme, in collaboration with Free State Provincial Government (FSPG); (3) the establishment of an agreement with the International Labour Organisation (ILO) and Department of Public Works for the construction contractor incubator development; (4) the establishment of strategic partnerships with the University of Johannesburg, • Finally, the establishment of the CUT Institute for Continuing NMMU and the UFS in the area of Human Settlement Development: (5) research collaborations between CRPM. PDTS and the University of the North West, the University of Pretoria, and the CSIR; (6) the Software Development Project for 21 SMMEs in the Free State in

collaboration with the Johannesburg Centre for Software Engineering (JCSE), based at the University of the Witwatersrand, Johannesburg. This forms part of an international cooperation agreement with the Software Engineering Institute (SEI) at Carnegie Mellon University in the USA.

- Education (CUT-ICE) is an important strategic milestone of 2013. It is envisaged that CUT-ICE provide continuing education that addresses national, regional and local training needs for the economic development of the Central Region and the country at large. Faculty of Engineering and Information Technology has joint partnerships and collaborative projects in various areas, such as (1) the IT Hub in Welkom; (2) the Contractor Development Programme, in collaboration with Free State Provincial Government (FSPG); (3) the establishment of an agreement with the International Labour Organisation (ILO) and Department of Public Works for the construction contractor incubator development; (4) the establishment of strategic partnerships with the University of Johannesburg. NMMU and the UFS in the area of Human Settlement Development; (5) research collaborations between CRPM, PDTS and the University of the North West, the University of Pretoria, and the CSIR; (6) the Software Development Project for 21 SMMEs in the Free State in collaboration with the Johannesburg Centre for Software Engineering (JCSE), based at the University of the Witwatersrand, Johannesburg. This forms part of an international cooperation agreement with the Software Engineering Institute (SEI) at Carnegie Mellon University in the USA.
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#### Performance Indicator(s)

Establishing partnerships within the SADC region, specifically smaller countries; consolidating other partnerships within the continent and in other parts of the world; enhancing partnerships through staff development programmes (master's and doctoral degrees) for some of the universities within the continent; and increasing research collaboration with other African institutions

#### Achievements

- The Internationalisation Strategy is being operationalised through the establishment of an International Office. CUT is now geared towards having a footprint on the rest of the continent and strengthening partnership globally. The university's vision is that, by 2020, 10% of its students should be international students from Africa and beyond.
- CUT also hosted a very successful 17th Annual International Education Association of South Africa (IEASA) Conference in August 2013, where In February 2013, the Vice-Chancellor and Principal visited the University of the West of Scotland (UWS) in order to Internationalisation Strategy was launched.

#### Performance Indicator(s)

Devising strategies to diversify the support base for the institution - morally, socially, financially and otherwise; focusing on engaging with various stakeholders and creating strategic partnerships; ensuring institutional advancement and better financial sustainability from such engagements; and reorganising the university centres and business-oriented units.

maximise stronger international networks and partnership opportunities. The faculties of Health and Environmental Sciences and Humanities were successful in establishing contact with UWS counterparts.

#### Achievements

- The CUT Services and Enterprises Trust (CSET) came into operation in April 2012. It is 100% owned by Central University of Technology, Free State, and is mandated to market and commercialise the university's intellectual capital through short course management; contract research and consulting; intellectual property management: and technology transfer. CSET actively seeks prospective partners, including companies; entrepreneurs; NGOs to help them develop their ideas into new products and services for commercialization. Over the last two vears, CSET has achieved substantial success in establishing new partnerships and collaborations with various government departments. For example, an SMMEs-empowerment programme in the area of road repairs was formulated with Department of Public Works, Roads and Transport (DPRT). The project is already two-thirds on the way to completion. Other projects include partnership projects such as the Educator Mentorship Development Project (EMDP) with the Telkom Foundation; and the Saturday, Winter and Spring School projects, of which various organisations are part. These projects attracted a sponsorship amounting to more than R7 000 000 in 2013.
- CUT's focus with regard to Community Engagement (CE) projects, shifted in 2013 towards what we call quad-helix partnerships between the university on the one hand, and government, business, industry and civil society on the other. The need to obtain a specific profile and the focus area of CE projects led to CUT revising its CE template. As a result, the CE Model has been transformed into a comprehensive developmental model.
- The model consists of the following focus areas: Eradicating poverty and related conditions; promoting human dignity and health; increasing social capacity development; education; and balancing a sustainable environment with a competitive industry. The university's division of CE had a total of 26 projects in 2013 of which 23 were from the faculties and 3 from CUT-SAA. Steps have been taken to revitalise the local incubator, as well as to establish an incubator at the Welkom campus.

## MANAGEMENT AND ADMINISTRATION

dministrative structures in both the support and academic management divisions have been aligned as part of the broader three-phased institutional restructuring exercise, which produced new structures and the staff establishment currently in place.

Prof. Thandwa Mthembu Vice-Chancellor and Principal

Prof. Henk de Jager Deputy Vice-Chancellor: Academic and Research

Ms Martine van der Merwe Acting Deputy Vice-Chancellor: Resources and Operations

> Dr Nothemba Mrwetyana Registrar, joined CUT in September 2013

Dr S Makola Campus Director: Welkom Campus











This section deals specifically with managerial/administrative aspects of the institution's operations.

The division Institutional Planning, Partnerships and Communications (IPPC) was radically restructured with the ending of Prof. T Schultz's employment contract at the end of December 2012.

The Strategy Execution Unit (SEU) was established not only to help us devise and refine the plans and strategies, but also to execute them. Towards this end, a review of the remainder of the sections in this division, namely Communications and Marketing; Partnerships and Enterprises; and Transformation Projects, was conducted by SEU in 2012 and finalised in 2013.

Council took a resolution to disband the IPCC Division, with its units being transferred to other divisions. The Institutional Planning Unit was re-organised for it to focus on academe; hence the name changed to Academic Planning. As a result, the Deputy Vice-Chancellor: Academic and Research is now managing Academic Planning. Finally, the Communications and Marketing Section moved to the Vice-Chancellor's Office, reporting administratively via SEU.

#### Executive, management and administrative appointments

Registrar's Division: In September 2013, the university appointed a new Registrar, Dr Nothemba Mrwetyana. Academic Division: The designation of the Deputy Vice-Chancellor: Academic has been changed to Deputy ty Vice-Chancellor: Academic and Research in order to reflect the importance of research and innovation at CUT.

• The process of revamping the academic management system was also finalised through the appointment of heads of department (HODs) as part of the2-tier system, moving away from the multi-layered, cumbersome and less accountable system that CUT previously had, namely that of deans, school directors and programme heads. To this effect, 21 of the 22 HOD positions were filled on a permanent basis. We are in the final stages of filling and placing staff in the faculties in terms of the STEPS framework.

Resources and Operations Division: The benchmarking of administrative and academic structures across different multi-campus institutions has been concluded. A workshop on the strategic positioning of the Welkom campus took place on 5 November 2013. The workshop provided directions for the strategic blueprint of the Welkom campus. In line with these developments, the position of Campus Manager was changed to that of Campus Director.

The Deputy Vice-Chancellor: Resources and Operations, Prof. GP Mavende, unfortunately fell seriously ill in 2012. The Chief Financial Officer, Mrs Martine van der Merwe, was appointed as Acting DVC: Resources and Operations after Prof. Mavende tendered his resignation from his position in August 2013. Prof. Neil Garrod was appointed by Council in November 2013 as the new DVC: Resources and Operations. He is due to commence duties at the beginning of the second guarter of 2014.

#### **Financial Sustainability**

In an effort to promote accountability among budget holders dents who have left CUT. Progress has been made towards and to strengthen the linkage between planning and budgeting, a Resources Allocation Model (RAM) was developed in which has been a source of concern for many years. CUT 2012/13, and is ready for implementation within the academic faculties in 2014. Furthermore, executive managers the buy-out offer of 60% of total service. These amounts and senior managers now control their budgets fully without were paid out into their current pension funds in November undue interference from the Finance Section, as was the 2013. Acceptance of this settlement translated into a R13. case in the past, thus creating greater accountability across the system. In 2013, the university allocated R105.773 million in strategic funds, which were utilised for the implementation of the strategic priorities emanating from Vision 2020 by the Exco of Council for the DHET infrastructure projects, and its strategic plans.

Financial aid totalling R231.778 million was awarded to students in 2013, an amount made up of CUT funds, NSFAS sions, and implementation glitches that exist are being adgrants, and externally funded bursaries and scholarships. Strategies have been put in place to recover debt, including ministrative burden of supply chain management; enhance internal strategies for students who are still in the system, and the use of debt-collecting agencies/attorneys for stu- acquisition process.

the reduction of the post-retirement medical aid liability, negotiated with in-house employees, of which 69% accepted 2million saving on the liability as at 31 December 2013. With regards to procurement management, a special procurement policy and procedures were adapted and approved which assisted in the fast-tracking of these projects. The e-Procurement system has been fully rolled out to all dividressed. It is envisaged that this system will ease the adbudgetary and approval controls; and speed up the general

CUT has received unqualified audits every year for the past 10 years, meaning that its financial position and performance have not only met the requirements of the Higher Education Act, but have also been in accordance with the International financial reporting standards.

#### HUMAN RESOURCES

An exercise of strategically aligning the Human Resources section has been conducted by an external consultant. The final report on the Human Resources Turnaround Strategy was submitted at the end of November 2013. One of CUT's strategic priorities is the attraction, retention and development of talent. The talent management policy and the recruitment policy and procedure will be finalised in 2014.

The exercise of enhancing the performance management system to ensure that key priorities are cascaded and aligned. and to ensure that individuals' performance throughout CUT is measured against the overarching goals of the institution, has gained momentum. Consultations with various stakeholders with regard to the institutional scorecard are being finalised, and will be implemented in 2014. In this way, individual performance will be in sync with that of the institution.

### CONTROL MEASURES, GOVERNANCE REVIEWS AND INTERNAL AUDIT

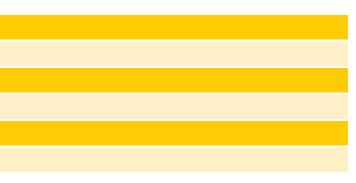
CUT maintains a system of internal control over financial reporting and the safeguarding of assets against unauthorised acquisition, use or disposal. Such systems are designed to provide reasonable assurance to CUT, the Audit and Risk Committee and Council regarding an operational environment that promotes the safeguarding of assets and the preparation and communication of reliable financial and other information

These include documented organisational structures policies and procedures, including a code of ethics that are communicated throughout CUT to foster a strong ethical climate and the careful selection, training and development of its staff. Internal auditing monitors the operation of the internal control systems in terms of an approved internal audit plan, and reports findings and recommendations to management and the Audit and Risk Committee. Corrective actions are taken to address control deficiencies and other opportunities for improving the systems when identified. Council, operating through its Audit and Risk Committee, oversees the financial reporting process. Internal audit projects that were concluded by the end of 2013, as well as those still in progress, are reflected in the table below:

Human Resources
Corporate Governance
Assets Management
Procurement process reviews
Income process reviews
Marketing Strategy

#### **INTERNAL AUDIT PROJECTS**

According to management 68% of the above findings reported on in 2013 have been cleared, 32% of the findings are in the process of being implemented, although significant progress has been made, these findings have not been completely resolved.



### **INFORMATION AND COMMUNICATIONS TECHNOLOGIES (ICT)**

For purposes of information management, CUT has implemented the Higher Education Data Analyser (HEDA) system, which makes use of data sourced from the Higher Education Management Information System (HEMIS) for submission to the DHET. In addition, CUT uses Oracle Discoverer, which draws operational data from the ITS database. The reports generated from these systems are used for planning, monitoring and decision-making across CUT.

During the past few years, CUT has also made use of the ordinary HEMIS sub-system on the ITS system for statutory reporting on various aspects of the core business and other non-academic support functions. Statistical reports and information on the institution's performance in relation to its targets are published periodically in the Enrolment Monitor, Size and Shape Monitor and the Student Performance Monitor. These, together with other reports produced from time to time, allow the university to monitor and manage its enrolment process, its size and shape plans, its student performance and the overall performance of the university.

### **RISK MANAGEMENT**

Council has committed CUT to a process of risk management that is aligned to the principles of the King III Report and the Higher Education Act (Act 101 of 1997).

The Audit and Risk Committee, as a sub-committee of Council, is specifically responsible for the system of risk management, and thus reviews the risk reports of the university, reporting to Council on key risks facing the university and associated risk mitigation responses. The Constitution of the Committee has been revised to incorporate all risk-related issues, and as such Council approved the renaming of the Audit Committee to the Audit and Risk Committee towards the end of 2012. Management is accountable to Council for designing, implementing and monitoring the process of risk management, and integrating it into the day-to-day activities of the university. Management structures continue to be developed to focus on certain key activities within the university.

Risk monitoring includes processes such as:

- Strategic risk workshops, where risks are monitored and adjusted to the unique circumstances of the university;
- Registers declaring financial interests and gifts;
- Internal audit reviews;
- Compliance reviews; and
- Senior management reviews on work performed in accordance with policies and procedures.

**Risk assessment:** University management conducted a strategic risk assessment workshop in October 2013, which was facilitated by the external auditors of the university. Following the strategic risk workshop, an updated Strategic Risk Register was compiled. The management of the risks identified at the strategic workshop is currently being integrated into the day-to-day activities of the university.

**Fraud risk management:** Employees and others have access to a whistle-blowing facility (Ethics Hotline) to anonymously report unethical and risky behaviour. Any dishonesty, when detected, is taken seriously and addressed on an on-going basis. The major incident in this regard in 2013 involved allegations of fraud involving student loans and bursaries; and a forensic investigation into the allegations.

**Examples of risk categories:** Management is continuously developing and enhancing its risk and control procedures to improve the mechanisms for identifying and monitoring risks. Examples of the risks faced by the university include:

- Proper handling of machinery and hand-held tools;
- Training in the use of such equipment; and
- Risks as per the Risk Assessment and Emergency Manual.

**Institutional risks:** Reputational risks which is in the process of being addressed. Financial sustainability/stability, all overtime worked due to staff shortages was within the budget allocation.

**Business continuity planning:** Increasing security personnel with the recruitment of new staff; security training of existing staff; installation of integrated CCTV cameras; continuous performance evaluation of CUT security personnel and outsourced security officers; and the installation of time attendance devices to control absenteeism and incidents of staff members arriving late, leaving early and deserting their posts.

#### ACADEMIC ADMINISTRATION

As another element of the STEPS process, CUT has established a strategy for more effective and efficient academic management in view of better delivery of the product. A by-product of the STEPS process is the streamlining of the academic structure to a two-tier layer of deans and heads of department, from a previous four-tier structure.

Progress was made in the phase implementation of online registration. By the end of 2012, systems were in place for all first-year students to register online in 2013. Provision was also made for senior students who have passed all prerequisite subjects to register online in 2013. For 2014, all CUT students are required to register online, both on and off campus.

The announcement of the HEQF in 2007 compelled all higher education institutions to align their qualifications, with UoTs having been particularly affected. Since 2009, UoTs have been in a state of transition, re-curriculating their old Section 151 qualifications (national diplomas and BTechs), and in some cases developing completely new qualifications. The following curriculum development activities took place in 2013:

All CUT programmes were categorised into Category A, B or C according to the requirements of CHE.



As part of the STEPS process, the following nine qualifications were submitted to the DHET, and all were cleared for submission to CHE	In addition, the following qualifica- tions have since been submitted to CHE for the initial phase of the ac- creditation process	The following Category B qualifica- tions of the Faculty of Management Sciences and the School of Civil En- gineering and Built Environment re- spectively were re-curriculated and approved by Senate
Higher Certificate in Community De- velopment Work	Diploma in Dental Assisting	Diploma in Internal Auditing
Diploma in Design and Studio Art	Bachelor of Radiography in Diagnostics	Diploma in Public Management
Advanced Diploma in Agricultural Extension	Higher Certificate in Renewable Energy Technologies	Diploma in Financial Information Systems
Advanced Diploma in Health Management	Diploma in Design and Studio Art	Diploma in Human Resources Management
Advanced Diploma in Logistics and Transportation Management	Higher Certificate in Community De- velopment Work	Diploma in Office Management and Technology
Bachelor of Sciences in Hydrology and Water Management		Diploma in Marketing
Higher Certificate: Renewable Energy Technologies		Diploma in Hospitality Management
Diploma in Sustainable Energy Advising		Diploma in Tourism Management
Bachelor of Education: Senior Phase and FET Teaching		National Certificate in Information Technology

A core curriculum, aimed at preparing CUT students to adequately cope with their courses upon entry into the university and for the world of work, was developed as part of the STEPS process. Learning materials for the four core curriculum modules were developed, piloted on both the Bloemfontein and Welkom campuses respectively, circulated across CUT for quality assurance, and finally presented to all the deans, the Deputy Vice-Chancellor: Academic and Research, the programme directors, and academic staff.

The Extended Curriculum: proposals for 14 programmes were developed and submitted to the DHET for approval and funding – all of which were successful.

## **INSTITUTIONAL OPERATIONAL PLAN 2013**

The goals and objectives that the executive team and divisions have set for themselves are contained in the quarterly Institutional Operational Plan (IOP) Report that the Vice-Chancellor submits to Council.

The year 2013 represents the end of the 1st phase (2010 to 2013) of the university's implementation plan of Vision 2020, a phase during which the focus was on 'building a strong foundation' for CUT as an emerging university. A number of achievements were realised during this period (more detail on the achievements is available in the Strategic Set above). According to the university's Strategic Plan, the focus of the next phase (2014 to 2020) is to advance the academic project of the university. Efforts in this phase will be on consolidating and embedding the foundations we have laid, ensuring that university programmes are not only characterised by relevance, excellence and quality, but are also demand-driven and user-oriented.

The University plans to double its efforts to increase research and innovation outputs and ensure their desired impact on the broader society.

## COUNCIL AND SENATE

he University Council is the highest decision-making body at Central University of Technology, Free State and consists of thirty members. Sixty percent (60%) of the members are external members, and have the knowledge and experience relevant to the objectives and governance of CUT.

The very nature of any university's business is long-term. While there is a need for short- to medium-term development gains, these opportunities must not redefine the university's longer-term goals of developing human and intellectual capital, and deploying these in the interest of socio-economic development within a very competitive global economic context. As the transformation position paper stresses, the transformation of the university is a long-term goal, with its engage-



Building on the notions of the role of a university of technology, CUT has begun to implement Vision 2020, which has five key principles:

- As a technological university, innovation is essential to the Vision 2020. We therefore see social and technological innovation as the focus of the academic, skills development and research programmes.
- Measuring the result of the work is also fundamental to the vision. We at CUT are not focused on quantity and generalities. but on measurable performance: outcomes and impact, subject to systematic and robust monitoring and evaluation,
- Socio-economic development and entrepreneurship are at the heart of everything we do. CUT's endeavours in knowledge production and human capital development have to be relevant and aligned to the agenda of improving the standard of living in the province; the central region of the country and South Africa as a whole. In a nutshell, the vision as an engaged university guides and grounds us into partnering with business, government and the broader society - the golden thread that binds public policy; innovation and the commercialisation of scientific and technological ideas to ensure greater prosperity.
- The geographical location and the local and regional comparative advantage also matter. The location should reflect and shape CUT's agenda and priorities, as we exist primarily to address the needs of the communities, the province, region and country. Primarily, local and regional development should be the epicentre of the revolution.
- Finally, quality and excellence are the glue that holds everything together. CUT has to strive to, and thrive in, providing the best services in education and training, research, innovation and entrepreneurship development.

During 2013, Council attended to and addressed a number of significant institutional matters, the most important of which were the following approval of policies, plans, constitutions and manuals:

- Policy on the review of contracts of executives and senior managers: Institutional criteria and procedures;
- Institutional Operational Plan 2013:
- Policy on higher education studies for employees and their dependants;
- Admissions policy 2014;
- Policy on sabbatical leave;
- Internationalisation Strategy;
- Enrolment Planning for 2014/25 2019-2020;
- Regulations on the implementation of the Bill of Rights at CUT;
- Sustainability Framework;
- · Policy on sustainable development commitment; and
- Policy on the promotion of academic staff

The under-mentioned committees were approved by Council to execute the above authority. As 2013 commenced, all committees were operating under the revised constitutions that were aligned with King III.

#### Standing committees of Council

• The Executive Committee (Exco) of Council addresses urgent matters between Council meetings, and issues referred to it by Council or its standing committees. Chaired by ClIr Dr SM Seane, the Exco of Council addressed matters such as the Institutional Operational Plan 2013; the Strategic Budget 2013; the election of new members to Council; the term of

office of the Chancellor/the election of a new Chancellor; the reconstitution of the Convocation; the Commission of Inquiry; amendments to the Higher Education Act; the DHET 3-300 infrastructure projects and matters resulting from that; as well as other matters referred by Council for finalisation.

- The Remuneration Committee of Council, which attends to remuneration issues specifically mandated by Council, was chaired by Cllr Dr SM Seane, and met once in 2013 to discuss the market-relatedness of executives' remuneration. The benchmarking of the market-relatedness of executives' salaries had not been concluded by the end of the year.
- The Audit and Risk Committee of Council reviews the annual financial reporting process; the system of internal control and management of financial risks; the audit process; and CUT's process for monitoring compliance with laws and regulations. The committee was chaired by Cllr Prof. B Setai in 2013. Specific matters attended to include the top-priority strategic risks of CUT; the approval of the Annual Financial Statements 2012; the review of the whistle-blowing policy (the policy and procedure regulating fraud, corruption, mismanagement and other dishonest activities); internal assurance providers/review of the institution's finance function by the Audit and Risk Committee; the implications of King III; and the Risk Assessment Report of PricewaterhouseCoopers (PwC).
- The Finance Committee of Council governs the planning, financial and resources affairs of CUT. It considers and recommends to Council corporate strategic plans; finance and resource governance; as well as the annual budget. It also monitors performance in relation to the approved budget, and ensures the financial health of the institution as an on-going concern. The Finance Committee is delegated to approve the following: Finances with regard to new positions on the permanent staff establishment; loans and overdraft agreements; the creation of foundations/trusts and other legal entities; the construction of permanent buildings; the purchasing and long-term lease of fixed property.

The Finance Committee was chaired by Cllr T Loate; specific issues attended to during 2013 included a review of the procurement policy; the implementation plan on the e-procurement process; medical pre-funding; the increase in municipal costs; progress on the Institutional Operational Plan for 2013; the DHET infrastructure projects; the Campus Master Plan; the report on the five-year projection; the Commercial Services & Enterprises Trust (CSET); Annual Financial Statements 2012; the CUT Annual Report 2012; the Sustainability Framework; the mandate for salary negotiations 2014 - 2016; and security measures on campus.

- The Investment Committee of Council reviews the investment performance of CUT on a guarterly basis to determine the continued feasibility of achieving the investment objectives set out in CUT's investment policy. It should ensure the maintenance of a financially sound investment structure, as well as sufficient reserves to meet the strategic objectives of the institution. The committee, chaired by Cllr R van Biljon.
- The Human Resources Committee of Council recommends to the CUT Council appropriate strategic directions and priorities in human resources governance, e.g. performance management, conditions of service and employee relations. The committee, which has full delegated power to approve new positions on the permanent staff establishment of the institution, was chaired by Cllr MM Mohohlo in 2013. The Committee attended to matters such as the implementation of the institutional performance management system (IPerMS); medical pre-funding/post-retirement medical aid liability; the policy on higher education studies for employees and their dependants; staff movements and absenteeism; the recruitment of a Registrar; the matter related to the chairing function of the Selection Committee; the recruitment of a Deputy Vice-Chancellor: Resources and Operations; the implementation of the Bill of Rights; parameters for settlements with employees; the grievance policy and procedure; the policy on the promotion of academic staff.

### CHALLENGES OF GOVERNANCE AND MANAGEMENT AT CUT

#### With respect to governance challenges, the following occurred in 2013:

#### The De Bruin Commission of Enquiry

After the 13 August 2012 judgment by Judge Daffue against the Minister of Education, the Minister lodged an appeal. However, the appeal was withdrawn in May 2013.

At its meeting of November 2012, Council appointed Adv. JP de Bruin, Senior Counsel (SC), to investigate various allegations on which Judge Johann Daffue did not have much information and evidence, and that he had recommended to Council in his judgment for further investigation. The terms of reference for this investigation were very broad and included all the matters referred to Council by Judge Daffue, as well as all other new matters related to those. The allegations included the following:

Maladministration, financial mismanagement, misuse of public funds, violation of human rights and labour laws, violation of CUT's policies and procedures, a culture of intimidation, fear and victimisation, and nepotism.

Adv. De Bruin invited all previous complainants to come forward to share their complaints - also with regard to specific CUT staff members. He also advertised the call for information in the regional newspapers. The investigation was completed in May 2013, and submitted to Council on 31 May 2013. Council accepted the findings and recommendations at its meeting of 7 June 2013. In short, Adv. De Bruin found no basis for the allegations that Judge Daffue had referred to Council or for those that had emerged as part of the broader terms of reference.

#### **Council composition**

Having a full Council complement is critical for good governance. Some members of Council did not attend meetings on a regular basis, as stipulated in the CUT Statute. The following Council members did not meet this requirement: Mr W Zama, Mr Z Fihlani, Ms F Bockman and Mr M Maleka.

After receiving correspondence from the Council Chairperson, reminding the Councillors of their obligations and the consequences of non-compliance with Council regulations, Mr WW Zama and Mr M Maleka had tendered their resignations

Neither Ms E Rockman nor Mr ZL Fihlani had replied to the letters sent to them regarding their absenteeism from Council. Their membership was considered automatically terminated, since they had failed to respond within seven working days. The vacancies that resulted from these terminations and resignations placed pressure on the remaining Council members who had to participate in more than one committee of Council.





#### Senate

Senate, as a statutory body, made an important contribution to the positioning of the Central University of Technology, Free State aligned with Vision 2020 as a leading 21st-century university of technology.

Contributions by the various committees of Senate, namely leadership and focused and relevant academic programmes the Executive Committee of Senate; the four faculty board with high impact, as well as by approaching the core accommittees; the University Academic Appointments and tivities on a multidisciplinary and intradisciplinary basis, so Promotions Committee; the University Academic Planning that, during the past year, we were able to take giant strides and Quality Committee; the University Engagement Commit- forward as far as the academic project was concerned. Mattee; the University Research and Innovation Committee; and ters that received attention in Senate meetings included the the University Teaching and Learning Committee, were disrecommendation of a number of new academic programmes cussed at the four regular Senate meetings during the year, for approval by Council; the recommendation of a number of with specific recommendations to Council. policies to Council; changes to the academic structure; and the discussion of teaching, research and community activities that are related to the academic project.

Senate focused on the challenge of maintaining the university's academic excellence by providing excellent academic

The following were approved by Senate and, in terms of policies, recommended to Council for approval in 2013:

- Policy on sabbatical leave
- Policy on Vice-Chancellor's awards
- Admissions policy 2014
- Student Assessment Manual 2014
- CUT Internationalisation Strategy
- Revised Senate standing committees and their supporting structures
- CUT STEM Strategy
- CUT Enrolment Plan 2014/15 2019/2020
- Bevised Senate section of the CUT Statute
- Guidelines for open-book assessments
- Phasing-out plan for learning programmes offered at the Kimberley learning site
- Quality improvement plans for faculties
- Reports by faculties, Senate committees and sub-committees
- Public lectures
- Academic appointments and promotions
- CUT core curriculum
- CUT graduate attributes

Senate approved the proposed qualifications to be offered at Welkom campus from 2014 to 2020, subject to the feasibility of the programmes. In addition, the business plans for the programme Master's of Life Sciences and the BSc in Environmental Health were approved. Senate noted the approval of the Bachelor's Degree in Radiography: the Higher Certificate in Renewable Energy Technology; the Advanced Diploma in Agriculture Extension; and the Diploma in Design and Art to be offered at CUT as from 2014.

### **CHANGES IN ACADEMIC STRUCTURES**

The "STEPS Close-out and Recommendations Documents – Part V: The Organisational Design of New Academic Management Structures" addresses the strategic transformation of the academic management structure, and the corresponding roles and associated responsibilities required to drive Vision 2020 forward in general, as well as the range of STEPS outcomes and recommendations in particular. This means that, instead of having deans; directors and programme heads as part of the formal structure, CUT will have only deans and heads of department. Senate and Council approved the generic two-tier structure for faculties, for implementation on 1 January 2014. A number of changes were approved during 2013, and the final approved academic departments were as follows:

Faculty of Engineering and	Faculty of Health and	Faculty of Management	Faculty of Humanities
Information Technology	Environmental Sciences	Sciences	
<ul> <li>Department of Civil Engineering</li> <li>Department of Built Environment</li> <li>Department of Electrical, Electronic and Computer Engineering</li> <li>Department of Informa- tion Technology</li> <li>Department of Mechanical and Mechatronic Engineering</li> <li>Department of Mathematical and Physical Sciences</li> <li>Department of Health Sciences</li> </ul>	<ul> <li>Department of Clinical Sciences</li> <li>Department of Agriculture</li> <li>Department of Life Sciences</li> </ul>	<ul> <li>Department of Business Management</li> <li>Department of Business Support Studies</li> <li>Department of Accounting and Auditing</li> <li>Department of Govern- ment Management</li> <li>Department of Tourism and Events Management</li> <li>Department of Hospitality Management (to be known as the Hotel School)</li> </ul>	<ul> <li>Department of Postgraduate Studies: Education</li> <li>Department of Educational and Professional Studies</li> <li>Department of Design and Studio Art</li> <li>Department of Communication Sciences</li> <li>Department of Mathematics, Science and Technology Education</li> <li>Department of Language and Social Sciences Education</li> </ul>

### STRATEGIES TO ADDRESS THE FACULTIES' EMPLOYMENT EQUITY PROFILE

The faculties mainly employ the following two strategies to address their employment equity profile (mainly equity in academia):

A "grow-your-own-timber" approach, whereby staff members develop their own developmental plans to facilitate their attainment of higher qualifications and to address areas lacking in skills or knowledge. The faculties support the staff in their quest to successfully follow the development plan, thus allowing them to be promoted to lecturer/senior lecturer/associate professor or professor. The Stars of Academe and Research (SoAR) project is an example in this regard. It aims to identify top performers in teaching and research, and to develop them to be employed by CUT. Emphasis is placed on equity and excellence in this regard.

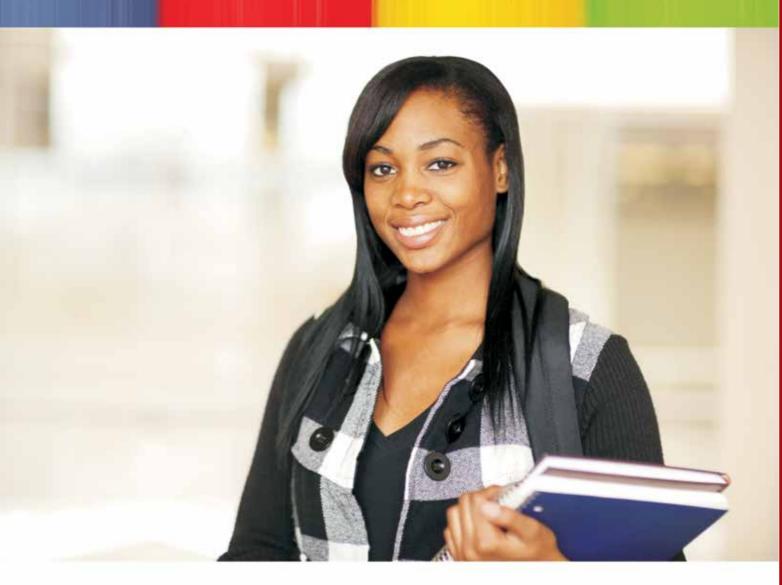
The recruitment plan for vacant positions allows for recruitment as widely as possible and, in the case of scarce skills, would also include head-hunting. As part of the procedure, once suitable candidates have been selected, the equity profile of the appropriate faculty (per programme and department) is considered.

Permanent instructional/research staff profile by population

Staff			African		С	oloured			Indian			White	
Headcount	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Permanent Total
2013	26	91	117	7	З	10	2	6	8	81	75	156	291
2012	23	78	101	5	3	8	2	5	7	78	80	158	274

No provisionally approved departments.

In addition, a number of positions for department managers as secondary appointments were approved by Senate and Council.



## THINKING BEYOND

## ACADEMIC PROJECT

## ACADEMIC PROJECT

### ACADEMIC PARTNERSHIPS

realisation of the strategic thrusts of the institution. The year 2013 represents the end of the 1st phase (2010 to 2013) of the university's implementation plan of Vision 2020, a phase during which the focus was on 'building a strong foundation' for CUT as an emerging university. A number of achievements were realised during this period. According to the university's Strategic Plan, the focus of the next phase (2014 to 2020) is to advance the academic project of the university. The efforts in this phase will be on consolidating and embedding the foundations we have laid, ensuring that the programmes are not only characterised by relevance, excellence and quality, but are also demand-driven and user-oriented. We will also double the efforts to in-

UT's annual academic planning remains focused on the crease the research and innovation outputs, while ensuring that these respond to the needs of the region and have the desired impact on the broader society.

> CUT remains committed to its core activities of teach and learning, research and community engagement as well as the pursuit of excellence within and across these core activities. Consequently, the university strives for continued enhancement of partnerships and co-operation agreements with government, business and industry.

> A venture undertaken to co-operate with industry and to promote access with success was the linking of curricula with industry through the involvement of relevant stakeholders

One of CUT's institutional objectives for 2013 was to pursue strategic partnerships, and a number of faculty-related events took place in this area of activity. The following highlights are some of the key partnerships, co-operation agreements and links to industry, as well as success stories for faculties:

#### Achievements - Faculty of Engineering and Information Technology

- Twenty-five (25) articles were published in accredited journals.
- Seven (7) articles were published in non-subsidised journals.
- Forty-eight (48) conference papers were presented nationally and internationally.
- One (1) poster was presented nationally and internationally.
- 48% of papers read at conferences were published.
- Fifteen (15) staff members served as peer reviewers for national and international journals.
- Four (4) staff members served on the editorial boards of national and international journals.
- The Department of Built Environment successfully organised and hosted the Sustainable Building (SB13) Southern African Conference at the Cape Town International Convention Centre, Cape Town, South Africa, from 15 to 16 October 2013.
- A team of four students from CUT won the 2012 Siemens Cyber Junkyard Competition, aimed at developing cutting-edge innovative engineering designs. The awards ceremony was held at the Misty Hills Country Hotel in Muldersdrift on 16 October 2013.
- Two teams of seven students each manufactured and raced their Baja vehicles during the 2013 Society of Automotive



Engineers (SAE) Annual Sasol Mini Baja Competition held during October 2013. Vehicles were subjected to several tests during the competition, including static judgment, manoeuvrability, hill-climbing, skit-pull and endurance racing. The CUT team secured an overall sixth position.

#### Awards / Donations

A total of R3 090 117 was made available by the National Research Foundation (NRF), the Water Research Commission and the Technology Innovation Agency (TIA) to researchers in the faculty.

- The Faculty hosted the Annual Provincial National Science, Engineering and Technology (SET) Week during August 2013. All four faculties participated in the event, which was attended by 1 460 learners and 30 educators.
- The Telkom Foundation extended their sponsorship for the EMDP for another two years to the value of R4.45 million. Three new primary schools were identified to participate in the project, namely Heide Primary School, Monyatsi Primary School and Karabello Primary School.
- The Department of Information Technology has a collaborative relationship with the Johannesburg Centre for Software Engineering (JCSE), and two of its staff members were being trained to become TSP/PSP instructors. The department also serves as the regional hub of the Cisco Academy; is a member of HEICTA and the Computer Society of South Africa; and established the IT Hub in Welkom in collaboration with the Free State Provincial Government and JCSE.
- The Department of Mechanical and Mechatronics Engineering has collaborative agreements with SA Truck Bodies; Transnet; the Free State Department of Economic Development, Tourism and Environmental Affairs; the Technology Innovation Agency; the Free State Development Corporation; the University of Pretoria; the CSIR; the University of Johannesburg; the IDC; the National Aerospace Centre in Johannesburg; and AMTS.
- The Department of Electrical, Electronic and Computer Engineering has a research collaborative agreement with the University of Stellenbosch, as well as a sound relationship with the Hochschule Ulm in Germany, and is busy strengthening relations with Mittweida, Aalen and Chemnitz Universities in Germany. A BTech student from the department attended Mittweida University for three months, from September 2013 to December 2013. The department also worked on a research project in collaboration with Stellenbosch University.
- The Department of Information Technology is a member of ACM; the Euro Africa Cooperation Forum on ICT Research; and Science Technology and Innovation for the Development of Africa.



Experiential training leads to CUT students joining the South African Navy. The four Electrical Engineering students who are in the SA Navy, training and completing their National Diploma at CUT before they were deployed onto warships, strike crafts, or submarines. From left: Midshipman SD Mayekiso, Midshipman BM Miezu. Midshipman SP Sehloho, and Midshipman TJ Moloi proudly saluting campus in front of the BHP Billiton Building, CUT's Engineering hub.



CUT ANNUAL REPORT 142



CUT Develops Solar-powered Charging Stations for Students - the project represents one of the many ways CUT is committed the drive towards a greener future.

#### Achievements - Faculty of Health and Environmental Sciences

- Twenty-seven (27) articles were published in accredited journals.
- Four (4) articles were published in non-subsidised journals.
- Thirty-four (34) conference papers were presented nationally and internationally.
- Nine (9) posters were presented nationally and internationally.
- Twenty one (21) staff members served on the editorial boards of national and international journals.
- Nineteen (19) staff members served as internal and external assessors and moderators.

#### Awards / Donations

A total of R1 952 950 in grants from the NRF and CUT was awarded to researchers in the faculty for the academic year 2013.

#### Significant highlights

- The Faculty of Health and Environmental Sciences and the Faculty of Engineering and Information Technology initiated collaboration towards the promotion of MIT research at CUT.
- The School of Health Technology had a collaborative relationship with the UFS's Department of Cardiothoracic Surgery. and one staff member spent every Wednesday at UFS.
- The School of Agriculture and Environmental Sciences has a collaborative relationship with the UFS's Department of Chemistry.
- The programme Emergency Medical Care initiated collaboration between the Faculty and the Northern Cape College of Emergency Care and the Free State College of Emergency Care in view of possible MoUs.
- The Clinical Technology Programme initiated collaboration with the UFS's Department of Cardiothoracic Surgery; the Herzzentrum Universitaet Leipzig in Germany; and the University of Oslo in Norway, and seven prospective research projects, involving two staff members, were identified.
- Prof. Joyce MacKinnon, Associate Dean and Professor from the School of Health and Rehabilitation Sciences at Indiana University in the USA, was a visiting professor at the Faculty of Health and Environmental Sciences from 17 to 25 September 2012.



CUT's geneticist, Prof. Annabel Fossey, and agricultural expert Prof. Dennis Umesiobi was inaugurated early in 2013.



Prof. Linda de Jager Dean: Faculty of Health and **Environmental Sciences** 

### Awards / Donations

- Financial support of R25.9 million was provided by the Funza Lushaka Bursary Scheme to Teacher Education students.
- A total of R135 000 was awarded by the NRF to researchers in the faculty.
- A total of R32 000 was awarded to the Department of Design and Studio Art for a block bursary from the National Arts Council of South Africa, which will be awarded to two students with financial difficulties who perform well.



#### Achievements - Faculty of Humanities

- Twenty (20) articles (12.33 publication units) were published in accredited journals.
- Thirty (30) papers were presented at national/international conferences.
- The undergraduate pass rate was 79.4% in 2013.
- Prof. DP Ngidi received a category C rating as a researcher from NRF, effective from 01 January 2014 to 31 December 2019.



Prof. David Ngidi

#### Achievements - Faculty of Management Sciences

- Twenty-four (24) papers were presented at national/international conferences.
- Fifteen (15) articles were published in accredited journals.
- Three (3) chapters were contributed to published books.
- Prof. AJ Geldenhuys: External member of the Institute of Municipal Finance Officers (IMFO) Research Committee; research fellow at UFS; member of the Oxford Round Table; member of the Editorial Council for Administratio Publica.
- On 15 May 2013, the Department of Internal Auditing and Financial Information Systems hosted the Business Ethics Project Awards function in conjunction with PwC. The project is now in its second year, and CUT is still the only university of technology in the country to offer this level of practical learning as part of its curriculum. The main purpose of the project is to raise awareness among accounting students of various unethical aspects occurring in both the public and private sectors.

#### Awards / Donations

- A total of R1 190 650 was awarded by NRF and CUT to researchers in the faculty.
- Protea Hotels awarded R110 000 in the form of sponsorships to the Hotel School.
- The Culture, Arts, Tourism, Hospitality and Sport Education and Training Authority (CATHSSETA) awarded R1 474 000 in the form of sponsorships to the Hotel School and the Department of Tourism and Event Management.

#### Significant highlights

- All the departments in the faculty have some or other form of cooperation with the University of the Free State. The Faculty also cooperates with the North West University, the South African College for Tourism, the Vaal University of Technology, the University of Zululand and the Private Hotel School.
- Various meetings were held with Flavius Mareka FET College to discuss a possible collaboration in offering the NHC Accounting qualification at their Kroonstad campus.
- The Department of Tourism and Event Management cooperates with the following universities as part of the Strongbow Capacity-building Project in Ethiopia: Vrije University of Amsterdam; Katholieke Universiteit of Leeuven; Jimma University; Addis Abbaba University; Hawassa University; Mizan-Tepi University; and Arba Minch University.
- · Prof. Ulrich Holzbaur of the Aalen University of Applied Sciences in Germany is a visiting professor of the faculty. The faculty has an active exchange agreement with Hogeschule Harz in Germany.



CUT students turn their back on unethical practices! Business Ethics Award winners from the Department of Accounting and Auditing were recognised for their presentations on ethics at the annual Business Ethics Awards function, which was presented in conjunction with PwC. CUT is still the only Technology University in the country to offer this level of practical learning as part of its curriculum.

Front row (from left to right): Audrey Kakora, Esther Pasmene, Joy Johnson, Patience Shata, Mugelane Witbooi and Simone Abrahams. Back row (from left to right): Schalk Maartens, Werner Landman (PwC), Leandi Lubbe (CUT), Riche van Wyk (PwC).

### ACADEMIC DEVELOPMENT AND SUPPORT

Academic Development and Support focuses on preparing staff - especially young and designated academics - to embrace new trends and innovations in teaching and learning (e.g. streamlining learner-centred approaches to teaching and learning). This enables the effective implementation of mixed modes of instructional delivery and learning by embedding technologies in teaching and learning. It also allows for an improved response to socio-economic needs, international/global, national and institutional change and transformation imperatives, as well as the effective design and implementation of innovative programmes that are not only aligned to the Higher Education Qualifications Framework (HEQF), but also pursue CUT's Vision 2020. This is achieved through four centres, namely Teaching and Learning, Work-Integrated Learning, Curriculum Development, and E-Learning and Educational Technology.

Significant progress has been achieved in the various areas of Academic Development and Support (ADS), which include:

- Supplemental Instruction (SI) is an academic assistance programme that aims to enhance student performance and retention. SI does not identify high-risk students, but rather identifies high-risk subjects. SI leaders are the kin-pin in the supporting process, and serve as role models for students in a specific subject. In 2013, 90 SI leaders were appointed and trained, while a total of 19 968 students attended SI sessions. Of these, 17 628 were first-year students, 1 624 were second-year students and 716 were third-year students.
- The Work-integrated Learning (WIL) and Skills Development Office plays an important role in negotiating • The role of the Careers Office is to equip students with placements with employers on behalf of students, and the necessary skills and competencies to successfully consequently monitoring their progress in the workplace. compete in the growing and highly competitive labour The office provides valuable information regarding work market, to connect them with employers in the different opportunities. A total of 4 004 students were registered sectors of the economy, and to reduce the unemployment for WIL in 2013 (see tables below).



Dean: Faculty of

Management Sciences

Prof. Mabokang Monnapula-Mapesela Faculty of Managemen



rate amongst CUT students. A total of 1 160 students attended the 41 career development training sessions that were presented by the Careers Officer during 2013, along with 264 individual appointments and 30 mock interviews. Not only final-year students are targeted, but also first-year students to encourage career development as early as their first year of study. A comprehensive students' CVs database is kept, and circulated daily to employers seeking to fill permanent or part-time positions. During 2013, a total of 475 CVs were sent to employers, 222 job opportunities were advertised on the notice-boards, and a total of 197 employers made use of the services.

### Faculty of Engineering and Information Technology

LEARNING PROGRAMME	TOTAL
National Diploma: Building	30
National Diploma: Engineering (Civil)	203
National Diploma: Engineering (Electrical and Computer Systems)	345
National Diploma: Engineering (Mechanical)	131
Total for faculty	709

### Faculty of Health and Environmental Sciences

LEARNING PROGRAMME	TOTAL
National Diploma: Agricultural Management	48
National Diploma: Biomedical Technology	22
National Diploma and BTech: Clinical Technology	41
National Certificate: Dental Assisting	63
National Diploma: Fire Technology	10
National Diploma: Emergency Medical Care	112
National Diploma: Environmental Health	129

National Diploma: Radiography
National Diploma: Somatology
Total for faculty
Faculty of Health and Environmental Sciences
LEARNING PROGRAMME
BEd (FET) Computer Science; Economic and Management S Technology and the Postgraduate Certificate in Education (P
Clothing

150
21
596

#### .

	TOTAL
ciences; Languages; Natural Sciences; GCE)	2 041
	7
	2 048



#### Faculty of Management Sciences

LEARNING PROGRAMME	TOTAL
National Diploma: Hospitality Management	80
National Diploma: Marketing	119
Certificate and National Diploma: Office Management and Technology	349
National Diploma: Sport Management	38
National Diploma: Tourism Management	38
BTech: Financial Information Systems	27
Total for faculty	651

## Access to selected courses and academic progress in different disciplines and study areas

CUT faces several challenges with regard to student access to the institution at large and into specific courses of study. Progression in different levels of study as well as in different disciplines also poses major challenges to the institution (see statistics in the tables below). Some of the challenges to access, and consequently to throughput and success, include the following:

- Under-preparedness of first-time entering students.
- Late applications and dependency on student walk-ins.
- Students enrolling in courses that are not their first choice.
- Capping of numbers in some programmes and a lack of space in others.
- High drop-out rate at first-year level.
- Low levels of academic language proficiency; and
- Limited laboratory space in some faculties.

#### **CESMD** - **CESM** category

CATEGORY	FTE	FUNDED CREDITS	SUCCESS RATE
BUS/MAN	2 131.276	1 579.89	74.1%
EDUCATION	1 889.781	1 497.38	79.2%
OTHER HUMANITIES	1 861.001	1 505.822	80.9%
STEM	4 080.680	3 034.345	74.4%
Grand total	9 962.738	7 617.437	76.5%

#### 2013 First-time entering cohort

	Cohort	Ν	%	Ν	%	Ν	%
2013	3 851	438	11.4%	664	63.6%	3 116	80.91%
Degrees	876	125	14.3%	121	68.4%	746	85.16%
Diplomas and certificates	2 532	43	1.70%	469	69.4%	746	85.16%
Doctoral	13	0	0.00%	1	28.0%	12	92.31%
Honours	82	29	35.40%	30	26.80%	51	62.20%
Master's	44	0	0.00%	2	93.2%	32	72.73%
Other postgraduate	304	241	79.3%	41	5.9%	258	84.87%

#### **CUT** academic support interventions

CUT embarked on various academic support programmes in order to mitigate the problems and challenges mentioned above including the following:

- Supplemental Instruction (SI) was made compulsory for all students who obtain less than 50% in any subject.
- The core curriculum for CUT was finalised for inclusion in all new and re-curriculated programmes. This core curriculum comprises of four modules, namely: Academic Literacy and Communication Studies, Digital Literacy, Numeracy, and Success Skills.
- An Extended Curriculum Programme (ECP) in Marketing was developed and submitted to the DHET for approval.
- R3.065 million and R72.000 DHET funds were received for ECP lecturer training and foundation provision.
- All extended programmes in the Faculties of Health and Environmental Sciences and Engineering and Information Technology were audited for accreditation purposes.
- A Student Mentorship Programme for all first-year students was implemented in the Faculty of Health and Environmental Sciences, the Faculty of Humanities and the Faculty of Engineering and Information Technology.
- An English Language Fellow from the USA was appointed for the period February 2013 to November 2013 to develop a new credit-bearing, subsidy-earning Academic Literacy Programme (ALP) (now called Academic Language Literacy and Communication Studies), and to lecture in the programme. This ALP was developed as part of the core curriculum.
- A survey of the quality of teaching and learning at first-year level was conducted, and intervention strategies were developed for faculties.
- The use of a state-of-the-art technologically interactive classroom (Smart Class) in Faculty of Management Sciences (Hotel School).
- Student advising and tutoring within the faculties.
- The formal mentorship programme for new academics. This was made part of IPerMS and probation to ensure commitment.
- Twenty-three (23) new academics enrolled for the formal mentorship programme.
- 26 academics enrolled for and completed two accredited modules (16 credits each), namely Teaching and Learning Facilitation and Assessment.
- New technologies (clicker technology) are applied during assessment in large classrooms.
- Workshops for academic staff and students: More than 730 academics attended training and development in various areas of teaching and learning; assessment; technology education; WIL; emotional intelligence; conflict management and academic writing, to mention a few.
- A CUT Teaching and Learning Plan/Strategy 2014 2020 was developed, approved by Senate and Council, and submitted to the DHET.
- Ten CUT graduate attributes, namely sustainable development; innovation and problem solving; community development; entrepreneurship; technological literacy; numeracy; effective communication; technical and conceptual competence; teamwork; and citizenship and global leadership were developed and approved by Senate for implementation in 2014. These will be promoted by inclusion in the curriculum and through extra-curricular and sporting activities. Coordinators of the Student Peer Mentorship Programme and heads of department are the custodians of the graduate attributes project.

- Funding for foundation programmes, teaching development grant and WIL:
  - A DHET Teaching Development Grant to the value of R18 562 000 was secured for the period 2012/2013 and 2013/2014 for various teaching-and-learning-related projects to enhance student and staff development and support. A proposal/application to the value of R42 653 000 for the period 2014/2015, 2015/2016 and 2016/2017 was submitted to the DHET during December 2013.
- Placement of 551 students for WIL during 2013, and negotiations of more than R19 million from participating employers in the form of "salaries" (stipends, wages, etc.) to students,
- An admission policy for FET NC (V) 4 Level; N3; N4; N5 and N6 was developed and launched to facilitate access and articulation pathways for students from the Further Education and Training (FET) sector.
- 500 online evaluations of academics and module content were conducted.
- A strategy for teaching large classes was developed.
- Promotion of excellence in teaching and learning through the Vice-Chancellor's Excellence Awards for the best lecturers.



#### Curriculum development and alignment with HEQSF requirements

As part of the STEPS process, the Centre for Curriculum Development was involved in the submission of the following gualifications to the DHET for clearance, all of which were ultimately cleared for submission to the Council on Higher Education (CHE):

- Higher Certificate in Community Development Work
- Diploma in Design and Studio Art
- Advanced Diploma in Agricultural Extension
- Advanced Diploma in Health Management
- Advanced Diploma in Logistics and Transportation Management
- Bachelor of Sciences in Hydrology and Water Management
- Higher Certificate in Renewable Energy Technologies
- Diploma in Sustainable Energy Advising
- Higher Certificate in Community Development Work
- BEd in Senior Phase (SP) and FET Teaching

In addition, the following qualifications have since been submitted to CHE for the initial phase of the accreditation process:

- Diploma in Dental Assisting
- BHS in Radiography
- Higher Certificate in Renewable Energy Technologies
- Diploma in Design and Studio Art (received accreditation status)
- Higher Certificate in Community Development Work

With effect from O1 January 2014, the following programmes will be offered to first-year students:

- Diploma in Design Studio Art
- Higher Certificate in Renewable Energy Technologies
- Advanced Diploma in Agriculture Extension
- Bachelor's degree in Radiography (diagnostics)

The following category B gualifications were re-curriculated using the CUT re-curriculation framework and the CHE category B questions template. Written feedback was provided to HODs and programme owners in the Faculty of Management Sciences:

- Diploma in Internal Auditing
- Diploma in Public Management
- Diploma in Financial Information Systems
- Diploma in Human Resources Management
- Diploma in Office Management and Technology
- Diploma in Marketing
- Diploma in Hospitality Management
- Diploma in Tourism Management

#### e-Learning

The following accomplishments, aimed at promoting educational technology and e-learning at CUT during 2013, deserve to be mentioned:

- Completion of an Active Learning Centre/SMART Classroom: An Active Learning Centre (Smart Classroom) the first of its kind in SA universities - was established in the Hotel School of the Faculty of Management Sciences. This class allows lecturers and students to actively engage with one another using the latest educational technologies.
- . The complete student database was imported into eThuto (Blackboard), and students were activated for its use. A total of 896 courses were actively accessed, which constitutes an increase from 57% to 76%.



#### **COMMUNITY ENGAGEMENT**

The need to obtain a specific profile and the foci area of the community engagement (CE) projects resulted in CUT revising its CE template. As a result, the CE Model has been transformed into a comprehensive developmental model. The model has the following focus areas: Eradicating poverty and related conditions; promoting human dignity and health; increasing social capacity; development; education; and balancing a sustainable environment with a competitive industry. In 2013, there were 26 projects.

#### **Developmental workshops**

The Community Engagement Unit organised a number of workshops to strengthen the university's understanding of community engagement. The unit invited Dr John Boughey to facilitate two workshops at the Bloemfontein campus as part of staff development in teaching and learning, research, and community engagement. The first workshop was held in February 2013 and the second one in April 2013. The topics were "Community-focused Teaching & Researching in Higher Education" and "Re-Visioning the three pillars of Teaching, Research and Community Engagement in Higher Education: from Pillars to People". A successful public lecture was held on O6 March 2013 by Dr Glenda Kruss of the

Human Sciences Research Council (HSRC). A video link with HSRC Durban, Cape Town and Pretoria enabled further participation from other universities. The topic was "Academic Interaction with External Social Partners: Investigating the Contribution of Universities to Economic and Social Development". In October 2013, a public colloquium was held on the National Development Plan. Fellow university community engagement managers; members of the South African Higher Education Community Engagement Forum (SAHECEF); fellow colleagues; FS legislature members; and members of the public attended this colloquium.



SAHECEF (South African Higher Education Community Engagement Forum The university participates and collaborates in SAHECEF projects on a regular basis. CUT hosted SAHECEF for its 2013 second board meeting and a public colloquium on 17 and 18 October 2013. Throwing their weight into the boat was from left: Prof. Laetus Lategan, Dean of Research and Development at CUT; Ms Jeeva Munsamy, Manager: Community Engagement; quest speaker Commissioner Pascal Moloi is the Managing Director of the Resolve Group; Dr Darren Lortan, Chair of SAHECEF; and Ms Percy Moleke, Secretariat: National Planning Commission.



## **Research Development and Innovation**

Prof. Laetus Lategan Research and Innovation

The Unit for Research and Innovation supports the vision through the creation and implementation of new knowledge.

CUT's Research and Development Strategy (2011 to 2014) emphasises four key goals:

- The development of a sustained, relevant and responsive research culture.
- The qualitative and quantitative improvement of research outputs.
- Socio-economic development through transfer and innovation.
- The development of strategic research and innovation partners and programmes.

Based on these four key goals, the following challenges were identified for research and innovation during the period 2011 to 2013:

- Translating Vision 2020 to the research and innovation activities of the university (emphasis on research, innovation, outcome, impact, socio-economic development and sustainable development).
- Integrating research, teaching and engagement.
- Growing research participation, outputs and the funding basis (based on the research clusters).
- Growing university and triple-helix partnerships.
- Transfer and innovation activities.
- The internationalisation of research.
- Growing the next generation of researchers.



An annual seminar entrenched the love of research with new academic staff and invigorated staff members with new ideas to do their research – the basics of science writing was explored.

### BASIS FOR RESEARCH PARTICIPATION AND PRODUCTIVITY

In acknowledging the research cycle and the execution of the research assignment as core university value, the following categories for research participation and productivity are identified:

- Study towards highest qualification in field of study.
- Participation in research training;
- Publication writing;
- Conference presentations;
- Postgraduate supervision;
- Research grants;
- · Professional research engagement (editorial boards, review panels, assessment panels, etc.); and
- Transfer and innovation.

These categories concentrate on (i) research skills development and (ii) creating an enabling research environment. The outcomes will now be integrated into four leading principles articulated in Vision 2020. These principles are sustainable development; socio-economic development; input leading to outcomes; and outcomes leading to impact. The following research clusters, programmes and foci serve as platform for the research and innovation activities.

#### **Research clusters and programmes**

The University Research and Innovation Committee identified 15 strategic STEM research programmes (2011 to 2013) to facilitate research and innovation. Benchmarks for strategic research programmes are the number of postgraduate students enrolled and graduated; the number of post-doctoral fellows; the amount of external funding awarded to the programme; the number of active researchers; the number of rated researchers; the number of research publications (books, articles, published conference proceedings and reports); and commercial work. These programmes were integrated into three research clusters.

CLUSTER	PROGRAMMES
Industrial design, communication and development	<ul> <li>New Product Development and Design</li> <li>Evolvable Manufacturing, Automation and Vision Systems</li> <li>Sustainable Engineering</li> <li>Energy Management</li> <li>Water Resource Management</li> <li>Information and Communication Technology</li> </ul>

Quality of health and living	<ul> <li>Applied Food Safety an</li> <li>Sustainable Farming Sy</li> <li>Applied Health Technol</li> <li>Environmental Assess</li> <li>Biotechnology</li> </ul>
People and skills development	<ul> <li>Socio-Economic Develo</li> <li>Leisure Management</li> <li>Education (Sub-themes Service Learning, Voca</li> <li>Research Education</li> </ul>

Based on this approach, the following plan facilitated the development of research and innovation: **RESEARCH AND DEVELOPMENT PLAN (2011 TO 2013)** 

FOCUS	OBJECTIVE	ACTIVI
Scholarly development through research and innovation training.	Scholarly engagement with the research process and research cycle.	<ul> <li>Pre-d</li> <li>Docta</li> <li>Post-</li> <li>Prograte s</li> <li>Progravitir</li> <li>Progravitir</li> <li>Progravitir</li> <li>Progravitir</li> <li>Progravitir</li> <li>Progravitir</li> <li>Progravitir</li> <li>Collog group</li> </ul>

- nd Biotechnology ystems logy
- ment and Management

opment Studies

s: Health Science Education, General Education, ational Pedagogy)

#### PROGRESS doctoral training In total, 16 workshops were presented and 470 oral training staff and students -doctoral training attended (cumulative). ramme on postgradu The workshops supervision addressed a variety of research themes in order ramme on scientific to develop the generic ng skills of researchers. ramme on tech (See Table 5 for detailed sfer and innovation information on the al faculty research research and developinars ment workshops.) ouiums and discussion DS

Research partnership development.	Capacity growth of research projects.	<ul> <li>Multi-, inter- and transdisciplinary research.</li> <li>Joint ventures with national and international universities, research bodies and research councils.</li> <li>Joint ventures with government/business/industry.</li> </ul>	Collaboration with SU, UCT, CPUT, UFS, TUT, NMMU. Projects on food security and safety, machine vision, research education, and medical product development. CUT partners with UFS in a Medical Ethical Committee. Preliminary discussions with UFS on collaboration in Animal Ethics Committee. Collaborations with international universities [Aalen, UIm, Charitre (Germany), Lougborough, Wales (UK), IUPUI (USA), Kugari Institute of S & T (Rwanda)] on projects on food security and safety, machine vision, manage- ment, research educa- tion, and medical product development.		involvement and expertise in technology transfer and innovation. Awards Fund cates the external research gra unding available for research	<ul> <li>training.</li> <li>Training of st students in in cycle.</li> <li>Identification outputs for p innovation.</li> <li>Studying sust technologica</li> <li>Supporting th in efforts at new product</li> </ul>	and iransfer Office aff and novation of research ossible cainable I development. ne community innovation and development.	
Development of research clusters and programmes.	Strengthening of research capacity.	<ul><li>Student retention and throughput</li><li>Publications</li></ul>		1. NRF BTech block	( grants			R2 995 000
		<ul> <li>Conference attendance</li> <li>Patents</li> <li>Rated researchers</li> </ul>		2. NRF master's gr	rants and scholarships			R460 000
		<ul> <li>Research funding</li> </ul>		3. NRF doctoral scl	holarships			R300 000
				4. NRF post-doctor	al fellowships			R920 619
				5. SANHARP				R58 083

6. SKA	R215 000
7. CSUR	R413 749
8. Improvement of academic qualifications	R400 000
9. Sabbatical	R300 000
10. Thuthuka	R458 770
11. Incentive funding for rated researchers	R260 000
12. Equipment grant	R1 331 000
13. KIC	R24 122
14. RIMS	R150 000
15. International collaborations	R177 000
Total	R8 463 343

External research funding available for research projects in 2013

FUNDING INSTRUMENT	AWARDED AMOUNT
1. MRC	R250 000
2. PA & Alize Malan Trust	R120 000
3. Mutual & Federal	R145 000
Total	R315 000

The table below indicates the progress made with the awarding of research grants funded through institutional funds in 2013. The following awards were made to staff and students for their research projects: Total CUT Research and Development grant awards

CATEGORY	NUMBER OF PEOPLE SUPPORTED	TOTAL AWARDED
Master's degree awards	47	R1 336 920
Doctoral degree awards	22	R1 047 230
Post-doctoral fellows	4	R580 000
Staff projects	3	R625 000
Equipment	8	R353 161
Supplementation: Thuthuka	7	R420 658



Supplementation: NRF researchers	1	R20 000
Supplementation: Thuthuka	7	R420 658
Total		R 4 382 969

ITEM	EIT commitment	EIT progress	HES commitment	HES progress
INI	PUT TARGET	S		
Papers read at SA Conferences (1st author)	10	16	17	21
Papers read at international conferences (1st author)	11	11	8	6
Staff with M-degrees	36		23	
Staff with D-degrees	16		19	
Students enrolled for M-degrees	34	42	59	59
Students enrolled for D-degrees	9	9	14	16
Post-doctoral fellows	2	1	З	4

#### The following table provides a summary of the performance of the faculties against the set research targets for 2013: Performance on consolidated commitments from faculties

EIT - Faculty of Engineering and Information Technology
 HES - Faculty of Health and Environmental Sciences
 HUM - Faculty of Humanities
 MAN - Faculty of Management Sciences

HUM commitment	HUM progress	MAN commitment	MAN progress	Total commitment	Total progress	Performance
INPUT TARGETS						
18	9	16	7	61	53	86.88%
12	13	8	12	39	42	>100%
30		38		127	116	91.34%
25		19		79	73	92.41%
45	56	35	37	173	194	>100%
30	40	22	18	75	83	>100%
0	0	1	1	6	6	100%

ITEM	EIT commitment	EIT progress	HES commitment	HES progress		
OUTPUT TARGETS						
Accredited articles - credit units (Final count will only be available on 15 May 2014 when publications are submitted to DHET)	11	16.35	20	10.19		
Patents	3		1			
Completed M-degrees (Based on year of graduation in year n)	12	2	12	17		
Completed D-degrees (Based on year of gradua- tion in year n)	2	2	2	0		
Rated researchers	0	0	5	4		

HUM commitment	HUM progress	MAN commitment	MAN progress	Total commitment	Total progress	Performance
OUTPUT TARGETS						
25	16.32	14	12.66	70	55.52	79%
0		0		4	6 submit- ted for reg- istration	Regis- tration approval: 6 pending
10	5	6	5	40	29	72.5%
2	1	3	0	9	3	33.3%
2	1	З	1	10	6	60%

#### DHET Research and Development Grant (2013 to 2014)

The Department of Higher Education and Training awarded the university a grant to the value of R4 430 000. The purpose of the grant is to support the university to meet its shortfall with regard to research publications and completed postgraduate qualifications. Based on the DHET-identified categories in 2012 - 2013, the expenditure of the grant is as follows (approved by the DHET in 2013):

#### Summative overview of grant expenditure

	STAFF AND POST- GRADUATE STUDENT DEVEL- OPMENT INITIATIVES	RESEARCH COSTS AND RESEARCH INFRA- STRUCTURE DEVEL- OPMENT PROJECTS	INCENTIVES FOR ACADEMICS AND OTHER RESEARCH- ERS	RESEARCH PROJECT COSTS AND OTHER FEES
Postgraduate bursaries	R1 590 000			
Post-doctoral fellowships	R945 000			
Capacity building among staff, including qualifica- tions and mentorship.	R350 000			
Research-related training workshops, e.g. how to write, publish, supervise, etc.	R320 000			
Academic exchanges		R180 000		
Funding for research activities (local and interna- tional).			R610 000	
Topping up NRF grants.				R435 000
			TOTAL	R4 430 000

#### Faculty research managers and support to the Welkom campus

Research Managers were appointed in each faculty, and Research and Innovation support was introduced for the Welkom campus. The faculty research managers (FRMs) will fulfil a key role in creating a vibrant research environment and culture, so as to administer all research activities within a faculty, and to provide managerial support; and communicate faculty-specific research targets, plans, internal criteria and institutional procedures to students and staff:

- Faculty of Engineering and Information Technology:
- Faculty of Health & Environmental Sciences:
- Faculty of Management Sciences:
- Faculty of Humanities:
- Welkom campus Research & Innovation Coordinator: Mr Molefi Motsoeneng

#### **Reactivation of the Graduate School**

The Research and Development Unit administers a virtual During 2013, a Research and Development Support Manual Graduate School. The purpose of this school is to provide was developed by the Graduate School to provide postgradcollective support to supervisors and postgraduate students in growing their research capacity, and to provide uate students and staff with essential research information needed to succeed. The manual is a 'one-stop shop' where access to best practice resources in support of research. A programme on research education; research workshops; postgraduate students and researchers can a number of books: and electronic resources were develfind all the information regarding research at CUT. oped to support academic staff, postgraduate students and

#### **CUT** academic journals

The Research and Development Office publishes two research journals: the Interim and the Journal for New Generation Sciences (JNGS).

#### **INTERIM:** Interdisciplinary journal

The Interim is an in-house interdisciplinary, developmental academic journal that provides new researchers with the opportunity to publish their research. Twenty editions of the Interim were published between 2002 and 2013, constituting more than 220 papers. The Interim serves as a unique outlet to publish work in progress, and aims at developing scientific writing skills in publishing research that meet an acceptable standard of research and writing. It provides an opportunity for academic staff to develop editorial skills by serving on the Editorial Board. There is open access to the Interim, thus ensuring that there would be no limitation to the potential readership. The Interim can be accessed at http://www.cut.ac.za/ faculty\_pages/publication/

Dr Mohamed Mostafa Prof. Karabo Shale Prof. Crispen Chipunza Dr Mike Mhlolo

post-doctoral fellows in doing research.

## Journal for New Generation Sciences

The Journal for New Generation Sciences (JNGS) is a DHET-accredited publication that is published by CUT bi-annually. Papers in the technological sciences are reviewed and published in its July and December editions. The JNGS is an accredited research publication in which scholars, both internal and external to the institution, may publish. It accommodates national and international publications, and showcases the university's commitment to applied research. The JNGS focuses on papers that reflect the scientific results of:

- Science, Engineering and Technology (SET), and the management of SET research.
- Applied research informed by industry/business problems.
- Partnerships with industry/business/government (triple helix).
- Knowledge production in the context of Mode 2 Knowledge Generation.
- Scholarship in teaching and research.
- Research projects leading to SET qualifications.
- Income generation through research.
- Entrepreneurship through innovation.

# **RESEARCH AND DEVELOPMENT PLAN (2014 TO 2020)**

During 2013, all role-players engaged with Research and Innovation strategies toward the fulfilment of Vision 2020's committed research and innovation outputs. As a result of a two-day workshop, a Research and Development Plan 2014 to 2020 was drafted and approved by Senate in August 2013. The university's Vision 2020 articulates the four leading principles as sustainable development; socio-economic development; input leading to outcomes; and outcomes leading to impact. Consequently, CUT's Research and Development Plan aligned its strategies with the four key goals:

- The development of a sustained, relevant and responsive research culture.
- The qualitative and quantitative improvement of research outputs.
- Socio-economic development through transfer and innovation.
- The development of strategic research and innovation partners and programmes.

The four leading principles became the main performance indicators of Research and Innovation. This approach corresponds with international best practice in research management. The focus of all research and development activities is that they result in outputs, outcomes and impact. The importance of the above-mentioned approach is that, whilst an enabling environment is created in support of research, the policy directives and management of research are aimed at maximising the outputs, outcomes and impact of research. The following plan was drafted:

### **Research and Development activities**

FOCUS	OBJECTIVE	ACTIVITY
Scholarly development through research and inno- vation training	Scholarly engagement with the research process and research cycle.	<ul> <li>Pre-doctoral training</li> <li>Doctoral training</li> <li>Post-doctoral training</li> <li>Programme on postgraduate supervision</li> <li>Programme on scientific writing</li> <li>Programme on technology transfer and innovation</li> <li>Annual faculty research seminars</li> <li>Colloquiums and discussion groups</li> </ul>
Research partnership devel- opment	Capacity growth of research projects.	<ul> <li>Multi-, inter- and transdisciplinary research.</li> <li>Joint ventures with national and international universities, research bodies and research councils.</li> <li>Joint ventures with government/ business/industry.</li> </ul>
Development of research clusters and programmes	Strengthening of research capacity.	<ul> <li>Student retention and throughput</li> <li>Publications</li> <li>Conference attendance</li> <li>Patents</li> <li>Rated researchers</li> <li>Research funding</li> </ul>

transfer and innovation involvement	<ul> <li>IP Act of 2008 and Technology Transfer Office training.</li> <li>Training of staff and students in innovation cycle.</li> <li>Identification of research outputs for possible innovation.</li> <li>Studying sustainable technological development.</li> <li>Supporting the community in efforts of innovation and new product development.</li> </ul>
-------------------------------------	--

The following strategies will support this plan: Human skills and potential development, structural development, intellectual skills development, resources, and policies.

STRATEGIES	1	2	3	4	5	6
Human Skills and potential development	Ten inte- grated sup- port pro- grammes to grow research capacities.	Increas- ing the enrolment of post- graduate students.	Growing the senior- ity of the academic staff pro- file.	Introducing research leave to optimise the oppor- tunity for research participa- tion.		
Structural Development	Reactivation of the Grad- uate School in support of the facul- ties.	Implement- ing the approved constitution of the URIC.	Training for faculty research managers.	Research and Tech- nology and Innovation administra- tive support will be imple- mented at the Welkom campus as from 2014.		

Intellectual Skills Develop- ment	Rolling out of a scientific writing skills programme.	Implement- ing a revised Interim publication structure.	Increas- ing the research outputs of postgradu- ate stu- dents.	Funding for conference attendance based on defined criteria.	Rolling out of institutional training pro- grammes.	Defining cri- teria for ac- ademic staff research outputs in a 3-year cycle.
Resource	Allocation of Institutional Research Grant.	Allocation of DHET Research and Develop- ment Grant.	Revising the allocation of publication incentives.	Strategising to grow research equipment and facili- ties.	Revise funding allocation to students.	
Policy	Revising institutional research policies to reflect the new institu- tional frame- work for Research and Develop- ment.					



### Library and Information Services

The national celebrations of the Library Week took place from 15 to 23 March 2013. The Library Week takes place annually in March to acknowledge the importance and contributions of libraries to nurturing the information society; enriching cultures; and fostering socio-economic development.

Mid-March 2013, the library offered a database demonstration to staff and students. It had become customary for the library to familiarise library clients with online full-text databases to which the library subscribe. The use of technology, including mobile phones; laptops; iPads; etc. to access library resources was emphasized.

Another milestone was reached on 14 May 2013 when the library started operating extended opening hours. The library opening hours were increased by 6 hours per week. It was in the best interest of library clients to extend opening hours in the evenings, and Saturdays. To cushion the need for additional manpower to provide services late in the evenings, a number of students were recruited to provide assistance.

The CUT library is gradually embracing the development of an e-book collection. While hard copies of library materials would still be maintained, a trial of a select collection of databases from some e-book vendors was conducted among library clients to establish the usefulness and user-friendliness of their platforms to CUT clients.

In acquisitions the library effort to increase the proportion of more up-to-date materials in the collection is paying dividends. Similarly, the shift in favour of Science, Technology, Engineering and Mathematics (STEM) - in line with CUT's mission - was embraced in the allocation of funding for library acquisitions. A total of 14 745 new library materials were added to the library in the period October 2011 to October 2013.



Library incorporated mobile technologies to enrich students' learning experience.

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# **TECHNOLOGY AND INNOVATION**

The Technology and Innovation Unit had a successful 2013 with various projects in support of the academic project and with a direct impact on the socio-economic development of the region and nationally. Herewith some of the highlights:

Technology Transfer Office (TTO), two applications for intelthis facility. On invitation by Seda, SAMTI hosted the 2013 National Incubation Day on 6 December 2013. lectual property (IP) protection have been formally submitted to the patent office, whilst a further five applications are being prepared by the TTO, with t he assistance of patent The Centre for Rapid Prototyping and Manufacturing (CRPM) attorneys for registration at present. Mr Seane, Chief Exechad a very successful 2013. The highlight of the year was utive Officer of CUTis (CUT innovation services) has been aphosting the Rapid Product Development Association of South Africa (RAPDASA) conference. The CRPM and CUT were pointed as a full member of the Intellectual Property Steering Committee. Several products have been referred to him praised for organising the 14th annual conference in innovafor possible commercialisation. tion, themed "Additive Manufacturing (AM) - Improving Your World Layer-by-Layer", at the SANParks Golden Gate Hotel. SEDA Agricultural and Mining Tooling Incubator (SAMTI) is Delegates from across the country, representing organisations such as the Technology Innovation Agency (TIA); the an element of the Science and Technology Programme of the Small Enterprise Development Agency (Seda). It is fund-Department of Trade and Industry (DTI); the Department of ed by the Department of Trade and Industry, and is aimed Science and Technology (DST); the Vaal University of Techat the development of an enhanced technical capacity in tool nology (VUT); Sasol; Aerosud; CSIR; 3D Solids AMT; and the making, with special emphasis on the agricultural and min-Titanium Centre of Competence (TiCoC) (to name a few), as ing sector. The unit is operational, and tenants are being well as international participants from France, UK, USA, Beleducated in business practices and technical skills in tool gium, Australia, Norway, Germany, Egypt, Switzerland and Poland, attended the conference. A total of 122 delegates, making. The refurbishment of the old water laboratory, to avail it for the joint utilisation of SAMTI and PDTS, has been including 18 international speakers, delivered 48 papers on completed. The relevant equipment has been installed in different aspects of AM.



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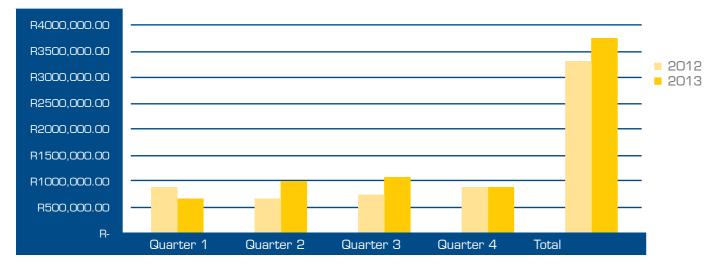
CUT was praised for hosting a successful RAPDASA conference Delegates enjoyed the breakaway to the Eastern Free State town Clarens. One of the key speakers. Dr Terry Wohlers from Wohlers Associates in the USA. congratulated CUT on a very successful RAPDASA event. Dr Wohlers, is a CUT alumnus, as he holds an honorary doctorate in Mechanical Engineering at CUT. At the forefront of research and innovation. CUT was one of three universities to beat 406 applications for a research chair at the South African Research Chairs Initiative (SARChI), and was awarded funding for five years in the field of Medical Product Development through Additive Manufacturing.

Another highlight of 2013 is the relationship that was established with Dr Cules van den Heever, a well-known prosthodontist from the University of Pretoria. The significance of this contact is that he is performing numerous implants on the maxillo facial region, as well as external implants such as ears and noses. He was seeking new manufacturing possibilities, and has partnered with CRPM in developing these new implants. Eight projects were completed during 2013, including titanium implants and pre-operational planning models and prototypes for ear-replacement surgery. A collaborative project by Dr van den Heever and the CRPM resulted in a medical first in South Africa when Ennica Makge, a young

woman from Gauteng who was born without a nose and nasal passages, received extensive jaw and facial surgery and a new nasal prosthesis. The CRPM played a vital role in the reconstructive surgery, by using AM technology to construct two models of Mahkge's skull, so that the team of doctors could perform pre-operative planning and comprehensively simulate the operation.

The commercial value of the 557 projects completed at the CRPM during 2013 was R3 799 172 (excluding VAT). The number and value of the commercial work increased by 14% relative to that of 2012.

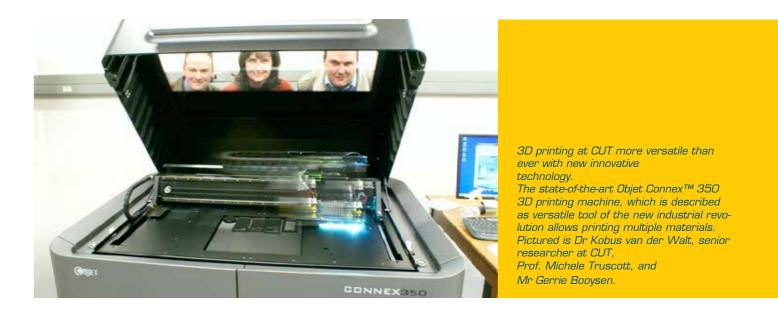
Value of commercial projects



The research team at the CRPM's application to the NRF's Research Infrastructure Support Programme (RISP) for a new state-of-the-art Objet Connex<sup>™</sup> 350 3-D printing machine was successful. The new machine adds to the CRPM's line-up of 3-D printing technologies. The total cost of the machine was R1.938 million. Two-thirds of the cost was covered under the RISP initiative of the NRF, and the remainder by the CRPM.

The roll-out of the Sustainable Development Project (SD) continued unabatedly, with frequent interactions by the responsible individuals within different operational units of the university. A special edition of the Interim concerning the roll-out of the SD project has been submitted to Research and Innovation for publication.

The Medical Device Innovation Platform (MDIP) was established to ease the development of commercially viable medical devices through collaborative efforts of participating universities and its students. The initiative is financed by the Medical Research Council, and all projects are to be executed jointly by staff and postgraduate students of at least two participating universities.



At the Product Development Technology Station (PDTS), develop their own innovative ideas. The Bloemfontein FabLab technology demonstration projects were undertaken on a is currently in its eighth year of operation since its official regular basis to showcase and potentially transfer new techopening on 23 October 2006, and is primarily sponsored nology to industry. During the third guarter of the 2013/14 by the Department of Science and Technology (DST), with financial year, the PDTS met with 36 small and medium a limited in-kind contribution from CUT. The FabLab had an enterprises (SMEs)/individuals. All the proposals that may average of 203 monthly users, and a total of 2 440 users result in a development project will follow the sequence of from January to December 2013. steps as laid down in the NPDP of the PDTS. As PDTS and SAMTI are sharing equipment, the workshop layout was The Bloemfontein FabLab assisted two local artists in proichanged in an attempt to create more space. ects that were selected as regional finalists for the 2013

SAMTI are sharing equipment, the workshop layout was changed in an attempt to create more space. The FabLab is an initiative of the Department of Science and Technology (DST), with the purpose of introducing students to the value of engineering and manufacturing. Private individuals may also make use of the facilities to test and

# **REGIONAL INNOVATION FORUM (RIF)**

The launch of the Free State Regional Innovation Forum was held on 9 May 2013 at the Hotel School Atrium of the CUT. The organising committee comprised representatives from CUT and UFS, whereas funding was appropriated jointly from CUT, UFS and DST. Approximately 100 delegates from various sectors in the province, including academia; national and local spheres of government; business support; and the broader community, attended the event.

The objective of RIF is to create platforms for deliberation amongst various contributors to the innovation value chain, in order to initiate projects aimed at improving the economic status of regions. The Free State Province was amongst the first provinces to implement this initiative, and the DST has appropriated funds to CUT with the expectation that higher education, government, and formal as well as informal businesses participate in the process.

The forum was instrumental in the forging of an active collaboration between CUT and UFS pertaining to the establishment of a Free State Science Park, as well as the establishment of an Institute for Continuing Education at CUT. The collaboration spans membership on various committees, and

the sharing of knowledge and information on aspects such as policy; commercialisation and legal approaches. CUT and members of RIFFS held a number of discussions with Mangaung Metropolitan Municipality regarding participation in the N8 corridor project. To this effect, the development of an ICC, tertiary institution and business park is of particular significance. CUT's involvement in these entities has been discussed, in particular considerations into the provision of services (ICC); the occupation of facilities (business park); and the extension of the main campus to the corridor area. Discussions have also included the utilisation of the Cecelia Park land and the possible construction of a bridge across President Brand Street.

# Teaching and Learning Activities

he Teaching and Learning section contains relevant statistics, referring to and containing information on the student headcounts, enrolments, and details on CUT student performance in 2013. The information presented for groups defined in terms of Higher Education Management Information Systems (HEMIS).

# **STATISTICS**

Student headcount data for 2013

# HEADCOUNT

CESM CATEGORY



Mr Imraan Patel, Deputy Director-General from the Department of Science and Technology said at the launch, "the benefit of innovation has the potential to address issues of inequality, poverty and unemployment, by developing a unified vision and identifying areas of strength and capability within the region."

Prof. Henk de Jager, Deputy Vice-Chancellor of Academic and Research at CUT; Mr Imraan Patel, Deputy Director-General from the Department of Science and Technology; Prof. Corli Witthuhn, Deputy Vice Chancellor of Research at the University of the Free State



CALENDAR YEAR								
2012	2013							
3 325	3 396							
26.1%	25.8%							
1 956	2 038							
15.4%	15.5%							
1 857	2 080							
14.6%	15.8%							

STEM	Headcount	5 585	578
	Percentage	43.9%	43.5%
Unclassified	Headcount	0	7
Unclassified	Percentage	0.0%	O.1%
Grand total	Headcount	12 724	1 330

The student headcount proportion in Business and Management Sciences indicates a slight decline from 26.1% in 2012 to 25.8% in 2013. On the other hand, Education and other Humanities CESM categories have increased from 15.4% in 2012 to 15.5% in 2013, and from 14.6% in 2012 to 15.8% in 2013 respectively.

# Enrolments by population group per major field of study

		AFRICAN	COLOURED		
CESM CATEGORY	2011	2012	2013	2011	2012
BUS/MAN	27.8%	27.5%	26.7%	27.0%	27.7%
EDUCATION	17.8%	16.9%	16.86%	12.8%	11.6%
OTHER HUMANITIES	13.7%	14.2%	15.65%	18.7%	22.1%
STEM	40.8%	41.4%	41.2%	41.5%	38.6%
GRAND TOTAL	10 723	10 902	11 588	489	480

In the Business and Management field of study, all population groups indicate a decrease in student headcount proportions, with the exception of the Indian population group, which indicates an increase from 16.9% in 2012 to 25.4% in 2013. In Education, the headcount proportions of the African, Indian and White population groups have decreased

		INDIAN		VVHITE		
2013	2011	2012	2013	2011	2012	2013
26.63%	27.0%	16.9%	25.4%	17.2%	14.7%	13.2%
12.54%	10.4%	9.7%	6.8%	4.2%	3.9%	3.8%
23.54%	16.3%	12.1%	9.1%	12.5%	15.1%	14.3%
37.49%	46.3%	61.4%	58.7%	66.1%	66.3%	68.6%
50	45	44	44	1 387	1 298	1 169



# Success/pass rates by major field of study and population group

CESM category	Afri	African		Coloured		Indian		White	
BUS/ MAN	72.7%	72.8%	80.4%	77.7%	63.9%	92.5%	84.3%	83.2%	
EDUCA- TION	81.1%	79.7%	80.1%	72.8%	68.2%	88.9%	73.5%	81.0%	
OTHER HUMAN- ITIES	78.5%	79.2%	85.3%	80.8%	83.9%	89.5%	78.5%	77.3%	
STEM	74.8%	72.8%	74.8%	74.3%	84.9%	69.9%	79.3%	77.2%	
GRAND TOTAL	76.2%	75.6%	79.9%	76.7%	80.2%	79.3%	79.6%	78.0%	

# Student performance and full-time equivalents (FTEs) across the major fields of study by gender

CESM category		20 Female	12 Male	2012 total	20 Female	13 Male	2013 total
BUS/	Success rate	75.1%	73.1%	74.3%	74.8%	73.2%	74.1%
MAN	FTE	1 290	859	2 150	1 265	867	2 131
EDUCA- TION	Success rate	80.6%	79.0%	79.9%	81.2%	76.6%	79.2%
	FTE	997	798	1 794	1 067	822	1 889
						CUT ANNU	AL REPORT   84

OTHER HUMAN- ITIES	Success rate	81.9%	74.1%	78.8%	82.4%	78.7%	80.9%
	FTE	1 090	707	1 797	1 118	743	1 861
STEM	Success rate	80.1%	73.9%	76.2%	79.4%	71.4%	74.3%
	FTE	1 479	2 525	4 004	1 507	2 574	4 081
Overall suc	cess rate	79.3%	74.6%	77.0%	79.3%	73.6%	76.4%
Total FTE		4 856	4 889	9 745	4 957	5 006	9 963

The university's overall success rate decreased from 77.0% in 2012 to 76.54% in 2013. Females appear to have performed better than their male counterparts during both academic years 2012 and 2013, as their overall success rate is consistent at 79.3% for both years. The male overall success rate fluctuated between 74.6% and 73.6% during the 2012 and 2013 academic years respectively. It is only in STEM that the success rate shows a noticeable decrease from 76.2% in 2012 to 74.34% in 2013. There was an increase in the success rate of other Humanities fields of study, from 78.8% in 2012 to 80.9% in 2013, while an almost similar trend appears in other fields of study.



# Undergraduate and postgraduate student enrolment and graduation rates by major field of study

CESM catego-	QUALIFICA- TION TYPE		CALENDAR YEAR							
ry		HEADCOUNT	GRADUATES	GRADUATION RATE	HEADCOUNT	GRADUATES	GRADUATION RATE			
	Occasional	1	0	0.0%	1	0	0.0%			
BUS/ MAN	Postgraduate	53	5	9.4%	52	6	10.8%			
	Undergraduate	3 271	901	27.5%	3 343	885	26.5%			
BUS/MAN	I TOTAL	3 325	906	27.2%	3 396	890	60.2%			
EDUCA-	Postgraduate	590	316	53.6%	639	389	60.9%			
TION	Undergraduate	1 366	322	23.6%	1 399	299	21.4%			
EDUCATIO	N TOTAL	1 956	638	32.6%	2 038	688	33.8%			
OTHER HU-	Postgraduate	33	3	9.1%	41	7	6.0%			
MAN- ITIES	Undergraduate	1 824	408	22.4%	2 040	402	19.7%			
OTHER HUMA	ANITIES TOTAL	1 857	411	22.2%	2 080	408	19.6%			

STEM	Postgraduate	135	22	16.3%	151	31	20.4%
	Undergraduate	5 450	1 181	21.7%	5 683	1 199	21.3%
STEM TOTAL		5 585	1 203	21.5%	5 789	1 230	21.2%
Unclas- sified	Postgraduate					0	2
	Undergraduate					7	23
UNCLASSIFIED TOTAL						7	25
GRAND TOTAL		12 724	3 159	24.8%	13 203	3 217	24.2%

In the Business and Management field of study, the graduation rate for postgraduate students has improved from 9.4% in 2012 to 10.8% in 2013. In Education, the headcount for under- and postgraduate studies has increased. The graduation rate for postgraduate studies has vastly improved from 53.6% in 2012 to 60.9% in 2013. In other Humanities fields, there was an increase in student headcount for both under- and postgraduate studies. The number of graduates for postgraduate studies has doubled. As a result, the graduation rate has increased from 9.1% in 2012 to 16.0% in 2013. In STEM, the headcount has increased for both under- and postgraduate students, while the graduation rates for postgraduate students has increased from 16.3% to 20.4%. The graduation rate for undergraduate studies has not changed significantly.

For the university as a whole, the graduation rate has decreased by 0.6% from 24.8% in 2012 to 24.2% in 2013, as a result of the increased student headcount in 2013. Lastly, according to DHET regulations, 2013 graduates are graduates who complete their studies before June 2014, which may affect the totals slightly.



# SIZE AND SHAPE

In 2012, the target was exceeded by 13%, while in 2013 the target was exceeded by more than 20%. This was as a result of pressure from the community for more student places, encouraging CUT to consider increasing the enrolment, but within what the economies of scale would allow. In as far as first-time entering students at undergraduate level are concerned, 2011 experienced a shortfall of 678 students (19.9% below target). In 2012, there was a shortfall of 497 students (15.1% below target), whereas in 2013 the target of 3 230 students was exceed by 198 students (5.78% above target).

In 2012, the targets were exceeded in the African and Coloured population groups by 16.6% and 8.6% respectively, while in 2012 the institution fell short of the target in the Indian and White population groups by 8.3%. In 2013, CUT exceeded the targets in the African and Coloured population groups (19.05% and 12.65% above targets respectively), while the institution fell short of targets in the Indian and White population groups (18.18% and 14.48% below targets respectively).

Lastly, whilst the STEM proportion of the enrolment increased marginally from 2011 to 2012, it fell short of its target by 0.3% in 2013, whereas other fields of study exceeded their targets. In 2013, the STEM proportion of the enrolment fell short of the target by 6.6%, despite exceeding the headcount target of 5 495 students by 157 students.

# Student Financial Aid

inancial aid totalling R231 778 450 was awarded to students in 2013 – an amount made up by CUT funds; NSFAS grants; and externally funded bursaries and scholarships.

Financial aid was awarded to students on the basis of academic performance and financial need. The various categories of financial assistance are discussed below.

CUT funding in 2013, provided a total of R15.344 million in financial support to students in the following categories:

Loans: The same criteria as those applicable to the awarding of NSFAS loans apply to CUT-funded loans. Students who complete their studies successfully within the same academic year in which the loan was awarded, also receive a 40% discount on the loan amount, awarded in the form of a bursary.

No funds under institutional loans were allocated to students in 2013. Academic progress was monitored on an on-going basis in order to identify students who would eventually qualify for financial aid, thus proactively identifying those students likely to be excluded from registration on financial grounds. Bursaries: First-year students who obtained 34 points calculated on the basis of their National Senior Certificate (NSC) results, were awarded bursaries totalling R394 483. In total, R15.344 million was allocated for bursaries in various categories.

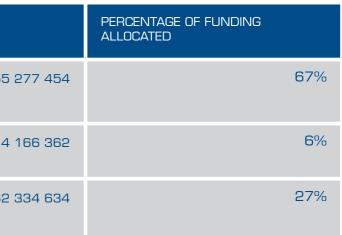
NSFAS loans: Criteria for these loans were based on NSFAS requirements; that is, the candidate had to be academically deserving and financially needy. The total allocation for 2013 amounted to R154 626 237. External donors: These awards, which were based on external donors' own criteria, amounted to a total of R62 334 634. R651 217 was for disabled students.

# Total financial aid granted in 2013

SOURCE OF FUNDING	AMOUNT
Government (NSFAS loans and bursaries)	R155
CUT support (bursaries and loans)	R14
External donors (bursaries only)	R62

# Changes in Tuition Fees charged and Financial Aid for Students

CUT reviews student fees on an annual basis. A policy and procedure for determining student fees ensures that, in the composition of student fees, there is a balance between the recovery of costs for the services received by students in terms of tuition and other related services and the fees charged. As a general guideline, student fees contribute between 25% and 30% towards the costs incurred by the institution. CUT strives to carefully and efficiently manage the costs of service, whilst ensuring that the quality of service is maintained.



The recommendations made to the CUT Council in respect of tuition fees and related fee increments are consulted with the Student Fees Committee, on which all stakeholders, including the SRC, are represented.

A number of factors are responsible for cost increases, some of which are listed below:

- Higher education is expensive, and the cost of providing such education usually increases at a higher rate than that of general inflation.
- Maintaining the physical campus and expanding the range of options for classrooms and research laboratories form a major part of the costs involved in providing higher education at a university of technology.
- Costs are also affected by the demand for additional facilities.

### Reasons for, and rationale behind, the proposed fee increment

The institution remains financially sustainable, provided that the contribution from students through the proposed fee increase is approved; the planned student enrolment numbers are achieved; and the increase in income and expenditure remains within the parameters of the financial projection.

Financial aid granted from CUT funds was increased along with the agreed percentage increase in tuition fees. Equity improvement demands are considered when allocating these funds.

Although there was a connection between the fees charged and the cost of a qualification, the exact cost of a qualification cannot be charged to a subject, as cross-subsidisation does and will continue to apply. Without a certain degree of subsidisation, some qualifications would not be affordable and would price CUT out of the market.

The STEPS process, initiated in 2010, assists in phasing out loss-making programmes that are of no strategic value. The PSP Icon Programme provides basic management information on programme viability.

At the time of determining tuition fees for 2013, the national CPI for March 2013 published on 17 April 2013, year on year, was 5.9%. The CPI rate for the Free State in March 2013 was 5.9%.

The increase in price index for Education, as reported by Stats SA for April 2013, was 9.0%, and is divided on two sectors, i.e. primary and secondary (9.1%) and tertiary (8.8%).

The increase in Government Block Grant was expected to be 6.1% at that stage, and will be in line with the national CPI.

Government subsidises more or less 66% of the cost of a qualification. The student thus pays only 33% out of his/her own pocket, taking into consideration some external funds that cover other costs. CUT receives no government grant for international students, with the exception of undergraduate students from the SADC region. Although international students are in fact supposed to pay three times the amount paid by domestic students, CUT charges them only 1.5 times more than domestic students.

Residences are not cross-subsidised and are self-sustaining. A minimum increase of 10% in residence fees for 2013, as decided on in 2012, was necessary to enable the residences to continue operating in a self-sustaining manner.

The registration fee of R751 for 2013 covered the costs of the registration process. Although the proposed application fee of R185 for 2014 would not cover the costs of the application process, it would be in line with the fee charged by other institutions.

# Further motivation for fee increases at CUT, and comparison with fees charged by other universities

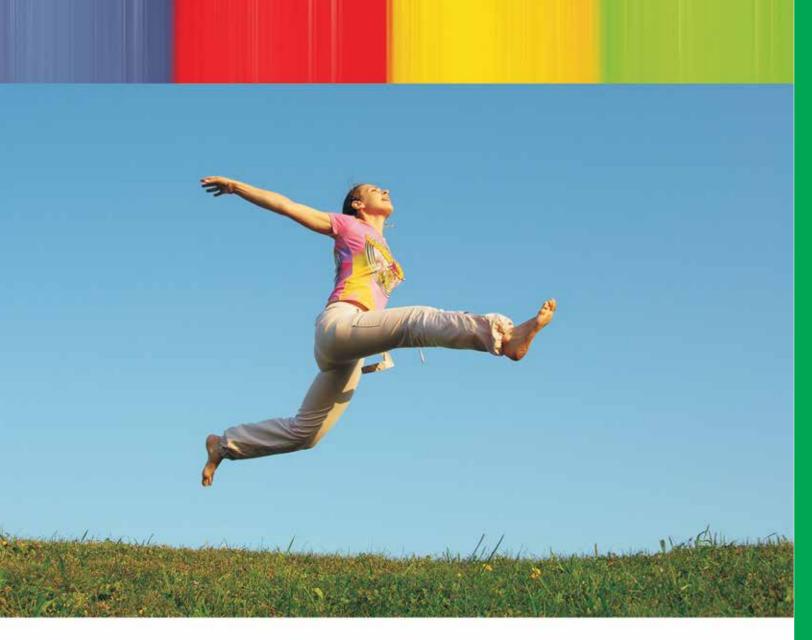
- Comparing CUT's fee increases for 2013 with those of the other 22 national institutions reveals that the average tuition fee at CUT was lower than that at any other institution in the country.
- CUT's residence fees for 2013 were competitive and were actually lower than the fees charaed by other institutions in urban areas.
- For 2013, the minimum amount payable upon enrolment at CUT was set to increase to R4 451 (enrolment deposit of R3 700 + registration fee of R751). This is still much lower than the average payable at the 22 other institutions in the country.

# Percentage annual fee increment for the 2013 academic year

The following annual percentage increases for 2013 in the respective categories were approved by the CUT Council in 2012:

- Tuition fees increased by an average of 8% for 2013.
- Residence fees increased by 10% for 2013.
- The registration fee increased from R630 to R751 for 2013.
- The application fee increased from R170 (already approved for 2012) to R185 for 2013.
- The late-application fee increased from R320 to R340 for 2013.
- The enrolment deposit/tuition fee instalment increased from R 2 950 to R3 700 for 2013.
- The residence fee instalment increased from R1 650 to R1 825 for 2013.





# INSTITUTIONAL ADVANCEMENT



# THINKING BEYOND

# Institutional Advancement

The Bloemfontein Campus houses a full array of modern buildings with well-equipped laboratories and lecturing venues. The campus has all-encompassing Library and Information Services, while the Lapeng Student Centre is a vibrant venue hosting a wide variety of student activities and services. Excellent sporting facilities on campus cater for the needs of sport enthusiasts, who can choose from a host of formally organised sport codes, ranging from athletics, soccer, rugby and cricket, to basketball, volleyball and netball.

CUT's Welkom campus is situated 160km northeast of Bloemfontein, and is in the hub of the Free State goldfields with several gold mines, a thriving industry in South Africa. Welkom campus facilities for students include: a library and information services, student cafeteria, 24-hour computer laboratory, equipped laboratories for programmes offered, a wellness centre supports staff and students with psychological matters, counseling, supplement studies, social services, and a wide range of sport facilities is available.

Both campuses offer a variety of student organisations, cultural activities as well as health services to advance access to quality education and to support students during their university years.

## **Strategic Partnerships**

One of CUT's institutional objectives was to pursue strategic partnerships, and major highlights for 2013 was:

The Faculty of Engineering and Information Technology has joint partnerships and collaborative projects in various areas, such as:

- the IT Hub in Welkom, under the auspices of the Department of Information Technology;
- the Contractor Development Programme, in collaboration with the Free State Provincial Government (FSPG), under the auspices of the Department of Built Environment;
- the establishment of an agreement with the International Labour Organisation (ILO) and the National Department of Public Works for the construction contractor incubator development, under the auspices of the Department of Built Environment;
- the establishment of strategic partnerships with the University of Johannesburg, Nelson Mandela Metropolitan University, and the University of the Free State in the area of Human Settlement Development, under the auspices of the Department of Built Environment;
- research collaborations the Centre for Rapid Prototyping and Manufacturing (CRPM) and the Product Development Technology Station (PDTS) have with the University of the North West, the University of Pretoria, and the Council for Scientific and Industrial Research (CSIR); and
- the Software Development project for 21 SMME's in the Free State, under the auspices of the Department of

Information Technology, in collaboration with the Johannesburg Centre for Software Engineering (JCSE), based at the University of Johannesburg. This forms part of an international co-operation agreement with the Software Engineering Institute (SEI) at Carnegie Mellon University in the United States of America (USA). The following parties are involved:

The Department of Electrical, Electronic and Computer Engineering obtained permission to commence with a course in Sustainable/Renewable Energy in 2014. The Northern Cape Provincial Government negotiated with CUT to enrol 20 students from the province for the course. The department also has strategic research collaboration with Stellenbosch University, which is also linked to cooperation with an industrial partner, CBI Electric.



Following a highly competitive and robust selection process for the 2011/2012 South African Research Chairs Initiative (SARChI) Call Phase 1, the National Research Foundation (NRF) awarded CUT (CRPM research niche area) a Research Chair for Medical Product Development through Additive Manufacturing (AM). An amount of R2 500 000 was granted for this purpose. CUT also submitted a SARChI Phase 2 full proposal for the awarding of Research Chairs for evaluation and approval to the NRF for 2013 onwards.

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The Department of Information Technology forms part of the Euro Africa Cooperation Forum on Information and Communications Technology (ICT) Research; is a member of Science Technology and Innovation (STI) for Development in Africa; and some of the lecturers in the department are members of the Association for Computing Machinery (ACM). The Department of IT serves as the Regional Academy for Cisco; offered CCNA training; has local academies in the Free State and Northern Cape; and is a member of the Higher Education Information and Communication Technology Association (HEICTA). The Department of IT, in collaboration with the University of East Finland and NMMU, participated in an international project called "Indehela ISD4D", which concentrates on the upliftment of communities through IT.

Staff members of the Department of Mechanical & Mechatronic Engineering serve on the Executive Committee of the Rapid Product Development Association of South Africa (RAPDASA), and are members of the regional Technology Innovation Agency (TIA).

Different departments within the faculty have good relationships with the Hochschule Ulm in Germany, and strengthened their relations with Mittwaida, Aalen and Chemnitz Universities in Germany, as well as with the Ecole Nationale d'Ingenieurs de Saint-Etienne (ENISE) in France. As part of the international exchange programme, three students visited the Hochschule Ulm in Germany. Two participated in the International Mechanical Engineering Programme (IMEP), and one attended a course in Electrical Engineering from October 2013 to December 2013.

As part of on-going engagement with the community, the faculty hosted its 10th Annual High-School Quiz during August 2013. Twelve schools from the Free State and Northern Cape participated in this event. The three schools in the final were Jim Fouché, Grey College and Sentraal. The winning school received two bursaries to the value of R10 000 each for learners to further their studies in an Engineering-related field at CUT; the first runners-up received two bursaries to the value of R7 500 each: and the second runners-up received two bursaries to the value of R5 000 each. A total of 70 learners attended the faculty's annual Career

Winter School during the June recess. Learners were provided with an overview of various engineering disciplines and programmes, and were allowed to participate in laboratory work. The learners visited Centlec, Bloemspruit Airbase and South African Truck Bodies to expose them to industry-related fields of study. The feedback we received from learners was very positive.

The faculty held its Annual Research Seminar during October 2013. The seminar was well-attended by people from the private sector. As in the past, this seminar served as a platform for sharing information and knowledge between scientists and engineers from industry on one hand, and academics and students from the university on the other. Many attendees from the private sector, some as far afield as Kuruman in the Northern Cape and some from the Eastern Cape, who are also members of the advisory committees, received valuable continuing professional development (CPD) points they require to ensure their status as practising enaineers.

The Faculty of Engineering and Information Technology, in collaboration with Interstate Bus Lines (IBL), assisted 290 grade 11 and 12 learners to improve their performance in Mathematics, Physical Sciences, Life Sciences and English. This gallant project had many positive results over the years, as learners' results in these subjects improved significantly, allowing them to be admitted to courses and programmes at university for which they most probably never would have qualified. A significant number of these students are currently furthering their studies in Engineering and Health & Environmental Sciences at CUT. Others opted to further their studies at universities offering courses not offered at CUT, such as medicine, law and actuarial sciences.

### Faculty of Management Sciences

As coordinator, the Horn of Africa Regional Environmental Centre and Network (HoAREC) contacted the Netherlands Organisation for International Cooperation in Higher Education (Nuffic) to apply for funding for the upliftment of

teaching, learning and research at five Ethiopian universities. The Accounting Technicians (AAT) programme continued in The Department of Tourism and Event Management was 2013, training accounting technicians to work in all sectors of the economy, including accountancy practice; industry chosen as the South African partner, together with the Vrije University of Amsterdam; the Katholieke Universiteit of Leeuand commerce; and the public sector. ven; Jimma University; Addis Abbaba University; Hawassa University; Mizan-Tepi University; and Arba Minch University. The Hotel School continued to provide moderation services Fields of research included tourism and natural resource to the South African College for Tourism in 2013. The main purpose of the project is to train guesthouse managers for management. Dr René Haarhoff visited the Wondo Genet College of Forestry, Ethiopia, to offer a Curriculum Developthe trans-frontier national parks. ment Workshop with the five partner Ethiopian universities.

The Department of Government Management was involved in a number of facilitation sessions as partner in the Execof Centlec in 2013 (the project commenced in 2010). utive Development Programme (EDP) of the Public Administration, Leadership and Management Academy (PALAMA), The Department of Business Management, in partnership and in collaboration with various consortia of different uniwith the Maccauvlei Learning Academy, offered the BTech; versities, including the North West University (Leader Con-Human Resources Management gualification to middle and sortium); the University of the Free State; the University of senior managers from commerce and industry in the Ver-Kwa-Zulu Natal; the Durban University of Technology; the eeniging area. The first group of 47 students graduated in Vaal University of Technology (Leader Consortium); the Uni-March 2013, and another group of 52 students graduated versity of Stellenbosch; the Tshwane University of Technology in September 2013. and the University of the Witwatersrand.



The Department of Business Support Studies continued to provide project management training to mid-level managers

# Facilities and Major Capital Projects

# Special Events

Infrastructure and Facilities Management remains a priority, and every effort is made to ensure that additional infrastructure is built and that the existing infrastructure is well maintained.

In 2012, the university received an approval of R314 million from the DHET infrastructure funding programme (DHET 3-300) for the period 2012 to 2015. A Lead Consultant, Ingérop, was appointed to manage the university's infrastructure development programme, and vigorous campus planning is underway. Some of the delays that were experienced due to a lack of human capital have been addressed by employing the expertise of Prof. Mojalefa Ralekhetho, who has vast experience from leading the previous infrastructure projects.

The Campus Master Plan has also been developed by Ingérop. Furthermore, a maintenance plan, including backlog maintenance costs, is in the final stages of preparation, and was presented for approval in early 2014.

The Facilities Management Unit is being repositioned to provide a more strategic, supportive role in planning and project management as opposed to the traditional day-to-day maintenance role. An Infrastructure Development Task Team will be exploring the possibility of obtaining available land and buildings in the surrounding areas of the university. An expression of interest (EOI) tender was published to invite all interested parties to participate as one of the suppliers of student accommodation to the university for a minimum period of three years.

UT has witnessed many changes and tremendous achievements in serving the central region of South Africa and the country as a whole. The university's pursuit of quality education and academic excellence, have brought forth great Imilestones. Here follows a few of the significant events for 2013:



# CUT creates employable graduates - Open Day

minds to new possibilities.

Grade 11 and 12 learners across central South Africa attended the Open Days, which took place at both the Bloemfontein and Welkom campuses on 10 and 11 May 2013. The purpose of the Open Days was to allow potential students the freedom to explore CUT's facilities and see what programmes are available to them beyond the generally known professions - opening their young "We develop future leaders that excel in industry and business across the globe", said Prof. Albert Strydom, Dean of the Faculty of Management Sciences, CUT's largest faculty. "All the lecturers consult with professionals and are sent to industry to interact with new trends, which are regularly incorporated into the course content".



## Varsity Shield Champions!

FNB CUT's lxias rugby team ended the group match stages of the 2013 FNB Varsity Shield unbeaten - thus being the only unbeaten team in this division of the FNB Varsity Cup competition. A great move down the short side with seven minutes left on the clock saw Alec Mhlango go over for the try which ultimately sealed the victory.







# Regional Innovation Forum, Free State launched at CUT

A commitment to innovation and economic prosperity is at the heart of central South Africa. CUT together with the Department of Science and Technology (DST) and the University of the Free State (UFS) pledged their commitment to innovation and collaboration at the launch of the Regional Innovation Forum Free State (RIF), which took place on O9 May 2013. The RIF aims to bring together stakeholders from various segments in the innovation value-chain in order to create strong systems of innovation by facilitating collaboration and supporting project and business development. Mr Imraan Patel, Deputy Director-General from the Department of Science and Technology said, "the benefit of innovation has the potential to address issues of inequality, poverty and unemployment, by developing a unified vision and identifying areas of strength and capability within the region."

The Free State Province holds a strong position in the agriculture, mining and the catering and hospitality sectors, which qualifies these sectors as initial focus areas for innovation through collaboration.

# CUT hosted national IEASA Conference

Is higher education responding effectively and quickly enough to internationalisation challenges and developments? CUT hosted the 17th International Education Association of South Africa (IEASA) Conference 2013 (21 to 24 August 2013 at the Bloemfontein Campus) with the aim of answering the emerging question about higher education's response to internationalisation in a changing world.

IEASA, a non-profit organisation, was established as a result of the need for universities in South Africa to respond to international educational trends. "If South Africa is to remain competitive within the global economic environment it is important that the higher education provides opportunities for students to obtain a global perspective and become global citizens", says Prof. Thandwa Mthembu, CUT's Vice-Chancellor and Principal and the Regional Chair: Sub-Sahara Africa of the International Association of University Presidents (IAUP).



Prof. Henk de Jager, Deputy Vice-Chancellor: Academic at CUT; Prof. Alvaro Romo, Secretary General-elect of IAUP; Dr Lavern Samuels, IEASA President; Prof. Rosa Meyer from Catholic University of Rio in Brazil; Dr Nico Jooste, IEASA Vice President; Mr Ramo Damodaran, Deputy Director: Outreach Division and Dr Jimmy Ellis, CUT Internationalisation Consultant. Photo supplied by Volksblad

## CUT signed MoU to promote widespread access to education

The MoU stipulates a working relationship between CUT and the Further Education and Training Colleges (FETC) sector, which will provide and improve access to further education and training institutions, including universities in the province. The signing of the MoU was the first step to the realisation of the Department of Higher Education and Training's efforts to revitalise the FETC sector in the Free State through systematic, coordinated and meaningful collaboration with universities.

The MoU also aimsto further promote specific learning areas, including science, technology, engineering, and mathematics (STEM).



(Front from left to right) Mr Tate Makgoe, MEC of Education; Prof. Thandwa Mthembu. Vice-Chancellor and Principal of the CUT; (Back from left to right) Mr. TS Letho, Director of Flavious Mareka FET College; DR LM Fourie, Director of Goldfields; FET College, DR SD Manese, Director of Maluti FET College and Mr JS Tladi. Chief Director: FET Colleges.



After two days of candid discussions and serious engagement, the SB13 Conference delegates showed their excitement for sustainability!

# Sustainable Building Conference 2013 of Southern Africa hosted by CUT

The conference served as a continuation of the Helsinki Conference of 2012 in terms of broad objectives of addressing the issues that face the built environment today and consolidating inputs from speakers and delegates in a wide spectrum of topics such as climate change, regenerative design, development and building urban resilience for the 2014 Barcelona Conference. The SB13 conference provided sub-Saharan Africa a platform for researchers and practitioners from the region to engage on the issues that affect the built environment.



# CUT launches Academy to support learning and teaching in the Free State

CUT launched the Schools Advancement Academy (SAA) as part of efforts to support Department of Education in meeting its set targets with schools in the province.

The concept of the SAA was adopted in 2011 to give effect to a more holistic approach on intervention programmes and to manage them in one basket. It is the culmination of a series of engagements between CUT community, Department of Education, external partners such as Standard Bank, Interstate Bus Services, Telkom Foundation and Mutual and Federal after showing interest to partner with CUT on these respective programmes. It was brought into existence to consolidate Saturday Classes for Grade 11 and 12, the Winter School and Spring School Programmes including EMDP (Educator Mentoring and Development Project).



At the official launch of CUT's Schools Advancement Academy, left to right was: Ms Nontando Seopa, CEO NLA Project Consulting; Prof. Henk de Jager, Deputy Vice-Chancellor: Academic; Ms Thando Lepele, PRO for Interstate Bus Lines; MEC Tate Makoe, Department of Education, Free State; Mr Giel de Villiers, Director of CUT-SAA; Ms Selloane Malihe, Head: Business Banking at Standard Bank South Africa; Prof. Thandwa Mthembu, Vice-Chancellor and Principal of CUT; and Ms Angeline Mdakane, Programme Manager of Kagiso Shanduke Foundation Trust.

# University Life

# STUDENT SERVICES

he Student Services Section continued to provide quality services to students through various activities on the Bloemfontein and Welkom campuses, rendered through the operational units Governance and Student Life, Residences, Wellness Centre and Operational Sport.

# Leadership

The SRC (Welkom & Bloemfontein campus) attended several leadership development seminars and workshops. Amongst others, the following deserve to be noted: An inductive moral leadership training workshop; a developmental annual conference of the National Association of Student Development Practitioners (NASDEV); and the Social Innovation Workshop, organised by the CUT Research and Innovation Centre, on O2 September 2013.

The SRC Elections 2013/2014, conducted by PwC, successfully took place in August 2013. The SRC Bloemfontein Inauguration Ceremony, which entailed signing a pledge to serve the students and CUT in line with the ideals of Vision 2020, took place on O8 February 2013 at the Lapeng Amphitheatre.



Student Leaders honoured for their leadership contribution in 2013.



### **Residence Life**

CUT residences provide accommodation for students on and off campus. Although a shortage of accommodation is still experienced, CUT has four (4) male residences and three (3) female residences that provide accommodation to 759 students in a clean and safe environment that is conducive to learning.

The occupancy is always 100%, because the demand is high. In addition, 10 international students are accommodated at the International House. CUT is in the process of partnering with external service providers, with the aim of accrediting those who meet the minimum requirements.





# Creation of a living and learning environment through educational programmes

In 2013, the mentorship programme in the residences continued unabated. Mentorship is offered to first-year students in all six residences, and the majority make use of the programme.

The residence that produced the best academically performing students was awarded the trophy for the best performing residence. In 2013 the honour went to Welgemoed Residence, followed by Mannheim Ladies and Loggies in the second and third place respectively.

# **HEALTH AND WELLNESS**

The Psychological and Social Work Section of the Wellness ed to improve not only their reading ability, but also their Centre rendered a wide variety of services to the students comprehension and retention of information. This enhances of CUT. Emotional and social well-being were at the core of chances of academic success. It is compulsory for all firstthis service. Support is provided to students at an individual year students to attend the reading programme. level, where psychological and therapeutic interventions are made. In the year under review, a number of group ses-The Reading Development Programme is scheduled in the sions and workshops were offered in areas in which numeracademic timetable via the academic departmental heads ous students reported the same problems. HIV counselling and the Wellness Centre. A decision has been made to and testing were also continuously attended to by the cenmake Reading Development compulsory for all first-year stutre. CUT also participated in national projects, as initiated dents. In 2013, 3 082 students were accommodated in and driven by the Higher Education HIV/AIDS Programme this programme. (HEAIDS).

The centre paid special attention to assisting students with emotional and adjustment problems. Academic support programme: Students are invited to complete study programmes to improve their memory and retrieval strategies. Such programmes are also presented after hours to students in the residences.

Physical well-being always forms the basis of wellness. To assist students in managing their physical wellness, CUT signed a memorandum of understanding (MoU) with the Department of Health to register the Healthcare Clinic on campus. The clinic has a registered sessional medical doctor, a full-time professional nurse, and a part-time nurse to render critical services on a day-to-day basis.

critical services on a day-to-day basis. The Students at Risk Programme was piloted in 2012. In 2013, more programmes were involved. The aim is to identify students at risk of failing as early as possible, and to render the necessary support.





## **Extracurricular activities**

The CUT choir is one of the best in the Free State, and achieved first positions in the categories female voice; male voice; western piece, as well as an overall first position, in the Old Mutual National Choir Competition: Free State Province, as well as in the Lengau Choral Association Competitions. The CUT Poetry (including Mingle Art) and Drama Association performed at the Grahamstown National Arts Festival.

Media activities included publishing two editions of the student newspaper (Speculum), and participating in the campus radio activities. CUT students also participated in a variety of social activities, including recreational sport: Latin-American and ballroom dance: debates: and chess.

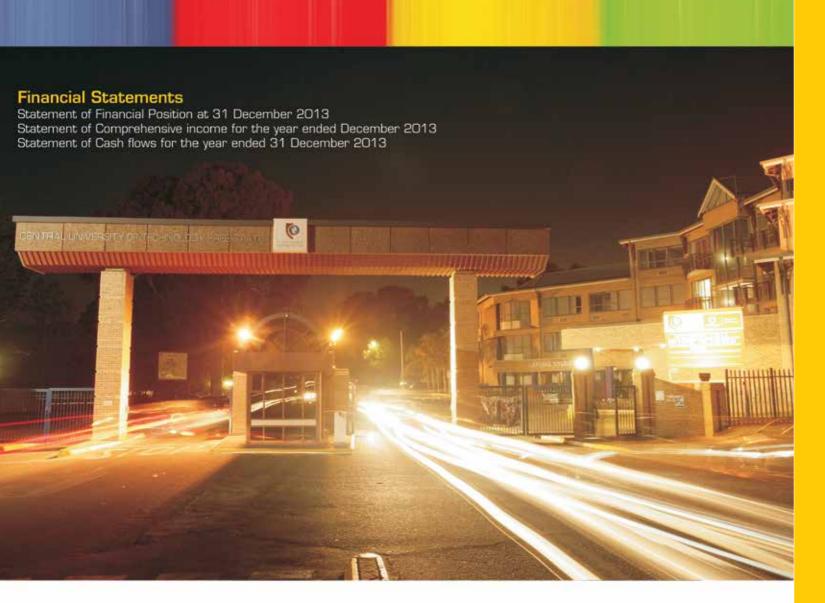
The Carnival Committee (the SRC community service wing) staged a successful Carnival Week, and made donations to seven charity organisations. Four other charity organisations were provided with food and clothing. A Christmas party for orphans was held in November of 2013 at the CUT hockey field. This exposed children to the university environment, thus building confidence and self-esteem for their future.

### Sport

Operational Sport is more competitive as opposed to recreational sport, which is managed by Student Life in collaboration with the SRC. Operational Sport rendered a wide range of sport codes to CUT students. League matches in soccer, rugby, athletics, basketball, volleyball, cricket, hockey, table tennis, tennis, karate, golf and netball took place throughout the year. Students were also granted the opportunity to take part in various sporting codes in South African student tournaments. Coaching clinics for disadvantaged students in hockey and cricket were organised by CUT cricket and hockey.

The CUT soccer team is in the top 5 of the log of the Vodacom League, with 14 matches to play. They perform exceptionally well, considering that they are newcomers in this league after winning the Castle League in the 2012/13 season and having been promoted to this higher league.





# THINKING BEYOND

# FINANCIAL HEALTH OF THE UNIVERSITY



### **CONSOLIDATED STATEMENT OF FINANCIAL POSITION** as at 31 December 2013

ASSETS	Note	2013 R '000	2012 R '000
Non-current assets		705 987	
Property, plant and equipment	5	491 546	472 375
Investment property	6	794	794
Other non-current financial assets	7	194 738	161 293
Non-current receivables		18 909	780
Leasehold asset	9	860	780
Student Loans	8	18 049	-
Current assets		178 152	215 071
Other current financial assets	7	-	33 205
Receivables and prepayments		93 493	35 643
Student debtors	10	82 609	17 889
Other debtors	10	10 884	17 754
Cash and cash equivalents	11	84 659	146 222
Total assets		884 138	850 314
FUNDS AND LIABILITIES			
Funds available		569 579	531 363
Restricted use funds reserves			
Other Education and general		234 260	203 430
Unrestricted use funds reserves - Education and general		335 319	327 933
Non-current liabilities		215 736	244 205
Interest bearing borrowings	12	3 514	1 375
Post retirement obligations	13	42 330	64 278
Deferred income	14	169 891	178 552
Current liabilities		98 823	74 745
Accounts payable and accrued liabilities	15	55 858	63 827
Leave accrual	16	358	314
Current portion of interest bearing borrowings	12	2 818	1 931
Current portion of deferred income	14	39 788	8 673
Total funds and liabilities		884 138	850 314

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME for the year ended 31 December 2013

				2013 R '000			2012 R '000
	Note	Council Controlled Unrestricted	Specifically Funded Activities Restricted	SUB- TOTAL	Student and staff Accom- modation Unrestricted	TOTAL	TOTAL
TOTAL INCOME		510 531	95 086	605 617	11 652	617 269	567 369
State appropriations - subsidies and grants		297 691	65 575	363 266	-	363 266	303 890
Tuition and other fee income		191 261	5 194	196 454	11 652	208 106	183 290
Income from contracts		-	23 347	23 347	-	23 347	27 444
Sales of goods and services		8 708	-	8 708	-	8 708	8 299
Private gifts and grants		1 240	732	1 972	-	1 972	2 713
SUB-TOTAL		498 901	94 848	593 748	11 652	605 399	525 636
Finance income	19	11 631	239	11 869	-	11 869	15 249
Gain on investments realised	20	-	-	-	-	-	26 483
TOTAL EXPENDITURE		486 460	90 331	576 791	12 333	589 124	523 98
		486 460	90 331	576 791	12 333	589 124	523 98
Personnel	17	306 478	18 759	325 237	5 190	330 427	306 036
Salaries		311 521	18 759	330 281	5 190	335 471	299 839
Settlement gain on post retirement benefit	13	(11 853)	-	(11 853)	-	(11 853)	
Post retirement benefits cost	13	6 810	-	6 810	-	6 810	6 19
Other current operating expenses	18	145 661	71 571	217 232	7 143	224 375	188 205
Depreciation	18	33 596	-	33 596	-	33 596	29 000
SUBTOTAL		485 735	90 331	576 065	12 333	588 398	523 247
Finance costs	21	425	-	425	-	425	464
Loss / (Profit) on disposal of assets		300	-	300	-	300	270
SURPLUS FOR THE YEAR		24 071	4 755	28 826	(681)	28 145	43 387
OTHER COMPREHENSIVE INCOME							
Items that will not be reclassified to profit /(loss)							
Actuarial (loss) / gain on post retirement obligation	13	1 537	-	1 537	-	1 537	(6 662
Items that may be subsequently classified to profit / (loss)							
Change in value of available-for-sale financial assets	7	-	-	-	-	-	14 020
OTHER COMPREHENSIVE INCOME FOR THE YEAR		1 537	-	1 537	-	1 537	7 358
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		25 608	4 755	30 363	( 681)	29 682	50 748

# CONSOLIDATED STATEMENT OF CASH FLOWS

for the year ended 31 December 2013

	NOTE	2013 R '000	2012 R '000
Operating activities			
Cash generated from / (utilized in) operations	25	(40 207)	51 704
Net cash flows generated from /(utilized in) operating activities		(40 207)	51 704

Investing activities			
Acquisition of property, plant and equipment	5	(55 378)	(138 433)
Proceeds on the disposal of assets	19	300	237
Non current financial assets - realisation at fair value / matured	7	8 115	50 694
Increase in other non-current financial assets	7	-	(50 694)
Interest received		2 595	8 079
Net cash flows used in investing activities		(44 368)	(130 117)

Financing activities			
Increase / (Repayment) of obligations		980	( 986)
Interest paid	21	( 425)	(464)
Increase in deferred income	14	22 455	23 388
Net cash flows from /(utilized in) financing activities		23 010	21 938
Net increase / (decrease) in cash and cash equivalents		(61 565)	(56 475)
Cash and cash equivalents at 1 January	11	146 224	202 699
Cash and cash equivalents at end of year	11	84 659	146 224



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# THINKING BEYOND

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