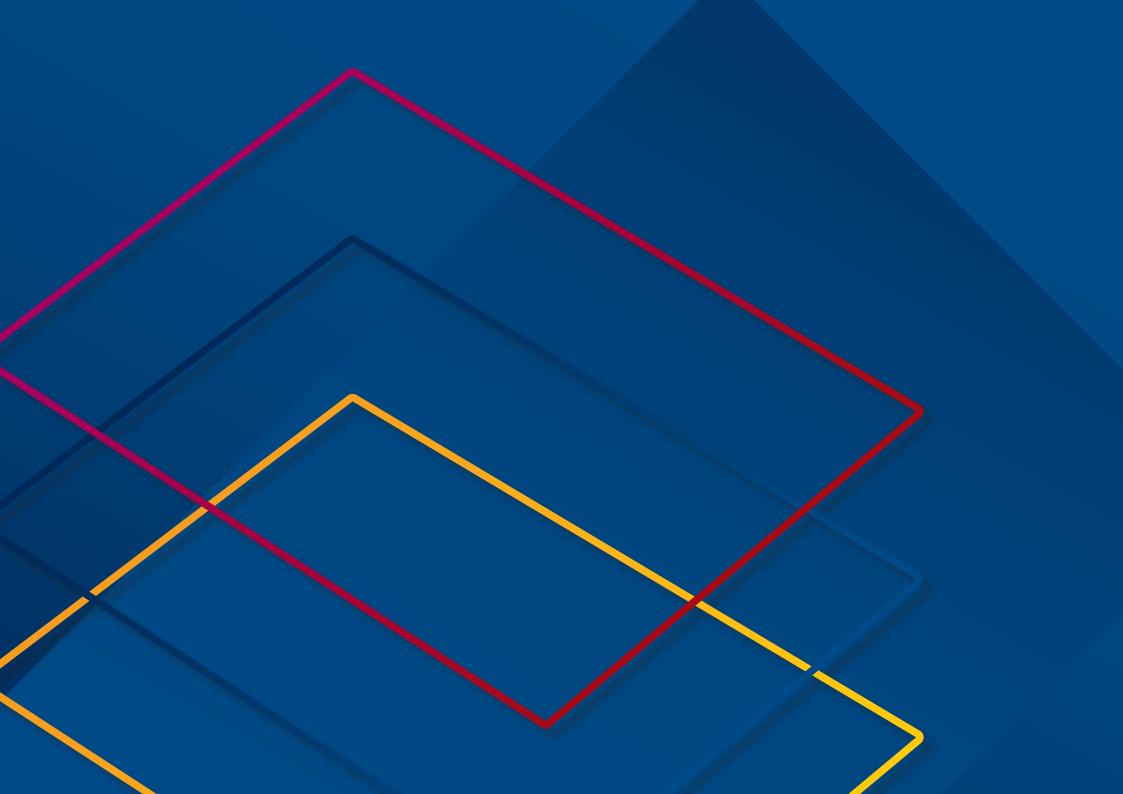


CUT Strategicplan

2016-20



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FOREWORD BY THE CHAIRPERSON OF COUNCIL

In a world where competition is harsh, especially in the business environment, organisations have to plan better for an uncertain future. The world in which we live has changed so radically in the past few decades that the factors and competences that made an organisation successful in the past do not guarantee success in the future.

As a public corporate citizen, the Central University of Technology, Free State (CUT) is accountable to a myriad of stakeholders as part of good corporate governance, and it is against this backdrop that CUT has prepared its Strategic Plan 2016 – 2020. Therefore, it is a way of laying CUT bare to public scrutiny, in the spirit of transparency, accountability and demonstrating value for money.

Transformation in higher education brings together four stakeholders with distinct but overlapping roles. First, the national government, as policymaker and major steering agent, must ensure that the system delivers outcomes aligned to national development goals. Secondly, higher education institutions – responsible for teaching, learning, research, innovation and engagement in line with their respective missions – must ensure performance on set goals. Thirdly, students, as the direct beneficiaries of higher education, are both co-producers of our intellectual products and long-term investors in processes to enhance outcomes. Fourthly, the broader community, including communities themselves, the private sector, sponsors, potential employers and parents, has a vested interest in the quality outcomes of higher education. Over the years, CUT has always risen to the occasion to meet the needs of our different customers and stakeholders, and to account to them, when necessary.

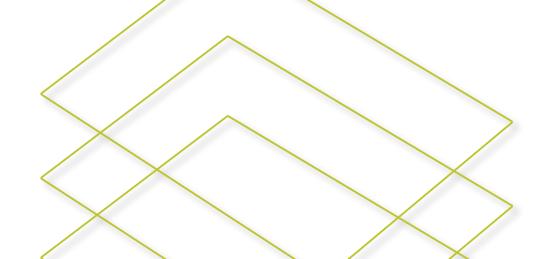
Our key challenges involve our students: Ensuring that we have appropriate and quality systems that enhance the potential for success; ensuring student services that meet the needs of our students and turn them into caring, competent, value-driven and productive citizens; and, most importantly, ensuring that our students receive the support (inside and outside the classroom, lecture hall and laboratory) that they need to succeed.

As alluded to in the plan, the framework for implementation of Vision 2020 is divided into three strategic sets that should be understood as the interconnected thrusts or dimensions of the university's strategic development path in pursuit of its vision and core mission. In order to address our key challenges mentioned above, the university has identified five institutional goals to pursue for the duration of this Strategic Plan. These include: Institutional advancement; teaching and learning; research and innovation; university life; and financial sustainability.

Finally, I would like to express my appreciation to the government, and in particular to the Minister of Higher Education and Training. I also wish to extend my sincere gratitude to my fellow Council members, the Vice-Chancellor and Principal of CUT, Management, faculties and staff for their unwavering commitment to our institution.



Mr Mike Mohohlo Chairperson of Council



MESSAGE FROM THE VICE-CHANCELLOR AND PRINCIPAL

I am delighted to present the details of our Strategic Plan for 2016 to 2020. This document outlines our vision and responds to the question – "What is CUT about and what shall it do?" In 2010, CUT's Council approved Vision 2020 and its associated plans. The vision and Strategic Plans 2010 – 2015 and 2016 – 2020 provide details of the foundation and pillars that we must build for CUT to become an even greater university.

The Strategic Plan takes us back to our enduring purpose; to our core mission: We deliver high-quality, appropriate Science, Technology, Engineering and Mathematics (STEM) academic programmes supported by applied research, including those in Management Sciences, Education and Humanities. We engage with the community for mutually beneficial development and to, first and foremost, foster city and regional development. We promote access with success in attracting potentially successful students, and we support them to become employable, and more importantly, job-creating graduates. We attract and retain high-quality students and expert staff from all over the world, and support their development and well-being. We forge strategic partnerships that are mutually beneficial and that enhance our contributions to city and regional development.

Our vision is of an engaged, innovative CUT – a powerful force in socio-economic development in the region. We will break down barriers to education in attaining this goal, and empower students to be part of shaping a quality learning experience for themselves and those around them. We consider our students as not merely customers, but co-creators of our innovations and other products and services that help to improve the quality of life of our people.

Developed through consultations with various stakeholders, the five key institutional goals in this Strategic Plan set our path for the long-term and lay firm foundations for the future. The plan will focus our efforts and our activities, forming the cornerstone of our work during the next five years and beyond. It is ambitious, and it is fundamental to achieving our vision for CUT, our city, our region and beyond.

As a university (of technology), we have made considerable progress in the implementation of our Vision 2020. We initiated a number of projects, new structures and units, such as CUT Innovation Services (CUTIS) that was established in 2010 via our Diversified Income Project (DIP) of 2010 to 2012. It is a Trust mainly dedicated to the commercialisation of our intellectual property (IP) and other commercial services. It functions as an independent business entity to cut the red tape and the bureaucracy of the university.

Sustainability@CUT is a project that leads our efforts towards education for sustainable development and the environmentally friendly use of our perishable resources.

Through the Higher Education Leadership and Skills Academy (HELSKA) project, we have provided specialised training and advancement of staff and our graduates.

The Schools Advancement Academy (SAA) co-ordinates all our school-focused development projects.

The Free State IT Hub, established in partnership with the provincial government, is meant to turn the Free State into an IT hub in software development. Various partners from across the world are involved to make this project a reality.

A new International Office is in place to ensure that, despite our main vision being regional, we can benefit from capacities from elsewhere to achieve the same.

We have established a Regional Innovation Forum, Free State (RIFFS) that will help to implement our regional innovation strategy, which links with the National Innovation Strategy.

We are making great strides in research and innovation outputs, which are being recognised nationally by the National Research Foundation (NRF).

We have improved our infrastructure, beyond what alumni who graduated more than five years ago could identify with, thanks to the Department of Higher Education and Training (DHET)'s support. The list of our achievements is long!

Despite the many achievements, CUT will face a more challenging and complex external environment in the years ahead. We need to pay careful attention to our core business, in order to further strengthen the four fundamental pillars of our implementation framework that we always keep at the back and front of our collective mind. We call it the Four-P's Framework: Inspiring PEOPLE to excel in discharging their responsibilities; executing our robust PLANS; sharpening our PRODUCTS; and utilising our PENNIES or financial resources wisely to deliver first-rate education.

Our challenge is to create a university of technology that is fit for purpose and delivers caring, competent and productive graduates that contribute to job creation in our city and our region. This Strategic Plan is a central element in this on-going process of change and improvement. CUT stands ready to deliver on its promise – to 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".

I express my profound gratitude to all the stakeholders – internal and external – for the strong support given to CUT over the years. As we position ourselves better each year, the future holds great promise for our city, our region and our country. In this way, the rest of the world will soon take notice of what our region and our country is made of.

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Prof. Thandwa Mthembu Vice-Chancellor and Principal

DEFINITION OF KEY CONCEPTS/TERMS

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Goals	What the organisation/unit/programme seeks to achieve as long-term, broad outcomes. Example: Improve CUT's quality and outcomes in research and innovation.
Objectives	Strategic objectives are more refined and specific actions that an organisation seeks to achieve (often in a defined time frame) in order for it to realise its long-term and broad goals. Example: Strengthen the capacity of CUT staff to undertake research that leads to innovation.
Performance indicators	Indicators are (usually quantifiable, but may also be qualitative) measures or metrics, often expressed as a rate, ratio or percentage, that are used to assess the performance (of an organisation/individual) against the objectives that have been set. Not all indicators have to be reduced to quantifiable measures. Organisations can also identify processes and qualitative indicators (e.g. raising awareness), which can be verified through observation methods and sample surveys. Example: Increase third-stream income.
Targets	Targets are numeric measures of a goal or objective that are expected to be attained at a particular point or within a set period of time. Example: By 2020, CUT expects that x number or y percentage of its academics would have obtained their PhDs.
Inputs	The resources (equipment; finances; people; time) that are required in order to contribute to the delivery of outputs. Example: Provision of funds (through initiatives such as the Stars of Academia and Research (SoAR)), time off, etc. in order to enable academics to pursue further studies.
Activities	Actions and processes (interventions) undertaken to produce outputs; i.e. "what we do". Example: Provision of support networks, training workshops, etc. to ensure that people in these programmes succeed.
Outputs	The goods, services and processes that are a product of the activities and interventions of the programme; i.e. "what the intervention produces or delivers". Example: PhD graduates; research publications.
Outcomes	Outcomes are the expected broad, longer-term benefits, results or changes in a programme or project that are a consequence of the delivery of outputs. Outcomes thus ultimately close the loop that links to the goals the institution/programme/project seeks to achieve. These goals and objectives are outlined in the institution's Strategic Plan. Example: Increase in research productivity; increase in external funding; enhancement of research culture; enhancement of academic reputation; etc.
Risks	The identification of a probable (future) event or change in circumstance that may affect the achievement of a goal or strategic objective. Example: The inability of faculties to find temporary (replacement) lecturers who would reduce the teaching load of those who are undertaking further studies may limit the ability of these academics to finish their studies in the allocated time.
Balanced scorecard (BSC)	The balanced scorecard is a review, monitoring and reporting mechanism that ensures that strategies, interventions and actions are balanced. It ensures that there is no inclination towards one element of it against other important perspectives or elements. It is thus a reminder of sorts that interventions and actions have to, where practicable, involve all the necessary elements of the BSC. Perspectives: Systems, policies and processes; resources – human, financial and otherwise; supplementary resources from stakeholders/partners; quality; learning; and growth.



LIST OF ACRONYMS

- Department of Higher Education and Training Global Competitiveness Index
- GCI
- Global Competitiveness Index Innovation; impact and outcomes; socio-economic development; location; and excellence Medium-term Strategic Framework Science, Technology, Engineering and Mathematics Strategic Transformation of Educational Programmes and Structures Tshwane University of Technology Universities of technology World Economic Forum Work-integrated learning

- STEPS
- UoTs

THE CUT CONTEXT

In 1981, the Technikon Free State, the predecessor of the Central University of Technology, Free State (CUT), commenced its operations with the noble intention of producing graduates who possess the skills and competences that are required to advance and support the industrialisation of the region. The levels and intensity of these needs have changed over time, but the core socio-economic or regional development mandate of the university remains unchanged. As a result of aspirations for advancement within the university sector, with particular requirements for improved research and teaching outputs, this core mandate is often compromised or even forsaken. Yet, the people of the region and the country at large still expect the university to produce skilled, innovation-focused, competent, caring and productive graduates that are able to fulfil their aspirations to advance their socio-economic development through social and technological innovations, and, more so now, in the light of an increasingly complex global economic environment.

At the time of the merger, the uniquely South African institutional designation of 'technikon' was discarded in favour of the internationally accepted 'university-of-technology' designation.

Transforming from a technikon to a university of technology (UoT) involved a change from a non-university system to a university system and subscribing to a typologically differentiated system; hence the different and nuanced mission statement. The change in designation to a UoT compelled us to rethink our position as a UoT that is fit for purpose. Amongst other things, we had to revise our plans; policies; rules; regulations; constitutions; manuals; the university's planning cycle and planning system (including our strategic planning and annual operational planning); the Constitution of the Students' Representative Council (SRC); the language policy; the admissions policy; the transformation vision document; the equity and excellence position; and the Leadership Charter.

Our Vision 2020 and the attendant strategic priorities detailed in this document constitute the university's public commitment leading up to the year 2020, in response to the abovementioned aspirations.



VISION

In 2010, CUT adopted a new vision, entitled Vision 2020, which states that: "By 2020, Central University of Technology, Free State shall be an engaged university that focuses on producing quality social and technological innovations in socioeconomic development, primarily in the Central region of South Africa."

CORE VALUES

- Customer service
- Integrity
- Diversity
- Innovation
- Excellence

MISSION

In aspiring to fulfil its vision, CUT, as a university of technology:

- delivers high-quality, appropriate Science, Technology, Engineering and Mathematics (STEM) academic programmes supported by applied research, including those in Management Sciences, Education and Humanities;
- engages with the community for mutually beneficial development;
- promotes access with success in attracting potentially successful students, and supporting them to become employable and job-creating graduates;
- attracts and retains high-quality students and expert staff, and supports their development and well-being; and
- forges strategic partnerships that are mutually beneficial.

GRADUATE ATTRIBUTES

CUT has adopted ten graduate attributes. The implementation thereof commenced in January 2014. These attributes underpin CUT's academic learning programmes, and will be further developed and integrated through teaching and learning, and curriculum and other activities, such as co-

curricular, cultural and sporting activities, work-integrated learning (WIL), and in any other manner that leads to their development/achievement. These graduate attributes have been introduced in all faculties as part of the Student Peer Mentorship Programme and in several other ways.

The ten graduate attributes are listed below:

- Sustainable development;
- Community engagement;
- Entrepreneurship;
- Innovation and problem solving;
- Technological literacy;
- Numeracy;
- Communication;
- Technical and conceptual competence;
- Teamwork; and
- Citizenship and global leadership.



BACKGROUND TO VISION 2020



The university's Vision 2020, Strategic Plan 2010 – 2015 and Strategic Plan 2016 – 2020 continue to guide and frame the activities of the university. The framework that underpins the university's Vision 2020 and our Strategic Plans is best captured in Figure 1 below, which depicts the three strategic sets that should be understood as interconnected thrusts or dimensions of the university's strategic development path in pursuit of its vision and core mission. Figure 1: Strategic sets of the university's Vision 2020 and Strategic Plan

Strategic Set 3: (2018 - 2020)

STRATEGIC SET 1 (2010 - 2013):

Building the foundations, so that CUT is fit for its purpose;

STRATEGIC SET 2 (2014 - 2017):

Innovating on the academic project, especially in STEM; and

3. STRATEGIC SET 3 (2018 - 2020):

Building strategic partnerships, in order to realise internal, regional, national and international goals, especially socio-economic development, through regional innovation.

Strategic Set 2: (2014 - 2017)

Innovating on the academic project

Strategic Set 1: (2010 - 2013)

Building the foundations

It is important to define the characteristics of each of these strategic sets in order to align them with the vision, goals and	
objectives of CUT. In 2009, Council approved the following defining characteristics of Vision 2020 under the three strategic	
sets of the university:	
Table 1: Defining characteristics of Vision 2020	



Strategic set (SS)	Defining characteristic of Vision 2020 (from the previous plan)	Link to the strategic goals (2016 – 2020)
SS1	 New values, ethos, attitudes, behaviours and relations amongst our people. New organisational design, function and structure aligned with Vision 2020. State-of-the-art facilities. Developing high-level skills and competences amongst staff, especially younger members and designated groups. Emancipating, empowering and supporting engagements and transactions between students and staff, and amongst staff. 	Goal 1: Institutional advancement Goal 2: Teaching and learning Goal 4: University life Goal 5: Financial sustainability
SS2	 Academic, research and innovation programmes that align with our regional and national goals. Niche areas and research/innovation centres. Learner-centred (and lately learner-initiated) methodologies and facilities, for example for entrepreneurship education. Pre-university programmes for learners in STEM in order to enhance our technology-oriented status as a UoT. 	Goal 1: Institutional advancement Goal 2: Teaching and learning Goal 3: Research and innovation Goal 4: University life
553	 Focusing on innovation for industrial and socio-economic development. Incubation platforms for small-, medium- and micro-sized enterprises (SMMEs) in the manufacturing and agricultural sector. Strong links with business and industry through public and private partnerships (PPPs) and other mechanisms. 	Goal 1: Institutional advancement Goal 3: Research and innovation

To minimise risks to the operationalisation of Vision 2020, the planning and implementation process was designed in such a way that it has shifting priority focus over a period of ten years, as illustrated in Table 2 below.



Table 2: An illustration of how the shifting focus would manifest itself to effectively limit the inherent attainment risks of the vision

Timelines	2010 to 2013	2014 to 2017	2018 to 2020
Headline descriptors	Getting the foundation on solid ground while making the types of impact that will consolidate the foundation.	and focused academic core to the foundation.	Getting a solid functional house as a precondition for major interior decorating and landscaping investments: Our stellar array of partners is our basis for we continue to build.
SS1 priority rating	Major priority	Priority	Priority
SS2 priority rating	Serious priority	Major priority	Serious priority
SS3 priority rating	Priority	Serious priority	Major priority

For the period 2010 – 2013, Strategic Set 1: Building the foundation, was a major priority. From 2014 onwards, it remains a priority, but not a major priority, whereas for the period 2014 – 2017, Strategic Set 2: Innovating on the academic project, especially in the area of STEM, is a major priority, and a serious priority from 2018 onwards. Equally important is Strategic Set 3: Building strategic partnerships (in order to realise internal, regional, national and international goals, especially socio-economic development through regional innovation), which is a serious priority until 2017 and a major priority from 2018 onwards.

The logic of Table 2 above is simple. All three priorities will continue to run concurrently, with different emphases over the years. Firstly, SS1 is crucial

in the formative stage in that, without the academic foundation being firmly in place, we could not begin to even fathom academic excellence. Once that foundation is firmly in place, but also continues to evolve and improve, we could begin to build our strong academic house brick by brick. Ultimately, once we have become fit for our purpose (SS1) and we have strengthened our academic project (SS2), we hope the region, the nation and the entire world will acknowledge our outputs and the outcomes they would have begun to achieve in the broader socio-economic development arena (SS3).

PLANNING AND BUDGETING CYCLE

A refined planning cycle for CUT was approved at the Mancom Planning Workshop of August 2011. This cycle ensures that we plan ahead for the year to follow, and at each workshop, performance is monitored and evaluated. In 2013, we incorporated the budgeting cycle into our planning cycle. We realised then that planning without a close link to resource provision has been sub-optimal. Thus, our refined planning and budgeting cycle ensures that planning informs budgeting, and not vice versa.

MPW-2 (February)

• Presentation and discussion of the refined divisional goals and priorities for each year

• The years divisional goals and priorities are broader than the more specific performance objectives and targets that will be presented at the MPW-3 in May.

MPW-3 (May)

- Presentation of divisional IOP (for the current year) progress reports
- Presentation and discussion of divisional performance objectives and targets for IOP for the following year (including staffing projections).
- MPW-3 has three objectives: the first is to assess the progress made with regard to the implementation of IOP for the current year and to get a sense of the divisional plans for following year.
- The second objective is to discuss the next year's divisional plans (in terms of performance objectives and targets, including staffing projections).
 This discussion is a precursor to the presentation by budget holders of their spending badgets in MPW-4
- The third objective is to begin the institutional budgeting process and the carryover projects would then be considered for funding into the next budget year.

MPW-4 (August)

- Presentation of proposed spending budgets (including staffing proposals) for the next year by budget holders, demonstrating how these enable the achievement of the IOP performance objectives.
- Presentation and discussion of draft Mid-year Performance Report for each year prior to its submission and approval by council in September of each year, and subsequent submission to DHET on 30 November each year.
- The draft budgets for the next year (calculated on the basis of the RAM) would have been circulated to divisional executives/budget holders in July, using the audited HEMIS data for the last year.
- This workshop will also provide an opportunity for management to discuss university priorities for the next year that may require top-slicing of the budget, or cross-subsidisation between budget holders

MPW-1 (October/November)

- Presentation and discussion of progress in relation to the implementation of strategic objectives.
- Discusion and finalisation of APP.
- Priorities for each executive for the following year are finalised in line with CUT's Vision 2020 and strategic thrusts.
- The APP for the current year will be submitted to Council for approval at its November meeting, proir to submission to DHET by 15 December of each year.
- Mancom has to ensure that the other components of the APP are in place. For example, the strategic Risk Register would have to be finalised at the workshop (or soon therafter) to be held in September each year.

VISION 2020 GOALS AND OBJECTIVES

In 2010, Council approved nine institutional goals that, upon revision, have been compressed into five goals.

Table 3: Institutional goals of Vision 2020 compressed into five goals

	Vision 2020 goals (2010 – 2015)	Vision 2020 goals (2016 – 2020)	
UB	Institutional advancement Operational effectiveness, efficiency and quality Campus development	Institutional advancement	
	Teaching and learning	Teaching and learning	
	Research	Research and innovation	
	University life Student experience People	University life	
	Financial sustainability	Financial sustainability	

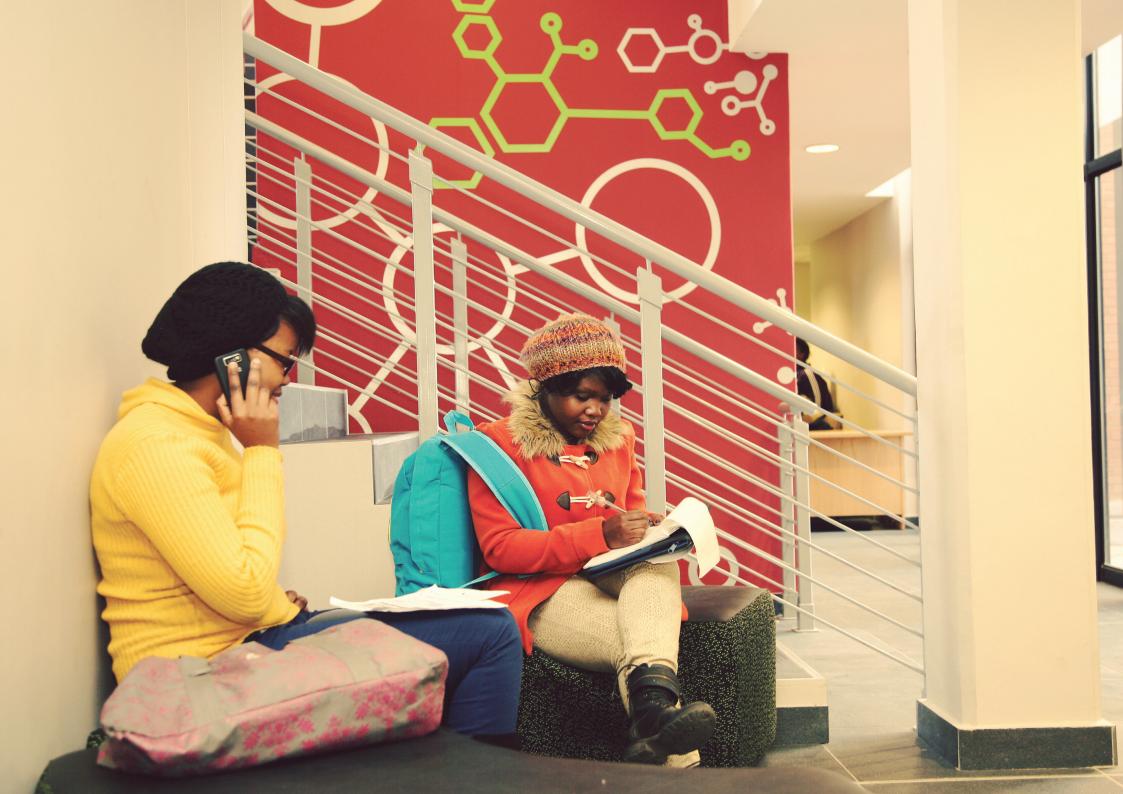
Each of these institutional goals is amplified into strategic objectives, key performance indicators, and targets in ANNEXURE B below. The indicators outlined in this Strategic Planning Framework will inform the development of a technology-enabled performance management tool at institutional level, in terms of which the Strategic Plan can be monitored and evaluated at frequent intervals on a three-year rolling basis. Furthermore, this Strategic

Planning Framework will establish a platform for the development of more detailed and specific operational plans in each of the major executive portfolios of the institution to ensure that the broad directional statements contained in Vision 2020 are given effect in respect of each of the divisions and faculties.

Table 4: Institutional goals and objectives

	STRATEGIC SETS (SS)	GOALS	OBJECTIVES
<u>L</u>	SS3; SS2; and SS1	 Institutional advancement – To continuously advance the concept of a university of technology to all stakeholders. 	 Enhance engagement with business/industry, government and its entities, and the broader community for local and regional development and advanced internationalisation. Embrace the use of innovation and technology to facilitate effective and efficient academic/business processes. Provide a sustainable teaching and learning environment with first-class facilities and infrastructure. Improve and enhance governance and management, and ensure institutional autonomy.
	SS2	 Teaching and learning – To shape the academic future of CUT in such a way that it is of a high quality, niche-focused and differentiated. 	 Instil research-informed teaching and learning. Review the approach to education to facilitate our graduates' entry into the workplace or entrepreneurship. Recruit and support potentially successful students from all backgrounds, especially in areas of Science, Technology, Engineering and Mathematics (STEM) at undergraduate and postgraduate levels (including international students).

-	STRATEGIC SETS (SS)	GOALS	OBJECTIVES
(LI)	SS2	 Research and innovation – To establish CUT as a research-informed university of technology that has distinct pockets of research excellence and value-adding links with government, business, industry and the community. 	 Deliver excellence in all our selected areas of research, with defined peaks of world-leading performance. Employ our social and technological innovation in the socio-economic development of the city and the region.
	SS1	 University life –To create an institution that encourages a diverse, democratic and academic ethos amongst students and staff. 	 Promote organisational well-being by providing a vibrant and a healthy environment. Proactively attract, retain, support, and develop high-quality staff.
	SS1	 Financial sustainability – To ensure financial sustainability. 	 Ensure financial sustainability in all entities and, where applicable, supplement the university's income through third-stream income.



ENVIRONMENTAL ANALYSIS

The university already boasts many achievements (strengths) since its launch of Vision 2020. Many of these can be found in the university's annual reports on http://www.cut.ac.za/ publications/. Our environmental analysis below takes these into consideration. However, concomitantly, it also takes into consideration a number of challenges, threats and weaknesses we face, and how we believe we will overcome them.

STRENGTHS

Student support services reflect the university's commitment to create a vibrant teaching and learning environment for our staff and students. CUT is committed to student success, with an emphasis on lifelong learning and metacurricular experiences aimed at the holistic development of our students. The range of services offered to students includes academic support (including supplemental instruction and student peer mentorship); student counselling and health/wellness services; and support to student governance structures. As part of fostering deeper deliberation and using every engagement opportunity as an avenue for student growth and development, CUT's top Management engages deeply, and actually manages, some of the education and training workshops of the broader student leadership, at least on a bi-annual basis.

The university is faced with some pressing challenges as far as student accommodation is concerned. A total of 830 students are currently accommodated in student residences on the Bloemfontein campus. Given this inadequate ratio of students being accommodated on this campus, and the absence of any (university-owned) student accommodation on the Welkom campus, it is clear that the shortfall in affordable accommodation for students is detrimental to students' experience of university life. Current plans include increasing the number of student beds available on both campuses. The university is presently building new residence facilities – with a total of approximately 300 beds – for students at its Bloemfontein and Welkom campuses, and will continue in its efforts to consider new funding models – via PPPs – to finance the much-needed expansion in student accommodation.



CURRICULUM TRANSFORMATION

As a direct strategic response to Vision 2020 – enhancing the academic project – CUT launched a process entitled the Strategic Transformation of Educational Programmes and Structures (STEPS) process in February 2010. STEPS is a major analytical and interactive (internal and external) review of CUT's philosophy and education; curriculum content and structure; modalities of teaching, learning and support, as well as graduate attributes; and competencies. The process focussed mainly on the revision of the instructional programmes offered to ensure that they are demand-driven and user-oriented. This meant that we had to understand the challenges the world, South Africa and our region face in the areas of, for example, water, energy, etc.

Emanating from the STEPS exercise, nine new demand-driven and user-oriented programmes, aligned with Vision 2020 and its impact-oriented developmental approach, and in partnership with business and industry, were approved by the Department of Higher Education and Training (DHET) in 2013, four of which were implemented in 2014 and another four in 2015. The final one of these programmes will be implemented in 2016.

Moreover, STEPS is more than curriculum reform; it is also a strategy for more effective and efficient academic management for improved delivery of our products. In this respect, STEPS has provided CUT with a new, lean and



flat academic structure consisting of a two-layer system of Deans and Heads of Department (HoDs), as opposed to the previous cumbersome scheme that comprised four layers, namely the Deans, HoDs, Directors of Schools and Programme Heads. With the STEPS project and several other curriculum development initiatives, the relevance, excellence and quality of our academic programmes have improved appreciably.

During our STEPS process, we continued to re-curriculate our programme offerings and align them with the requirements of the Higher Education Qualifications Sub-framework (HEQSF), while phasing out old programmes.

Since 2014, we have embarked on yet another phase of curriculum transformation and development. As much as we could boast new demanddriven and user-oriented programmes, we have not been able to use them to change the face of our city's and region's development. We have now produced an Innovation and Entrepreneurship Education Strategy. This strategy will help us to ensure that we produce increasingly more job creators and entrepreneurs than job seekers. Our region and our country require more and more of our innovations to be turned into useful products and services through entrepreneurship. In developing this strategy and choosing methodologies for entrepreneurship education, we have taken advantage of some of the globally leading programmes and universities in this field.

In partnership with the Free State province, and with many years' support from the Department of Science and Technology (DST), we have established a Regional Innovation Forum, Free State (RIFFS). The DST has been encouraging regions or provinces to develop their own regional innovation strategies that align with the National Innovation Strategy. Through this initiative, we hope to provide fertile ground for students in our entrepreneurship education programmes, enabling them to find space in the regional development arena as they become competent, caring and productive regional citizens.

CHALLENGES AND CONSTRAINTS

STUDENT RECRUITMENT AND ENROLMENT

There are two key elements with regard to the student recruitment and enrolment plans at the university. On the one hand, the university should meet the targets set for enrolment, as set out in the Enrolment Plan agreed with the Minister of Higher Education and Training in 2014. According to this plan, the university has committed itself to recruiting students at undergraduate and postgraduate levels, as indicated in ANNEXURE D, which provides the details by field of study, race and gender for first-time entering students. The university will develop methods and approaches aligned with its Teaching and Learning Plan in order to ensure that the students it recruits have the academic potential and skill sets they need to succeed.

STUDENT ACCESS, RETENTION AND SUCCESS

One of CUT's major obligations to the DHET is addressing the retention of students or drop-out rates. Retention has many dimensions, but it can be summarised as the prevention of student attrition, especially 25% of first-year students who do not return to their university studies after the first semester or year of study, and those who do, but who eventually do not graduate.

Students' poor performance at university is often linked to their under-preparedness for higher education studies, and the most common, but highly debilitating, aspect of such under-preparedness is their academic literacy. In this context, academic literacy is regarded as knowing how to speak and act within a particular discourse, and the reading and writing that occur within the academic discipline at large and within particular fields. These are tools through which to facilitate learning. While some students acquire academic literacy by virtue of their participation in the discourse of the relevant discipline, this is not always the case for students who are less prepared for higher education studies.

The student success rate is directly linked to the graduation rate. Although the current average graduation rate of CUT is 24%, which makes it one of the highest graduation rates in the higher education sector, it is imperative that the university puts measures and systems in place to maintain and improve its graduation rate.

RESEARCH AND DEVELOPMENT

Although the tables approved by the Minister of Higher Education and Training provide for 2.98% of postgraduate students to be at master's and doctoral level by 2020, CUT is seeking to increase this to 5% of the total headcount enrolment at this level by 2020. There is ample evidence from various national and international sources that South Africa is debilitatingly deficient at higher levels of academic achievement. In our view, 5% is too low to suggest any mission drift for CUT. We are also aware of studies that suggest that unemployment increases many times (in some studies quoted at approximately 15%) for students with diplomas as opposed to those with degrees (quoted at approximately 5%). Thus, resigning our diplomates to just that and making it more challenging for them to aspire to be real graduates is counter-productive in our broader economy.

The university is committed to increasing its research production each year. Strategies to enhance research capacity include improving the qualifications of instructional/research staff, particularly at doctoral level, and mentoring young and emerging researchers with respect to writing for publication in journals.

One of the major challenges at CUT is increasing the research outputs of publications in the form of articles, conference proceedings and books. CUT recorded 0.49 research outputs per instructional/research staff member in 2013. The aim is to increase this to a minimum of 0.75 by 2020, although the target set by the DHET is 1.1 outputs per instructional/research staff member. In terms of the six UoTs, Tshwane University of Technology (TUT) leads the sector, while CUT recorded the second-highest per capita research

outputs in 2013, regardless of its relative size. CUT produced only 0.5% of the total research outputs of the 23 universities in 2013. In order to be a true university in the higher education sector in South Africa, this percentage should increase to at least over 1% by 2020. Furthermore, CUT has all the potential to be the leading UoT in terms of research outputs, to be in the list of the top 15 universities in terms of research performance, and to have at least three world-class research centres established by 2020.

We are starting to see a change in the field of research and innovation. We have recently been awarded the DST/NRF Chair in Medical Product Development through Additive Manufacturing – something not many UoTs and traditional universities can boast about. Through our own investment over the years, we now have a strong team consisting of national and international researchers in this field, as well as state-of-the-art equipment that no university in this country has. In August 2015, the NRF awarded us the NRF Excelleration Award for a most improved university in terms of research outputs.

In order to escalate our research project, it is critical that the seniority of academic staff be improved. Currently, 30% of our academic staff members have doctoral degrees, which is quite competitive in relation to our sister UoTs and even some traditional universities. The aim is to increase this to 50% by 2020. Furthermore, to increase the pool of master's and doctoral students, the university requires a suitable number of associate professors and professors. In June 2015, only 36 instructional/research staff held the rank of professor, which is less than 13% of the academic staff complement. The aim is to increase this portion to 25% by 2020.

In line with Vision 2020, it is imperative that the university increases its social and technological innovations. Therefore, the enhancement of innovation activities at CUT and the roll-out of funding initiatives are of paramount importance in this regard. The university should develop and implement a rigorous CUT research, innovation and entrepreneurship chain. In addition, sourcing external

funding and partnerships, which will include close associations with all external stakeholders, is an important success factor. The goal is that the university registers 20 new patents/designs and/or trademarks for the period 2015 to 2020.

THREATS

ECONOMIC COMPETITIVENESS, GROWTH AND DEVELOPMENT

The world is currently experiencing one of the deepest global economic slowdowns in generations. In 2014, South Africa's growth continued to slow down, recording only 1.5% – the weakest performance since the global financial crisis. What began as a financial crisis in a handful of industrialised economies continues to spill over into the real economy, engendering massive contractions in consumer demand, rising unemployment, and mounting protectionist pressures world-wide. Developing countries have not been spared from its fall-out, and many are facing a decreasing demand for their export products along with falling commodity prices, significant reductions in foreign investment, and a more general liquidity shortage. Policymakers are presently struggling with ways of managing these new economic challenges, while preparing their economies to perform well in a future economic landscape characterised by growing uncertainty. In a difficult global economic environment, it is more important than ever for countries to put strong fundamentals in place, underpinning economic competitiveness, growth and development. Competitive economies are those that have factors in place that drive the productivity enhancements on which their present and future prosperity is built.

Since 2005, the World Economic Forum (WEF) has based its competitive analysis on the highly comprehensive Global Competitiveness Index (GCI), which captures the micro- and macro-economic foundations of national competitiveness. WEF defines competitiveness as the set of institutions, policies and factors that determine the level of productivity of a country, including factors such as infrastructure; macro-economic stability; health and primary education; higher education and training; labour market efficiency; and innovation. While South Africa ranked 56th overall out of 144 countries in 2015, its innovative potential could be at risk with a university enrolment rate (ranked 93rd) of only 19.2%. South Africa also performed poorly in terms of the quality of Science and Mathematics education (ranked 144th) and the availability of scientists and engineers (ranked 102nd). The business costs of crime and violence (ranked 133rd) do not contribute to an environment that fosters competitiveness. Another major concern remains the health of the workforce, ranked 127th out of 144 countries – the result of high rates of communicable diseases and poor health indicators more generally (WEF, 2015).

CUT's drive towards innovation and entrepreneurship education should be regarded in this light. As a university of technology, we can no longer rest on our laurels about the good academic programmes we offer and the well-educated and well-trained graduates we produce. However, we have directly contributed towards our city and region's development to ameliorate the deleterious effects of the global economy.

UNEMPLOYMENT, POVERTY AND INEQUALITY

In most middle-income countries, growth in per capita income is accompanied by widespread improvements in standards of living, and therefore social indicators. In South Africa, by contrast, social indicators remain relatively poor, largely due to the fact that the unequal distribution of income has prevented large sections of the population from sharing in the benefits of economic growth. While 13 million people have now been included in the safety net of social grants, poverty remains a deep and daunting challenge. Among our largest challenges are unemployment and poverty, with approximately 40% of South African households still living below the poverty line, estimated by the Treasury to be approximately R480 per person per month (PricewaterhouseCoopers, 2014).

Poverty and unemployment are closely linked: Those who are unemployed are likely to be the poorest of the poor. The Statistics South Africa Quarterly Labour Force Survey (Statistics South Africa, 2014) revealed that the unemployment rate has reached critical position. It was measured at 53.6% in 2013, and in 2014, youth comprised 41.8% of the total national unemployment rate of 25.4%. Unemployment is also closely linked to a lack of skills and education. The less skilled or qualified a person, the lower his or her chances are of finding decent work. The unemployment rate among those with university degrees is only 3%, while for those with Matric it is 28%, and for those without Matric it is over 60%. Furthermore, it is concerning to note that more than half of the people between the ages of 20 and 24 years are unemployed. The demographic, "youth bulge" is likely to pose even more severe problems later on, in terms of labour market supply and social

cohesion, as the generation of unskilled, unemployed youth grows older. Furthermore, one of the most undesirable outcomes of youth unemployment is the rapid rise of crime and substance abuse in South Africa. This is underscored by the Poverty Hearings, conducted by the African Monitor in 2008, linking youth unemployment and an increase in crime (PricewaterhouseCoopers, 2014).

Given the new challenges arising from the dramatic changes in the global economic environment, the main focus of the Presidency's Medium-term Strategic Framework (MTSF) is to minimise the impact of the economic downturn on the country's productive capacity as well as job and poverty reduction measures, to identify opportunities for new areas of growth and economic participation, and to promote greater equity and social cohesion. To this effect, education and skills development, particularly among our unemployed youth, education or training will play a significant role in preventing the intergenerational transmission of poverty by enabling the poor to obtain gainful employment and to engage meaningfully in economic and political processes. Although South Africa is one of the biggest spenders on education in the world – investing roughly 5% of its gross domestic product – it has one of the poorest-performing education systems in the world. Within this context, CUT needs to be mindful of the ravages of poverty, unemployment and social inequalities when planning for the future – in particular the impact these social ills have on access to higher education and the chances of success for students who originate from poverty-stricken communities in the Central region and beyond.

OPPORTUNITIES

In the 21st century, the job market and the overall nature of careers have changed. The challenge that is shared by all universities is to help generate intellectual property that can create new jobs, and to train people in fields that are most relevant in addressing the needs of today's economy. Entrepreneurship education has continued to feature as a captivating theme in local summits and international conferences, because of its potential as a tool for mitigating unemployment and other socio-economic challenges inhibiting sustainable development world-wide. Institutions must intensify the integration of entrepreneurship in their educational programmes.

CUT seeks to transform its entrepreneurship education, aligned with the university's vision of becoming a robust agent for innovation and socio-economic development in the Central region and South Africa as a whole.

STAKEHOLDER ANALYSIS



Our stakeholders – our students, staff, alumni, external sponsors and partners, including government, business and industry and other non-governmental organs of society – expect us to:

- deliver quality learning and teaching from academics at the cutting edge of knowledge;
- produce exceptional graduates who become the leaders of tomorrow;
- provide a stimulating environment that supports personal development;
- provide lifelong membership of a network and community that continually adds value;
- be a vibrant, diverse community, contributing to equitable citizenship and nationhood;
- sustain a reputation for delivery and professionalism; and
- produce leading-edge research, technology transfer and innovation.

As reported above, CUT plays a major role in our region to enhance collaboration amongst all stakeholders through the Free State Regional Innovation Forum and a plethora of other initiative in which we are involved. A number of collaborative initiatives in the areas of human resources development and regional innovation are in the pipeline.

STRATEGIC OUTCOMES: YEARS 2016 - 2020 Essentially, our Vision 2020 implores us to become an "isle of innovation" in our region, and perhaps in our country. The acronym "isle" represents the following values, practices and outcomes that we wish to embed as our way of life at CUT:

Innovation:

The main focus of our academic, research and skills development programmes will be social and technological innovation.

Impact and outcomes:

We will have definable factors to measure tangible outcomes, rather than systems and processes being regarded as ends in themselves.

Socio-economic development:

CUT chooses an active approach, and socio-economic development will be the ultimate outcome of our endeavours.

Location:

The uniqueness and resources of our location provide us with a comparative advantage that we should exploit to the fullest; and

Excellence:

The most important drivers of a successful organisation are quality and excellence.

As is clear from the above, we value and cherish our location as a comparative advantage we seek to turn into a competitive advantage. We regard our ultimate value as contributing to our city and region's development through innovation and entrepreneurship. We regard our value as not just being involved in the run-of-the-mill academic activities, but producing outcomes and making an impact in our region.

CONCLUSION & REFERENCES

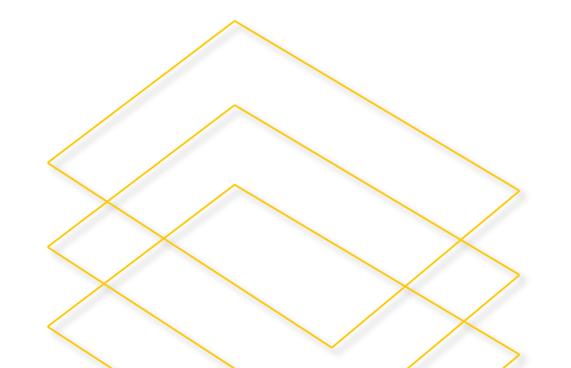


CONCLUSION

As we continue to make considerable progress in pursuing the implementation of our Vision 2020, there are key parts of CUT's vision that continue to be vital for our success. We must keep a very strong focus on these, which include the following: Our singular and powerful emphasis on the quality of our programme offerings; engagement for mutually beneficial development; attracting and retaining expert staff, and supporting their development and well-being; and leap-frogging forward through strategic partnerships with top institutions, both locally and abroad.

REFERENCES

PricewaterhouseCoopers. (2014). Global Economic Crime Survey: Confronting the changing face of economic crime. Statistics South Africa. (2014). Quartely Labour Force Survey. WEF. (2015). The Africa Competitiveness Report 2015. Geneva, Switzerland. http://www.cut.ac.za/publications/



ANNEXURES

ANNEXURE A: INSTITUTIONAL STRATEGY MAP

purpose	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. As an institution, we strive to create, advance and disseminate knowledge and understanding; educate and develop outstanding graduates and scholars; and make a social, economic and technological impact.						
	Our stakeholders – our s society – expect us to do		, external sponsors and	l partners, including gover	rnment, business and indu	ustry and other non-gove	ernmental organs of
	Deliver quality learning and teaching from academics at the cutting edge of knowledge.	Produce exceptional graduates who become the leaders of tomorrow.	Provide a stimulating environment that supports personal development.	Provide lifelong membership of a network and community that continually adds value.	Be a vibrant, diverse community contributing to equitable citizenship and nationhood.	Sustain a reputation for delivery and professionalism.	Produce leading- edge research, technology transfer and innovation.
sets (SS)	SS1: Building the foundation to make CUT fit for purpose (internal values, relations and organisational design and transformation).		SS2: Innovating on the our PRODUCT).	academic project, espec	ially in STEM (sharpening	SS3: Building strategic (to realise internal, reg and international goals economic development innovation).	ional, national , especially socio-
objectives	Embrace the use of innov technology to facilitate ef academic/business proc Review the approach to e our graduates' entry into entrepreneurship. Employ our social and ter innovation in the socio-ec of the city and region.	ffective and efficient cesses. education to facilitate the workplace or chnological	international students). Deliver excellence in all our selected areas of research, with defined peaks of world-leading performance.				
enablers	of the city and region.Ensure financial sustainability in all entities and, where applicable, supplement the university's income through third-stream income (utilising our PENNIES or financial resources wisely to deliver first-rate education – internal financial resources).Align academic and financial sustainability in all departments and centres. Grow and diversify sources of profitable income to invest in our future.Provide a sustainable teaching and learning environment with first-class facilities and infrastructure (utilising our PENNIES or financial resources wisely to deliver first-rate education – internal and external financial resources).		performance (executin processes). Deliver effective, efficie Improve and enhance i autonomy.	esses that have an impact g our robust PLAN – polic ent and standardised proc institutional governance, a I well-being by providing a	cies, systems and cesses. and ensure institutional	Deliver institutional stra (inspiring PEOPLE to ex their responsibilities – growth). Proactively attract, ret develop high-quality sta	cel in discharging learning and ain, support and
Values	Customer service	Diversity	Excellence	Innovation	Integrity		

ANNEXURE B: STRATEGIC PLANNING MATRIX



STRATEGIC S	SET 2:	INNOVATING ON THE	academic project, e	ESPECIALLY IN STEM		
Perspective GOAL 2			Key performance	Strategic objective		Strategies
			indicators	Baseline (2014)	2020	
Stakeholders/ partners	LEARNING: To shape the	 Instil research- informed teaching and learning. 	a) Success rate (in accordance with the Academic Plan).	76.5%	79.0%	- Ensure access with success through student support programmes.
	academic future of CUT in such 2. Reviewing the approach to education to facilitate our graduates'	approach to education to facilitate our graduates' entry into the workplace	b) Graduate attributes fully implemented by 2020.	54.09% (1123 of 2076)	80%	 Develop remedial teachi Change the methodology used. Change in academic activities (introduction of entrepreneurship education).
	differentiated.	3. Recruit and support potentially successful students from all backgrounds, especially in areas of Science, Technology, Engineering and Mathematics (STEM) at undergraduate and postgraduate level (including international students).	a) 100% student intake with an M score of 27 or higher (of which 50% should be 32) by 2020.	M score of 27 or higher (46.78%) i.e. 1726 f 3690; M score of 32 (12.03%) i.e. 480 of 3990	M score of 27 (50%); M score of 32 and more (50%).	 Develop co-operation with colleges in order to attract good graduates. Implement the
			b) Increased student intake of first-time entering students at undergraduate level and full-time Masters and Doctoral students	- First-time entering = 13044 i.e. 99.20% of 13149 - Masters = ? - Doctoral = ?	Entry criteria determined and implemented.	recruitment strategy - Increase funding for postgraduate students
			c) Enrolment targets met as set in the Academic Plan	- STEM = 43.90% - BUS/MAN = 24.50% - Education = 16.20% - OTHER HUM =15.30%	 STEM = 46.6% (7619 of 16340) BUS/MAN = 23% (3758 of 16340) Education= 15.7% (2568 of 16340) OTHER HUM = 14.3% (2395 of 16340) 	
0			d) 50% of students entering undergraduate/ postgraduate programmes complete those programmes in the minimum time by 2020.	30%	50%	 Increased student support through extend programmes, supplemental instruction and mentorship programmes

STRATEGIC S	SET 3:	BUILDING STRATEGIC ESPECIALLY SOCIO-EC	PARTNERSHIPS (TO REALISE I ONOMIC DEVELOPMENT THRO	NTERNAL, REGIONA UGH REGIONAL INN	l, nation Ovatio <u>n).</u>	AL AND INTERNATIONAL GOALS,	
Perspective GOAL 1		Strategic objective	Key performance indicators	Strategic objective		Strategies	
				Baseline (2014)	2020		
partners ADVANCEMEI To continuous advance the concept of a university of	ADVANCEMENT: To continuously advance the	industry, government and its entities, and	a) Improve brand awareness by 30% of the baseline by 2020.		30% of the baseline.	internationally and especially the continent.	
	university of technology to all	the broader community for local and regional development and advanced	b) Achieve objectives as set in the Internationalisation Strategy (ANNEXURE E).		100%	 Strengthening relationships with dominant feeder schools, and including students from the Southern African Development Community (SADC) region and beyond. Identification of quad-helix partners. Enhance the marketing of specific, niche 	
		internationalisation.	c) 100% increase in the number of active memorandums of understanding (MoUs) by 2020.	24	100%	 academic programmes of faculties. Building a strong relationship with alumni. Promoting and monitoring the image of CUT as a UoT. Implementing effective and efficient marketir and recruitment strategies. 	
Internal processes		 Embrace the use of innovation and technology to facilitate effective and efficient academic/business processes. 	a) 80% fully automated on-line business processes and systems that deliver results, by 2020.	50%	80%	 Ensure that all students in need of work experience to complete their qualifications obtain work placement. Provide career development training/job- hunting skills to all CUT students. Liaise and link students/graduates with industry. 	
		6. Provide a sustainable a teaching and learning environment, with	b) 20% of all advanced diplomas and postgraduate diplomas are accessible to flexible mode of learning, by 2020.	0%	20%		
			a) 100% equipped and fully maintained facilities, by 2020.	50%	100%	- Creating the desired building, technology and laboratory infrastructure in support of the desired programme and qualification mix	
			b) 20% of all advanced diplomas and postgraduate diplomas are accessible as blended learning, by 2020.		20%	(PQM). - Creating a value-adding student infrastructure. - Ensuring optimal utilisation of campus resources.	
Learning and growth		 Improve and enhance institutional governance, and ensure institutional autonomy. 	a) Application and explanation of all principles of King III, by 2020.		100%	- Develop and implement the governance frameworks.	



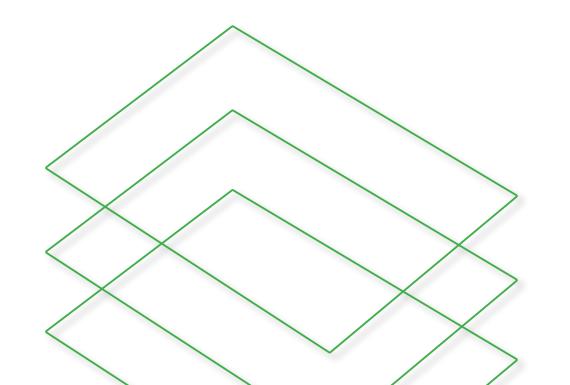
STRATEGIC SET 2:		BUILDING STRATEGIC PARTNERSHIPS (TO REALISE INTERNAL, REGIONAL, NATIONAL AND INTERNATIONAL GOALS, ESPECIALLY SOCIO-ECONOMIC DEVELOPMENT THROUGH REGIONAL INNOVATION).							
Perspective	GOAL 3	Strategic objective	Key performance	Strategic objecti	ve	Strategies			
			indicators	Baseline (2014)	2020				
Internal processes	RESEARCH AND INNOVATION: To establish CUT as a research- informed university of technology that has	of research, with defined peaks of world-leading	a) Achieve 100% of all targets set in the Research and Development Plan (ANNEXURE F).	- Publications = 87 - M Degrees = 37 - D Degrees = 13 - NRF Rating = 9	100%	 Establishing long-term mutually beneficial research partnerships with business and industry. Align research outputs with community engagement for mutually beneficial 			
	distinct pockets of research excellence and value-adding links with government, business and industry.	performance.	b) Increase the amount of external research funding, according to set targets as per the Research and Development Plan.		R20 000 000	development. - Enhance staff competence for postgraduate supervision. - Enhance funding opportunities to attract suitable doctoral students. - Invest in research infrastructure.			
		 Employ our social and technological innovation in the socio- economic development of the city and the region. 			100%	 Support research staff to write conference papers and publications to increase research outputs. Recognise and reward excellence in research and innovation. Develop a diverse and excellent cadre of young academics through succession planning, and by increasing the pool of doctoral graduates and postdoctoral fellows. 			



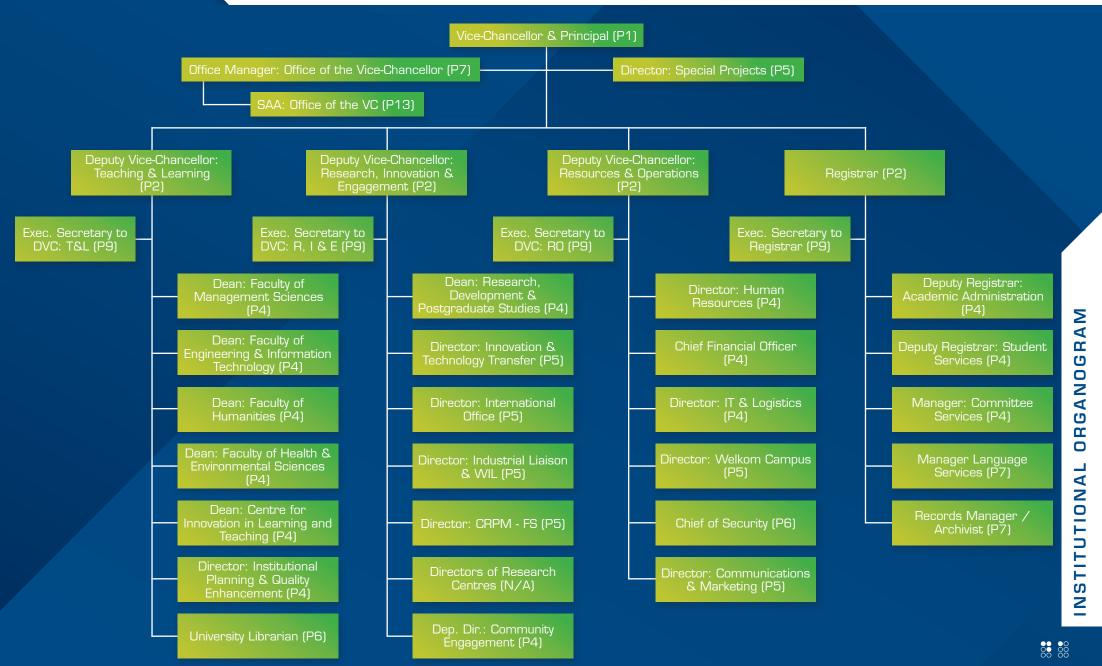
STRATEGIC SET 1:	STRATEGIC SET 1:		Dation to make CU1 Sign and transfof	r fit for purpose (Rmation).	(INTERNAL VALUI	es, relations and
Perspective	GOAL 4	Strategic objective	Key performance	Targets		Strategies
-		-	indicators	Baseline (2014)	2020	
Internal processes	UNIVERSITY LIFE: To	1. Promote	a) Staff satisfaction	55%	70%	- Promote scholarship
	create an institution that encourages a diverse, democratic and academic ethos amongst students and staff.	organisational well- being by providing a vibrant and healthy environment.	a) Student satisfaction	97.9%	99%	across all university engagements. - Promote tolerance of diversity in all institutional activities. - Diversity tolerance programme for staff, including all forms of racism and intolerance, i.e. HIV/Aids, gay rights, xenophobia, people with disabilities, etc. - Organise and convene workshops, seminars and colloquia.
Learning and growth		 Proactively attract, retain, support and develop highquality staff (talent management). 	a) Implementation of the Talent Management Plan, by 2020.	None	100%	 Targeted recruitment practices. Targeted scarce skills programme. Development programmes for all
			b) Implementation of a functional performance management system.	System implemented, but needs to be revised.	100%	 existing staff. Recruitment and retention of people with disabilities. Encourage and support instructional staff to upgrade their qualifications to master's and doctoral levels. Clearly defined promotional opportunities.



STRATEGIC SET 1:		BUILDING THE FOUNDATION TO MAKE CUT FIT FOR PURPOSE (INTERNAL VALUES, RELATIONS AND ORGANISATIONAL DESIGN AND TRANSFORMATION)						
Perspective	GOAL 5	GOAL 5 Strategic objective K		Targets		Strategies		
			indicators	Baseline (2014)	2020			
Finance	FINANCIAL SUSTAINABILITY: To ensure financial sustainability.	 Ensure financial sustainability in all entities and, where applicable, supplement the university's income through third-stream income. 	 a) Increase third- stream income to 10% of the total income by 2020. b) Effective and efficient use of resources with budget parameters. 	R17 million Resources Allocation Model (RAM) developed and implemented in the faculties.	10% of the university budget. Full implementation	 Create a focussed vehicle for third- stream income activity. Exercising sound financial control. Increasing reserves and investments. Enhancing fund- raising. Implementing a financial turnaround strategy. 		



ANNEXURE C: INSTITUTIONAL ORGANOGRAM



ANNEXURE D: CUT REVISED ACADEMIC PLAN 2014 TO 2020



GOVERNANCE BACKGROUND

- 1. The Academic Plan 2014 to 2020 is compiled as an important element of good corporate governance within the Central University of Technology, Free State (hereafter CUT or simply the University). As a public higher education institution, the University is legally committed to support the human capital development commitments of the Department of Higher Education and Training (hereafter, the Department or DHET) most of which were presented for public comment and engagement in the Green Paper for Post-secondary Education and Training (January 2012). This plan outlines the University's commitments arising from this legal commitment.
- 2. Moreover, the Academic Plan would have to be revised and updated whenever the Department revises their human capital development commitments and/or CUT's own strategic priorities changes. In this regard, the Academic Plan was formulated as the foundation to realize Vision 2020, which commits the University to the following.

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.

3. Going forward it is important to note the Department's intentions, including its ongoing commitment to three-year rolling plans with the next cycle to be effective from the 2014 academic year and its intentions for quarterly progress monitoring reports. The last intention would require that CUT considerably improve the integrated reliability of its academic administration.

GOVERNANCE BACKGROUND

- 4. The significant factors of the current regional and national context for the Academic Plan are as follows.
- 4.1. Regionally and nationally we have a depressing short-to-medium socio-economic context with increasing unemployment, especially among the youth. In this regard, the Academic Plan envisages sizeable growth in student-places as a temporary alternative to unemployment.
- 4.2. Fortuitously we still have the financial ability to invest in human and intellectual capital development, especially in areas with the potential for stimulating and sustaining faster economic and employment growth. The available public investment channeled through the University in the form of grants must therefore be used efficiently and effectively to advance faster economic and employment growth.
- 4.3. Lastly, the public pre-university education and training system is curtailed in its abilities to produce university-ready students with increasing participation in Science, Technology, Engineering and Mathematics (hereafter STEM). While the University will through selected projects support the pre-university education and training system, the University will have to improve the range and quality of its student academic support provisioning.

- 5. The Academic Plan was framed within the following general institutional context.
- 5.1. Firstly and as a strategic re-orientation informed by Vision 2020, the Academic Plan responds to our commitment to improve the impact/outcome of the academic project. In this regard, the University has already initiated and established a range of well-researched initiatives and this plan aims is to improve the integrated quality of these initiatives.
- 5.2. Secondly and as a matter related to the restructuring process which started in 2009, the University is nearing the conclusion of its Strategic Transformation of Education Programmes and Structures (STEPS) process. Apart from re-organization, revised curriculum development processes were tested and adopted, and there are several new or revised learning programmes at different stages in the pipeline.
- 5.3. Thirdly, the Department is in the process of concluding the last stage of a three stage public higher education infrastructure development programme. Under this programme the University has made several commitments supporting its infrastructure grant applications. These commitments will roll-over into the student enrolment planning for the coming years.

- 5.4. Fourthly, the University is also reviewing, updating and developing its resource allocation systems and processes. The overall aim is to improve resource efficiency and effectiveness. In response to this, the Academic Plan is therefore also founded on an institution-wide commitment to modest resource efficiency and effectiveness improvements.
- 5.5. CUT's previous strategic academic planning priorities were to slow-down the rapid student growth since 2004 and increase STEM student growth on the input side as material pre-conditions for improving student pass and completion rates on the output side. The University made remarkable progress:
 - (a) On the input side, CUT's total share of the higher education population decreased from 1.59% (2009) to 1.49% (2013) and its STEM student participation level grew however inconsistently to 43.7% currently1 but still well short of the 2013 target of 49.5%.
 - (a) On the output side, the most recent pass rates improved to 75.8% (2011) and our graduation rate erratically improved to 22.18% (2011).



6. Consistent with its current cooperative governance commitment, the Academic Plan is the product of several iterative consultation processes, some of which must still be concluded leading up to the Senate and Council meetings. It started with a draft proposal for input by the DVC: Academic, this rolled-forward as a draft proposal for input by the DVC: Academic and the Deans, which rolled-forward as a draft proposal for input from the Faculties and finally rolled-forward to the other divisions in order to solicit their commitment to the integrated support priorities.

- 7. The Academic Plan was structured in such a manner that it could link-up and support its commitment to performance management. This required that the Academic Plan take into account the structural arrangement of the different functional responsibilities. The document structure is therefore as follows.
- 7.1. The Academic Plan 2014 to 2020: This is the principal document and it articulates student enrolment, research and innovation priorities and also programme-and-qualification mix priorities targets. At the end the document has expanded data (pp 11 to 13) to the tables included in the main document.
- 7.2. Annexures: Annexures 1 to 4 (pp 14 to 21) consists of the faculty planning targets arising from the important tables in the Academic Plan. Annexure 5 (pp 22 to 24) consists of the key areas of the Academic Plan's supporting priorities as well as measures and 2020 targets. As indicated, most of these measures and targets are aimed at improving the quality of current initiatives.
- 8. Insofar as possible the Academic Plan uses the 2011 comparative data where historical performance is particularly relevant because this year's data is the last completed audited academic statistics. In other instances the August 2012 comparative data is used which is unaudited.

STUDENT ENROLMENT TARGETS

STUDENT ENROLMENT TARGETS

9. Strategic aims: CUT' student enrolment must continue to grow to fund its growing fixed expenditure and the following are key integrated elements directing the growth up to 2020.

- Reducing the proportion of the "unfunded" student cohort while continuing to grow.
- Growing the STEM participating cohort to 46.6% (after renegotiating the current target of 49.5% downwards).
- Improving and sustaining our student participation equity.
- Improving access by extending the foundation student intake.

FOUNDATION STUDENT INTAKE



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TABLE 1 ² : STUDENT HEADCOUNT ENROLMENT AND SIZE BY STEM AND EQUITY							
	2012	2014	2016	2018	2020		
Student headcount enrolment	12724	13149	14240	15373	16000		
STEM headcount enrolment	5585.5	5857	6518	7183	7460		
African	85.68%	84.70%	83.00%	81.20%	81.20%		
Coloured	3.77%	3.90%	4.10%	4.30%	4.30%		
Indian	0.35%	0.40%	0.40%	0.50%	0.50%		
White	10.20%	11.00%	12.50%	14.00%	14.00%		
Male	52.22%	51.70%	50.30%	49.00%	49.00%		
Female	47.78%	48.30%	49.70%	51.00%	51.00%		

10. AP outcome 1: By 2020, the following would be the student headcount enrolment targets.

² Refer to the expanded table at the end, noting that historic figures up to 2012 include both funded and unfunded students.

11. AP Outcome 2: The 2020 student headcount enrolment shape targets are as follows.

	TABLE 2 ³ : STUDENT HEADCOUNT ENROLMENT SHAPE BY BROAD STUDY FIELD AND QUALIFICATION TYPE								
ĹΒ	2020								
		DIPLOMA, CERTIFICATE	FIRST BACHELORS	POSTGRADUATE LESS THAN MASTERS		DOCTORAL	Row totals		
	STEM	35.59%	7.23%	2.08%	1.35%	0.37%	46.62%		
	Business and management	18.71%	3.94%	0.00%	0.25%	0.10%	23.01%		
	Education	0.37%	10.13%	4.62%	0.30%	0.25%	15.68%		
	Other humanities	9.28%	5.12%	0.07%	0.17%	0.07%	14.71%		
	TOTAL	63.95%	26.42%	6.77%	2.06%	0.80%			

³ Refer to the expanded table at the end, noting that historic figures up to 2012 include both funded and unfunded students. The undergraduate split will change due to new qualification articulation.

TABLE 3⁴: ALIGNED TO CUT'S INTERNATIONALIZATION COMMITMENT, AT LEAST 10% OF OUR STUDENTS WOULD BY 2020 BE FOREIGN (MOSTLY FROM AFRICA, PREDOMINANTLY SADC).

	2012	2014	2016	2018	2020
Student headcount enrolment	12724	13 149	14 240	15 373	16 000
Foreign students	574	745	1087	1429	1600

⁴ Refer to the expanded table at the end, noting that historic figures up to 2012 include both funded and unfunded students.

STUDENT ACADEMIC PERFORMANCE

- 12. Strategic aims: The key integrated student academic performance aims are to improve the pass and graduation rates and by implication, reduce the completion time of all qualifications and thereby offering more people quality public higher education opportunities.
- 13. AP Outcome 4: By 2020, CUT will improve its pass rates to 77.76%, graduation rates to 25%. These performance targets would require that the academic load per student head improves to 0.81 FTE's

TABLE 4 ⁵ : STUDENT ACADEMIC	PERFORMANCE BY	FTE ENROLMEN	T, PASS RATE AND) graduates		
	2011	2012	2014	2016	2018	2020
FTE enrolment	9 764	9745	10177	11093	12052	13000
Graduates	2 805	3159	3307	3442	3837	4142
Pass rates	75.80%	76.71%	74.94%	76.09%	77.25%	77.76%

⁵ Refer to the expanded table at the end, noting that historic figures up to 2012 include both funded and unfunded students.

14. Provisional lead fund #1: In support of these student enrolment and performance outcomes, the following provisional lead fund would be provided (subject to CUT budget):

	TABLE 5: PROVISIONAL LEAD FUND #1								
IÎ TA	2013 for 2014 ('mil)	2014 for 2015 ('mil)	2015 for 2016 ('mil)	Primary aims: Providing the transitional human and other resources to support the student					
	R 13.354	R 12.817	R 12.320	enrolment growth and student performance improvement targets					

These funds would be applied under the direction of the executive-in-charge but subject to Mancom approval of the proposed annual budgets.

RESEARCH AND INNOVATION IMPROVEMENTS

- 15. Strategic aims: The key integrated improvement elements would be to improve:
 - The quality and quantity of research and innovation output, especially in social and technological innovations that advance Vision 2020. Among others, this would require improving the research and innovation impact on developing CUT's comparative advantages in human, technology and economic development.
 - The sustainability of and talent management within Vision 2020 high-impact/outcome niche research and innovation areas.

16. AP outcome 5: By 2020, the following research and innovation targets would be achieved.



TABLE 6: RESEARCH AND INNOVATION PERFORMANCE TARGETS		
MEASURE	CURRENT TARGET / STATUS	2020 TARGET
16.1. Percentage of postgraduate student residency period spent at an accredited foreign partner institution, preferably within SADC; the time spent could be for project or course work, including online coursework.	Not measured	15%
16.2. Research output credits per fulltime equivalent instructional/research professional	0.1603 Year 2011	0.721
16.3. Percentage of grants secured for research projects, including partner research projects, funding needs of "mature niche research areas". The executive-in-charge must define the human and intellectual input and output characteristics of "mature niche research areas"	Not measured	25%
16.4. Number of biennial international or national academic events with at least 70% external attendance-paying participation per "mature niche research area"	Not measured	1

As before, these funds would be applied under the direction of the executive-in-charge but subject to Mancom approval of the proposed annual budgets.

PROGRAMME-AND-QUALIFICATION-MIX

- 15. Background to strategic aims: The aims to be advanced are informed by the understanding that:
 - CUT's primary impact on regional and national human capital development in support of socio-economic development would be through its programme-and-qualification-mix (PQM).
 - It PQM is therefore a primary avenue for facilitating and delivering the impact/outcomes of Vision 2020.
 - As an important resource efficiency commitment, CUT must contain and slow-down the high establishment/ phasing-in, maintenance and closing/ phasing-out cost associated with a multiplicity of "low participation" qualifications.
 - CUT has been and will be the recipient of several Department "infrastructure and efficiency grants" based on specific undertakings. During this planning timeframe CUT is expected to make good these undertakings.
- 19. Strategic aims: The key integrated elements of CUT's aims are to advance and implement the outcomes of STEPS and also respond effectively to the plethora of matter arising from the aforementioned commitments.

20. AP outcome 6: The following measures and 2018 targets would guide the on-going development of CUT's PQM development.



TABLE 8: PQM DEVELOPMENT TARGETS

	CURRENT	2018
20.1. Number of STEM undergraduate qualifications with less than 40 students per year of study, i.e. ±100 students across all years of a 3-year qualification	9 ⁶	0
20.2. With the exception of qualifications being phased-in-or-out, the number of all undergraduate qualifications with less than year -level- cohorts of 40 students (i.e. ±40 students within a 1-year qualification, ±70 students within a 2-year qualification and ±100 students within a 3-year qualification)	27	0
20.3. Percentage of full-time enrolled students enrolled in qualifications only offered at Welkom Campus	0.4%	1.5% ⁷
20.4. Percentage of "mature niche research areas" offering specialized undergraduate and/or postgraduate less than master qualifications	Not measured	50%

⁶ A qualification is classified as STEM if more than 50% of its FTE credits are in STEM. ⁷ The percentage is measured over the total CUT student headcount.

21. Provisional lead fund #3: In support of these PQM measures and targets, the following provisional lead fund would be provided (subject to the CUT budget) and in addition to the funds already approved for PQM development over 2012 to 13:

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TABLE 9: PROVISION	AL LEAD FUND #3			
2014 for 2015 ('mil)	2015 for 2016 ('mil)	2016 for 2017 ('mil)	2017 for 1018 ('mil)	Primary aims: To provide for the transitional human and other resources needed to achieve the PQM development guidelines
R 10.400	R 11.960	R 13.760	R 15.820	

As before, these funds would be applied under the direction of the executive-in-charge but subject to Mancom approval of the proposed annual budgets.

RESOURCE ALLOCATION

22. As mentioned, the University does not have a Resource Allocation Model (RAM) because, such a model would essentially be driven by normalized costing of expenditure as well as distribution of income which could only be achieved with a high degree of income, expenditure and performance data integration and conservative aggregation. CUT has not reached the required level of data integration.

- 23. In the absence of an agreed model, the following are important matters of principle to embed in any provisional initiative in this direction. For the foreseeable future, the highest proportion of CUT's income will for the foreseeable future remain the student state block grant and any future RAM would have to take into account the design principles embedded in the state block grant. The most salient of these principles would be that the system:
 - Is distributive, i.e. each institution gets a share of what is available and there is not an absolute guarantee.
 - It is historical, i.e. the student-drive state grant in year N is based on the institutional performance in year N-2.
 - It takes into consideration both input and output with a weighting of 7:3.
 - It is weighted in terms of subject education matter as well as the qualification level⁶.

⁸ Please note that in the last Ministerial Planning Statement notice was given of the intention to modify these weights. This change intention has not been affected in the paragraphs hereafter.

- 24. There is an important immediate logical planning principle arising from the historical nature of the state grant system, namely, since CUT, like many other institutions, has a very limited existing capacity to leverage external resources to fund strategic changes, it is compelled to secure funding from its state block grant to fund the concomitant developments. The provisional lead funding recommended in Tables 5, 7 and 9 was informed by this principle which, as said, will remain important to CUT.
- 25. As an initial position on these important principles which will in future underpin the desired RAM, CUT will use a performance weighted norm of teaching -input-units for the distribution and allocation of resources. Based on the planning parameters outlined before it is envisaged that the following scenario would probably emerge.



TABLE 10: ESTIMATE	TEACHING-II	NPUT-UNI	TS AND FTE INSTRUC	TIONAL/RESEARCH P	ROFESSIONALS		
	2011		2011 2012 2014 2016		2018	2020	
TIU		19987	20399	21615	23815	25783	27617
Funded Credits		7401	7499	7627	8440	9311	10107
Student FTEs		9764	9745	11092	11093	12052	13000
FTE instruct/research staff		356	380	353	370	393	426

GOVERNANCE AND ACCOUNTABILITY

- 26. Unless otherwise modified by Council, the following existing governance and accountability will be applicable.
- 26.1. The executive-in-charge must via Senate recommend to Council via the Finance Committee variations and modifications to these targets.
- 26.2. The executive-in-charge, after consultation with the executive-in-charge for budgets, must via the MANCOM to the Finance Committee propose 3-year rolling budgets against the provisional lead funds above. These rolling budget proposals must take into account human and other resources needs across the University.
- 26.3. Insofar as possible, the achievement of and performance against the approved annual targets for this plan would be managed under the performance management system.
- 26.4. Expenditure against the provisional lead funds would be subject to the existing and applicable delegated authorities.

ACADEMIC PLANNING

EXPANDED TABLES



TABLE 1: STUDENT H	IEADCOUNT	ENROLMENT	AND SHAPE	BY STEM A	ND EQUITY					
	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
Student headcount	12583	12644	12724	13149	13619	14240	14756	15373	16000	16000
enrolment (funded) STEM headcount enrolment	5 379	5 513	5585.4	5 857	6 164	6 518	6 830	7 183	7 460	7 460
African	84.18%	84.81%	85.68%	84.70%	83.80%	83.00%	82.10%	81.20%	81.20%	81.20%
Coloured	3.83%	3.87%	3.77%	3.90%	4.00%	4.10%	4.20%	4.30%	4.30%	4.30%
Indian	0.30%	0.36%	0.35%	0.40%	0.40%	0.40%	0.50%	0.50%	0.50%	0.50%
White	11.69%	10.97%	10.20%	11.00%	11.80%	12.50%	13.30%	14.00%	14.00%	14.00%
Male	51.98%	52.44%	52.22%	51.70%	51.00%	50.30%	49.70%	49.00%	49.00%	49.00%
Female	48.02%	47.56%	47.78%	48.30%	49.00%	49.70%	50.40%	51.00%	51.00%	51.00%



TABLE 2: STUDENT E	NROLMENT SHAPE BY I	BROAD STUDY FIEL	D AND QUALIFICATION TYP	ΡE								
	2012											
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	Postgraduate less Than Masters	MASTERS	DOCTORAL	ROW TOTAL						
STEM	35.11%	7.55%	0.06%	0.78%	O.18%	43.68%						
Business and management	21.60%	4.57%	0.00%	0.29%	0.12%	26.58%						
Education	0.36%	10.52%	3.65%	0.29%	0.28%	15.10%						
Other humanities	9.60%	4.77%	0.02%	0.17%	0.08%	14.64%						
TOTALS	66.68%	27.40%	3.73%	1.52%	0.65%							

			2020			
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	POSTGRADUATE LESS THAN MASTERS	MASTERS	DOCTORAL	ROW TOTALS
STEM	35.59%	7.23%	2.08%	1.35%	0.37%	46.62%
Business and management	18.71%	3.94%	0.00%	0.25%	0.10%	23.01%
Education	0.37%	10.13%	4.62%	0.30%	0.25%	15.68%
Other humanities	9.28%	5.12%	0.07%	0.17%	0.07%	14.71%
TOTALS	63.95%	26.42%	6.77%	2.06%	0.80%	



TABLE 3: STUDENT HEADCOUNT ENROLMENT SHAPE BY CITIZENSHIP

	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
Student headcount	12583	12644	12724	13149	13619	14240	14756	15373	16000	16000
enrolment Foreign students	666	617	574	745	916	1087	1258	1429	1600	1600



TABLE 4: STUDENT A	TABLE 4: STUDENT ACADEMIC PERFORMANCE BY FTE ENROLMENT, PASS RATE AND GRADUATES												
2010 2011 2012 2014 2015 2016 2017 2018 2019 2020													
FTE enrolment	9 863	9 764	9745	10 177	10 541	11 093	11 495	12 052	13 000	13 000			
Graduates	2 412	2 805	3159	3305	3352	3442	3584	3837	4070	4142			
Pass rates	73.65%	75.80%	76.71%	74.94%	75.58%	76.09%	76.68%	77.25%	77.75%	77.76%			

TABLE 10: ESTIMATE TEACHING-INPUT-UNITS AND FTE INSTRUCTIONAL/RESEARCH PROFESSIONALS												
		2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
	TIU	19985	19986	19 987	20399	21615	22586	23815	24671	25783	27617	27617
	Funded Credits	7024	7264	7401	7499	7627	7967	11 093	8815	9311	10107	10107
	Student FTEs	9697	9 863	9764	9745	10 177	10 541	11 093	11 495	12 052	13 000	13 000
	TE instruct/research staff	304	331	356	380	353	362	370	377	393	410	426
TIL	/FTE instruct/ research staff	66	60	56	57	61	62	64	65	66	67	65



ANNEXURE 1

FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

INTRODUCTORY NOTES

Some lead infrastructure development investments were made and more is planned so that the faculty could increase its student cohort and also support improved student pass and completion rates in what are nationally classified as a critical scarce skills area. The planned numbers hereafter are in response to these considerations. This faculty needs considerable transitional resourcing support to progress towards the significant planned improvements in pass and completion rates.



TABLE 1.1. ENGINEERING AND IN	FORMATI	ON TECHN	NOLOGY: S	TUDENT I	HEADCOUN	NT ENROLI) SIZE BY	STEM AND	EQUITY	
	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
Student Headcount Enrolments	3 997	4129	4 019	4 126	4 440	4 714	4 982	5 129	5 276	5 463	5 463
STEM Enrolments	3 953	4 006	3 990	3 955	4 143	4 371	4 627	4 851	5 095	5 299	5 299
African	3 217	3 366	3 271	3 784	3 622	3 809	4 036	4 159	4 280	4 436	4 436
Coloured	129	133	135	147	141	158	181	199	212	235	235
Indian	17	14	13	17	16	18	21	22	24	27	27
White	634	616	600	690	661	729	740	749	759	765	765
F	1 026	1 052	1 010	1 251	1 199	1 296	1 394	1 461	1 530	1 639	1 639
M	2 971	3 077	3 009	3 384	3 241	3 418	3 586	3 667	3 746	3 824	3 824



TABLE 2: STUDENT E	ABLE 2: STUDENT ENROLMENT SHAPE BY BROAD STUDY FIELD AND QUALIFICATION TYPE 2012											
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	Postgraduate less Than Masters	MASTERS	DOCTORAL	ROW TOTAL						
BUS/MAN	0.44%	0.00%	0.00%	0.00%	0.00%	0.44%						
EDUCATION	0.02%	0.00%	0.00%	0.00%	0.00%	0.02%						
OTHER HUM	3.38%	0.06%	0.00%	0.00%	0.00%	3.44%						
STEM	82.40%	12.54%	0.00%	0.91%	0.25%	96.10%						
TOTALS	86.24%	12.60%	0.00%	0.91%	0.25%							

			2020			
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	Postgraduate less Than Masters	MASTERS	DOCTORAL	ROW TOTALS
STEM	0.40%	0.00%	0.00%	0.00%	0.00%	0.40%
Business and management	0.02%	0.00%	0.00%	0.00%	0.00%	0.02%
Education	2.32%	0.26%	0.00%	0.00%	0.00%	2.58%
Other humanities	83.21%	10.94%	0.00%	2.10%	0.75%	97.00%
TOTALS	85.95%	11.20%	0.00%	2.10%	0.75%	



TABLE 3.1. ENGINEERING AND INFORMATION TECHNOLOGY: STUDENT HEADCOUNT ENROLMENT SHAPE BY CITIZENSHIP											
2010 2011 2012 2014 2015 2016 2017 2018 2019 2020											
Student Headcount Enrolments	4 129	4 019	4 126	4 440	4 714	4 982	5 129	5 276	5 463	5 463	
Foreign students	301	277	266	345	424	504	583	662	741	741	



TABLE 4.1. ENGINEERING AND INFORMATIC	ON TECHN	ology: St	UDENT A		PERFORM	ANCE BY	FTE ENROL	.ment, pas	SS RATE AN	ND GRADU	JATES
	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
FTE	3 107	3 075	2 856	2 898	3 437	3 664	3 881	3 995	4 136	4 410	4 410
Graduates	513	544	661	660	742	824	914	1012	1146	1279	1354
Pass rate	67.69%	68.42%	72.63%	72.66%	69.43%	70.97%	72.38%	73.67%	74.86%	75.96%	76.00%



TABLE 10.1. ENGINEERING AND INFORMATION TECHNOLOGY: ESTIMATE TEACHING-INPUT-UNITS AND FTE INSTRUCTIONAL/RESEARCH PROFESSIONALS

	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
TIU	6909	7183	6657	6852	9 526	10 155	10 757	11 073	11 464	12 223	12 223
Funded Credits	2113	2110	2084	2105	2 386	2 600	2 809	2 943	3 096	3 350	3 352
STUDENT FTEs	3119	3082	2868	2896	3 437	3 664	3 881	3 995	4 136	4 410	4 410
FTE STAFF	87	91	99	102	110	113	116	119	124	129	135
TIU/FTE instruct/ research staff	79	79	67	67	87	90	93	93	92	95	91

ANNEXURE 2

FACULTY OF MANAGEMENT SCIENCES

INTRODUCTORY NOTES

This faculty did not receive lead infrastructure development investments but would acquire very limited added facilities to be vacated by others moving into new or added facilities. The planned numbers hereafter are in response to these considerations. This faculty also needs considerable transitional resourcing support to progress towards the significant planned improvements in pass and completion rates.



TABLE 10.1. ENGINEERING AND INFORMATION TECHNOLOGY: ESTIMATE TEACHING-INPUT-UNITS AND FTE INSTRUCTIONAL/RESEARCH PROFESSIONALS

	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
Student Headcount Enrolments	4 597	4 714	4 504	4 378	4 355	4 421	4 550	4 658	4 665	4 786	4 786
STEM Enrolments	512	336	327	446	446	446	449	450	453	452	452
African	4 006	4 134	3 993	3 884	3 836	3 892	4 007	4 102	4 109	4 216	4 216
Coloured	212	211	202	208	199	204	207	212	212	218	218
Indian	11	14	20	16	15	15	16	15	15	17	17
White	368	355	289	270	305	310	319	327	327	336	335
F	2 817	2 871	2 677	2 618	2 700	2 710	2 779	2841	2846	2919	2919
M	1 780	1 843	1 827	1 760	1 655	1 711	1 769	1816	1820	1867	1867





TABLE 2.2. MANAGE	MENT SCIENCES: STUD	ENT HEADCOUNT B	ENROLMENT SHAPE BY BR	OAD STUDY FIELD AN	D QUALIFICATION 1	YPE
			2012)		
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	Postgraduate less Than Masters	MASTERS	DOCTORAL	ROW TOTAL
BUS/MAN	61.31%	13.19%	0.00%	0.83%	0.35%	75.67%
EDUCATION	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OTHER HUM	11.73%	2.82%	0.00%	0.14%	O.18%	14.88%
STEM	5.45%	4.00%	0.00%	0.00%	0.00%	9.45%
TOTALS	78.49%	20.01%	0.00%	0.97%	0.53%	

			2020			
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	POSTGRADUATE LESS THAN MASTERS	MASTERS	DOCTORAL	ROW TOTALS
STEM	61.31%	13.19%	0.00%	0.83%	0.35%	75.67%
Business and management	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Education	11.73%	2.82%	0.00%	0.14%	O.18%	14.88%
Other humanities	5.45%	4.00%	0.00%	0.00%	0.00%	9.45%
TOTALS	78.49%	20.01%	0.00%	0.97%	0.53%	



TABLE 3.2. MANAGEMENT SCIEN	ICES: STU	DENT HEA	DCOUNT	ENROLME	NT SHAPE	BY CITIZE	ENSHIP			
2010 2011 2012 2014 2015 2016 2017 2018 2019 2020										
Student Headcount Enrolments	4 714	4 504	4 378	4 355	4 421	4 550	4 658	4 665	4 786	4 786
Foreign students	260	249	208	270	332	394	456	518	580	580



TABLE 4.2. MANAGEMENT SCIENCES: STU	TABLE 4.2. MANAGEMENT SCIENCES: STUDENT ACADEMIC PERFORMANCE BY FTE ENROLMENT, PASS RATE AND GRADUATES												
2009 2010 2011 2012 2014 2015 2016 2017 2018 2019 2020													
FTE	3 335	3 294	3 129	3032	3 371	3 429	3 544	3 628	3 657	3 772	3 772		
Graduates	1 058	1 106	1 182	1340	1240	1213	1204	1187	1211	1257	1257		
Pass rate	72.31%	73.38%	75.89%	76.26%	76.00%	76.00%	76.00%	76.00%	76.00%	76.00%	76.00%		



TABLE 10.2. MANAGEMENT SCIENCES: ESTIMATE TEACHING-INPUT-UNITS AND FTE INSTRUCTIONAL/RESEARCH PROFESSIONALS													
	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020		
TIU	5303	5120	4997	4949	5 825	5 925	6 124	6 269	6 320	6 519	6 518		
Funded Credits	2403	2414	2368	2304	2 562	2 606	2 693	2 757	2 779	2 867	2 867		
STUDENT FTEs	3325	3290	3122	3024	3 371	3 429	3 544	3 628	3 657	3 772	3 772		
FTE STAFF	83	87	95	92	87	90	91	90	90	92	92		
TIU/FTE instruct/ research staff	64	59	53	54	67	66	67	70	70	71	71		

ANNEXURE 3

FACULTY OF HEALTH AND ENVIRONMENTAL SCIENCES

INTRODUCTORY NOTES

Some lead infrastructure development investments were made so that the faculty could increase its student cohort and also sustain and support improved student pass and completion rates in what are nationally classified as a critical scarce skills area. The planned numbers hereafter are in response to these considerations. This faculty's transitional resourcing support needs would mainly be in the expanded provisioning of education equipment.



TABLE 10.1. ENGINEERING AND INFORMATION TECHNOLOGY: ESTIMATE TEACHING-INPUT-UNITS AND FTE INSTRUCTIONAL/RESEARCH PROFESSIONALS

	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
Student Headcount Enrolments	1 094	1 140	1,223	1 271	1 404	1 529	1 634	1 734	1 835	1 900	1 900
STEM Enrolments	918	1 023	1 151	1 171	1 252	1 328	1 420	1 504	1 607	1 678	1 678
African	672	765	864	944	1 053	1 147	1 225	1 301	1 377	1 425	1 425
Coloured	54	59	56	44	49	53	57	60	64	66	66
Indian	7	6	6	6	7	7	9	9	9	10	9
White	361	310	297	277	295	322	343	364	385	399	399
F	644	672	703	734	820	892	953	1 012	1 071	1 136	1 150
Μ	450	468	520	537	586	637	681	723	765	764	749



TABLE 2.3. HEALTH A	AND ENVIRONMENT: STU	JDENT HEADCOUN	T ENROLMENT SHAPE BY	BROAD STUDY FIELD /	AND QUALIFICATIO	N TYPE
			2012			
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	POSTGRADUATE LESS THAN MASTERS	MASTERS	DOCTORAL	ROW TOTAL
BUS/MAN	0.04%	0.00%	0.00%	0.00%	0.00%	0.04%
EDUCATION	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OTHER HUM	7.82%	0.00%	0.00%	0.00%	0.00%	7.82%
STEM	65.43%	20.92%	0.00%	4.83%	0.95%	92.14%
TOTALS	73.30%	20.92%	0.00%	4.83%	0.95%	

			2020			
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	POSTGRADUATE LESS THAN MASTERS	MASTERS	DOCTORAL	ROW TOTALS
STEM	0.02%	0.00%	0.00%	0.00%	0.00%	0.07%
Business and management	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Education	9.65%	2.08%	0.00%	0.00%	0.00%	11.73%
Other humanities	62.80%	19.04%	0.00%	5.35%	1.05%	88.20%
TOTALS	72.47%	21.12%	0.00%	5.35%	1.05%	



TABLE 3.3. HEALTH AND ENVIRO	TABLE 3.3. HEALTH AND ENVIRONMENT: STUDENT HEADCOUNT ENROLMENT SHAPE BY CITIZENSHIP												
	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020			
Student Headcount Enrolments	1 140	1,223	1 271	1 404	1 529	1 634	1 734	1 835	1 900	1 900			
Foreign students	76	63	76	99	121	144	167	189	212	212			



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TABLE 4.3. HEALTH AND ENVIRONMENT: STUDENT ACADEMIC PERFORMANCE BY FTE ENROLMENT, PASS RATE AND GRADUATES											
	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
FTE	837	858	915	958	1 090	1 187	1 273	1 351	1 439	1 497	1 497
Graduates	307	337	378	407	475	495	524	561	603	647	643
Pass rate	82.88%	85.57%	86.83%	86.3%	86.83%	86.83%	86.83%	86.83%	86.83%	86.83%	86.83%

TABLE 10.3. HEALTH AND ENVIRONMENT: ESTIMATE TEACHING-INPUT-UNITS AND FTE INSTRUCTIONAL/RESEARCH PROFESSIONALS											
	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
TIU	3131	3531	3 796	3 973	3 004	3 271	3 508	3 723	3 966	4 126	4 126
Funded Credits	694	734	795	826	946	1 031	1 105	1 173	1 249	1 300	1 300
STUDENT FTEs	858	915	959	958	1 090	1 187	1 273	1 351	1 439	1 497	1 497
FTE STAFF	55	63	64	66	72	78	79	82	87	92	96
TIU/FTE instruct/ research staff	56	56	59	60	42	42	44	45	46	45	43

ANNEXURE 4

FACULTY OF HUMANITIES

INTRODUCTORY NOTES

Some lead mainly Teacher Education infrastructure development investments were made so that the faculty could increase its student cohort and also sustain and support improved student pass and completion rates in what are nationally classified as a critical scarce skills area. The planned numbers hereafter are in response to these considerations. This faculty's transitional resourcing support needs would probably be across all categories.



TABLE 1.4. HUMANITIES: STUDENT HEA	ABLE 1.4. HUMANITIES: STUDENT HEADCOUNT ENROLMENT AND SIZE BY STEM AND EQUITY										
	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
Student Headcount Enrolments	2 517	2 599	2 897	2 948	2950	2955	3075	3235	3597	3851	3851
STEM Enrolments	455	14	45	14	16	19	22	25	28	31	31
African	2 234	2 326	2 594	2 653	2 600	2 624	2 665	2 667	2 841	2 945	2 945
Coloured	62	79	96	101	130	131	143	159	181	169	169
Indian	6	4	6	5	14	13	12	27	27	26	26
White	215	190	201	189	206	185	254	384	547	712	712
F	1 386	1 447	1 623	1 689	1 633	1 773	1 971	2 125	2 397	2 476	2 476
M	1 131	1 152	1 274	1 259	1 316	1 182	1 103	1 112	1 201	1 375	1 375

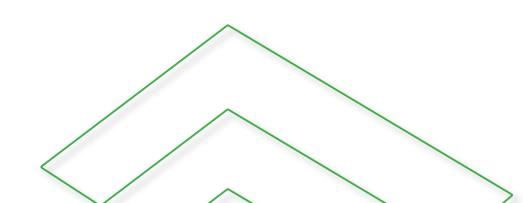




TABLE 2.4. HUMANITIES: STUDENT HEADCOUNT ENROLMENT SHAPE BY BROAD STUDY FIELD AND QUALIFICATION TYPE											
	2012										
DIPLOMA, FIRST BACHELORS POSTGRADUATE LESS MASTERS DOCTORAL ROW TOTAL											
BUS/MAN	0.98%	0.00%	0.00%	0.00%	0.00%	0.98%					
EDUCATION	1.53%	45.71%	15.88%	1.25%	1.21%	65.57%					
OTHER HUM	15.91%	16.39%	0.07%	0.52%	0.07%	32.95%					
STEM	0.16%	0.05%	0.28%	0.00%	0.00%	0.49%					
TOTALS	18.58%	62.15%	16.22%	1.77%	1.28%						

		2020										
	DIPLOMA, CERTIFICATE	FIRST BACHELORS	POSTGRADUATE LESS THAN MASTERS	MASTERS	DOCTORAL	ROW TOTALS						
STEM	0.98%	0.00%	0.00%	0.00%	0.00%	0.98%						
Business and management	1.53%	45.71%	15.88%	1.25%	1.21%	65.57%						
Education	15.91%	16.39%	0.07%	0.52%	0.07%	32.95%						
Other humanities	0.36%	0.15%	0.28%	0.00%	0.00%	0.87%						
TOTALS	18.78%	62.25%	16.22%	1.77%	1.28%							



ABLE 3.4. HUMANITIES: STUDENT HEADCOUNT ENROLMENT SHAPE BY CITIZENSHIP												
2010 2011 2012 2014 2015 2016 2017 2018 2019 2020												
Student Headcount Enrolments	2,599	2,897	2885	2 950	2 955	3 075	3 235	3 597	3 851	3 851		
Foreign students	42	41	37	48	59	70	81	92	103	103		



TABLE 4.4. HUMANITIES: STUDENT ACADEMIC PERFORMANCE BY FTE ENROLMENT, PASS RATE AND GRADUATES											
	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
FTE	2,418	2,636	2,864	2857	2 279	2 261	2 395	2 521	2 820	3 321	3 321
Graduates	492	425	584	752	849	819	800	824	877	887	887
Pass rate	75.07%	76.22%	75.34%	79.6%	76.00%	76.50%	76.50%	77.00%	77.50%	78.00%	78.00%



TABLE 10.2. MANAGEMENT SCIENCES: ESTIMATE TEACHING-INPUT-UNITS AND FTE INSTRUCTIONAL/RESEARCH PROFESSIONALS											
	2009	2010	2011	2012	2014	2015	2016	2017	2018	2019	2020
TIU	4642	4162	4462	4619	3260	3234	3426	3606	4034	4750	4750
Funded Credits	1814	2006	2154	2264	1732	1730	1832	1941	2186	2590	2590
STUDENT FTEs	2416	2633	2860	2866	2279	2261	2395	2521	2820	3321	3321
FTE STAFF	79	91	98	96	74	77	83	90	97	104	114
TIU/FTE instruct/ research staff	59	46	46	48	44	42	41	40	42	46	42

ANNEXURE 5

SUPPORT PRIORITIES AND MEASURES

INTRODUCTORY NOTES



This annexure proceeds from the assumption that every division and section has agreed core strategies for supporting the Academic Plan. This annexure seeks to articulate the priority impact/outcomes as well as improve priority alignment of these strategies across the University. To do so, this annexure focuses on aligning the priority impact/outcomes of People in the different sections based on the further assumption that the Academic Plan has qualified key aspects of the Product as well as portions of the Pennies.

SUPPORT SERVICES	QUALITY IMPACT/OUTCOME	ANNUAL MEASURE	MOST RECENT VALUE	2020 TARGET VALUE	LEAD DIVISION	SECTION
Student recruitment	Sufficient qualifying early admissions meeting most of our annual enrolment targets	% of qualifying applicants for first-time-entry places for the next year by October		75%	SEU	School Liaison and Recruitment
		% of qualifying registrations against first-time- entry places by January		95%	Registrar	Academic Administration
Student academic advising and counseling	Quality advice and support to mitigate challenges to student success	% of course/module changes and/or cancellations among first-time-entry students from January to May		5%	Academic	Faculty
		% of student registration cancellations, i.e. drop-out, from January to October		1%	Registrar	Wellness
Student learning support	Quality of services must support student learning success	Number of hours spent on IT supported learning per FTE student enrolment		100 hours	Academic	Academic Development
		Undergraduate full-time student-to-tutor ratio		50	Academic	Faculty
Student assessment	Enhancing the integrity and reliability of assessment	Student and staff rating of assessment and assessment service quality among a random sample after mid-year assessment		More than 4 out of 5	Registrar	Academic Administration
Student work-integrated learning support	Sufficient quality WIL opportunities	% of students successfully placed for WIL out of all students qualifying for WIL placement.		90%	Academic	Academic Development
Student social, sport, etc. development	Quality support for the development of well-rounded graduates	% of full-time students who have participated in at least one institution supported cultural, sport, etc. event ¹⁰ .		60%	Registrar	Student services
Instruct/research staff recruitment, induction, wellness and training	Sufficient competent staff to support and contribute to achieve the AP aims and targets	Number of working days to fill existing and new vacancies		30	Resources and Ops	Human Resources



¹⁰ An event qualify for this count only if effective student event participation requires practice, rehearsal, etc. in preparation and skills development prior to the event and of duration equal or more than the event itself.

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SUPPORT SERVICES	QUALITY IMPACT/OUTCOME	ANNUAL MEASURE	MOST RECENT VALUE	2020 Target Value	LEAD DIVISION	SECTION
		General and academic practices induction programmes satisfaction rating – conducted at least 3 months after induction		4 and better out of 5	Resources and Ops	Human Resources
		Satisfaction rating of wellness and training support conducted among a random staff sample		4 and better out of 5	Resources and Ops	Human Resources
Instruct/research staff retention and performance	Retaining and developing loyalty among staff making measurable contributions to achieve the AP aims and targets	% resignation of staff		5%	Academic	Faculty
		% resignation among staff with more than satisfactory performance, i.e. 4 or better out of 5 in previous year		2%	Academic	Faculty
Instruct/research staff support	Quality staff support to achieve AP aims and targets	Satisfaction rating of teaching and curriculum development support conducted among a random staff sample		4 and better out of 5	Academic	Academic Development
		Satisfaction rating of research, innovation and community engagement support conducted among a random staff sample		4 and better out of 5	Academic	Academic Development
		Satisfaction rating of LIS support conducted among a random staff sample		4 and better out of 5	Academic	Academic Development
		Satisfaction rating of equipment and infrastructure maintenance support conducted among department heads		4 and better out of 5	Resources and Ops	Logistics
		Satisfaction rating of procurement conducted among department heads		4 and better out of 5	Resources and Ops	Finance
		Satisfaction rating of marketing and liaison support conducted among department heads		4 and better out of 5	SEU	Marketing and Liaison

CUT STRATEGICPLAN 2016-20

Towards an Internationalisation Programme at CUT

ANNEXURE E THE INTERNATIONALISATION STRATEGY

Dr James H.P Ellis Internationalisation Consultant APPROVED BY SENATE ON 16 AUGUST 2013

EXECUTIVE SUMMARY

INTRODUCTION

CUT will launch its Internationalisation Strategy during the IEASA Conference on 21 August 2013. The strategy is based on the position paper, CUT as a University of the 21st Century, prepared by the Internationalisation Consultant after internal assessment and consultation with selected stakeholders. This Internationalisation Strategy document has been discussed with different groups of stakeholders since, including the Academic Division of Deans and HoDs, the Registrar's Office, Welkom Campus leadership, and Resources and Operations staff members. Comments received from these discussions are incorporated into the revised document.



WHY INTERNATIONALISATION AT CUT

Internationalisation at CUT is first of all an academic enterprise to strengthen and add value to the academic programme, operating at multiple levels in the institution, but particularly recognising its specific mission and mandate as a University of Technology.

Internationalisation at CUT will enhance its reputation nationally and internationally, create an internationalised curriculum, produce globally engaged faculty members with more international experience, more globally mobile and competent students, and an overall institutional ability to deal with the challenges of globalisation and produce technologically innovative local solutions.

Therefore we define Internationalisation at the CUT as the process of integrating an international, intercultural and global dimension into the purpose, functions or delivery of programmes in science, technology, engineering and mathematics and other key niche areas, that will promote and produce quality social and technological innovations in socioeconomic developments.

THE CONTEXT

The assessment of internationalisation revealed a limited scope of activities and engagement. There is no internationalisation policy, International Office, coherent set of rules for operation, or organised programme. The Current reality at CUT is

- A low level of internationalisation with respect to academics with international experience or exposure and functioning collaboration agreements;
- Very low levels of full time International students in both outbound and inflow, the latter of 573 in 2012 is only 4,4% of total student numbers. Exchange of students average only 20 from Europe and 8 South African students annually;
- CUT's Vision 2020 calls for at least 10% international students in 2020; thus a further growth of 5,6% or 0,7% growth on average per annum. In increasing SET enrolments from 43,7% in 2012 to 46% by 2019/2020, 50% of the international student growth should be in these areas.

The Internationalisation strategy below indicates how to achieve strategic objectives and targets.





KEY ELEMENTS OF THE INTERNATIONALISATION STRATEGY

Internationalisation at CUT is first of all an academic enterprise to strengthen and add value to the academic programme, operating at multiple levels in the institution.

The uniqueness of the strategy lies in its emphasis of CUT's endeavour to grow a strong Science, Technology, Engineering and Mathematics (STEM) programme as a hallmark of its institutional type.

CUT will identify and support our institutional STEM research strengths and the research groups in approved research clusters, programmes and projects.

Focusing in internationalisation on institutional niche areas will contribute to cooperation that will promote and enhance productive and sustainable academic collaboration beyond mere paper agreements.

The advantages for our faculty members are increased international exposure and increased research and post-graduate outputs. For our students it means increased international exposure and mobility and better preparation for the global work market. For our institution it means an enhanced international recognition and reputation, and ability to meet institutional needs and challenges and the demands to address global challenges.



	ACTION	RESPONSIBLE	TIMEFRAME	OUTCOME
1	 Endorse strategic role of Internationalisation and establish the International Office Launch the Strategy at 17th Annual IEASA Conference 21 August 2013 Recruit and appoint International Office staff Plan Executive visits to institutions abroad exploring partnerships. 	VC (SEU)	May 2013 June 2013 August 2013 September 2013 October 2013	Adopted by Mancom, Senate and Council International Office established Strategy launched at Conference Staffing for IO secured and appointed Plan for VC & other Mancom April 2014
2	 Establish the Senate University Internationalisation Committee Plan Internationalisation of the Curriculum- IOC (Workshop on IoC) Encourage departments to undertake own academic planning Develop criteria for prioritizing agreements Plan establishment of new agreements in line with priority criteria 	DVC Academic Dean Ac Devt	August 2013 October 2013 October 2013 September 2013 October 2013	Senate UIC established Teaching-learning internationalised Focused international academic planning Criteria agreed on and review planned. Process underway with partners
3	 Formulate internationalisation programme around (STEM) and the management of research in the programme Review existing linkages in terms of the strategy key foci Identify the niche programmes for existing and new linkages. 	STEM faculties' respective Deans	September 2013 and on-going October 2013 & ito MoU ongoing	Focused internationalised programme displaying unique focus and activities Redundant linkages terminated, existing deepened and new ones established
4	 Formulate an internationalisation programme around key faculty niche areas and the management of research in the programme Review existing linkages in terms of the strategy key foci Identify the niche programmes for existing and new linkages 	Other Faculties' respective Deans	September 2013 and on-going October 2013 & ito MoU ongoing	Focused internationalised programme displaying unique focus and activities Redundant linkages terminated, existing deepened and new ones established
5	 Recruitment international post-graduates and part of research teams Promote regional (African) and international research collaboration Develop research skills of staff and students through visitors to CUT Manage attendance international research conferences 	Deans to do recruitment, manage conferences, Dean Research and Innovation to assist with strategy	November 2013 February 2014 and on-going	Increased international post-graduate enrolment at masters and doctoral level. Increased international exposure, joint research and staff mobility
6	 Plan an internationalisation programme of activities of the IO indicating institutional priorities (unit's annual strategic plan) Generally administer internationalisation programme (details below) 	International Office (once established)	January 2014 and on-going On-going	A plan of action giving priorities is in place The plan is implemented efficiently
7	 Centralise administration of all international student services International student recruitment and a strategic enrolment plan Manage database on international students, agreements 	Registrar	September 2013 November 2013 February 2014	One-stop, fluent, efficient client service to internationals students Gradual increase of ± 0,7% pa in numbers
8	 Revisit and review policies, practices and procedures on Governance and Student Life, and Welfare and student accommodation Investigate possible housing provision for international visitors Establish one-stop clearing house for handling immigration procedures for foreign appointments 	ResOps	September 2013 March 2014 November 2013	International students are fully integrated into university life A healthy and safe campus environment for international students & visitors Efficient immigration client services

HOW THE INTERNATIONAL OFFICE RELATES TO CUT AS A WHOLE

Internationalisation traditionally deals with international curricula, staff - and student exchanges, collaborative research and teaching, and services to the international student body at institutions of higher education. If seen as the responsibility of the International Office, it does so merely as the enabling administrative arm of the programme.

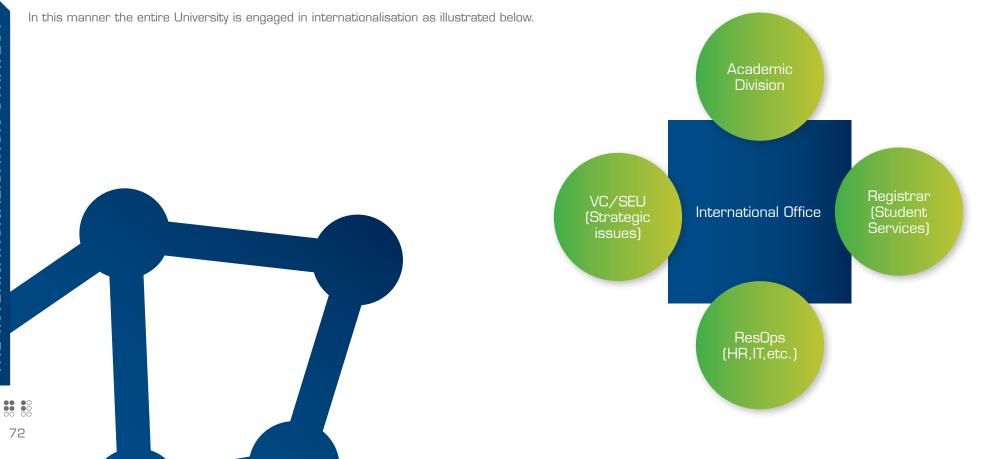
At CUT Internationalisation will be firstly an academic enterprise to strengthen the academic programme, foster intercultural cooperation and exchange, and build global engagement. In the Academic Division this is led by the Deputy Vice-Chancellor: Academic, and the Deans will play an important leadership and implementation role. This will include engaging in international partnerships, academic mobility, international research collaboration, Internationalisation of the curriculum, and quality care of activities. The international Office will play an advisory, support and administrative execution role in this respect as per request and agreements.

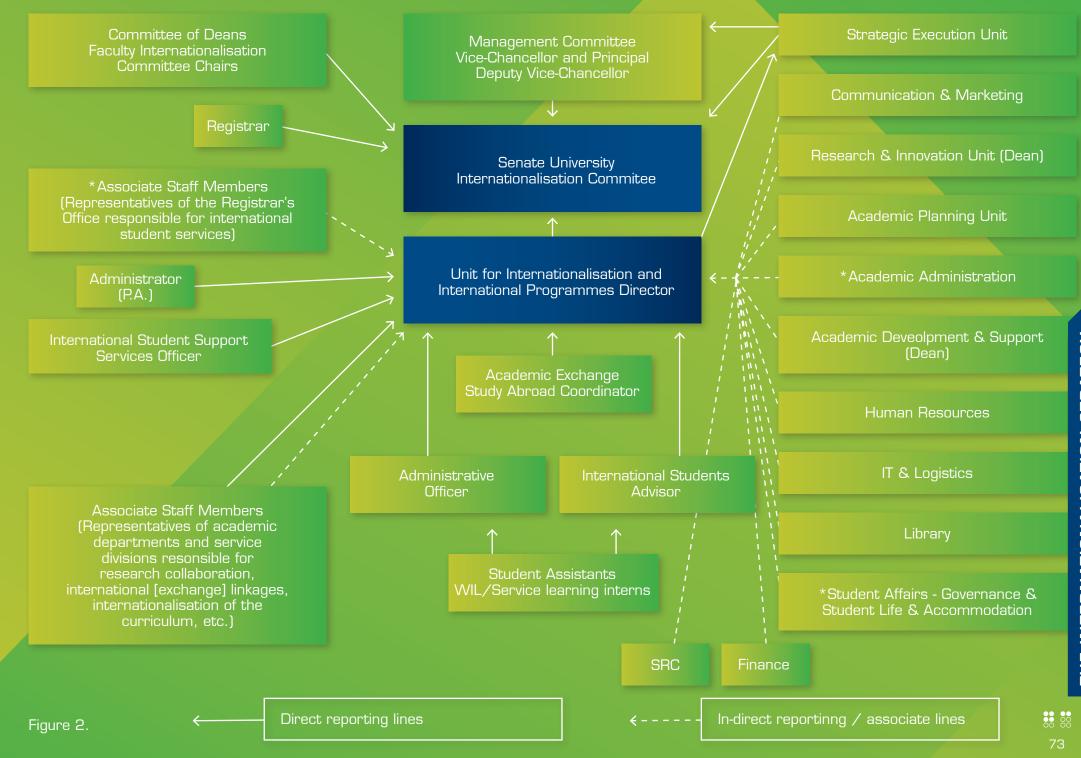
The Strategic Execution Unit will largely be responsible for positioning the University internationally and enhancing its reputation, taking care of particular strategic issues such as resourcing, marketing and communication, and monitoring objectives. The International Office will initially report to the SEU and advise on institutions and opportunities to enhance

the institutional reputation and formulating internationalisation objectives in line with the strategic objectives of Vision 2020, including international student enrolment targets.

The Registrar's Office will play a crucial role in international student affairs as it pertains to CUT rules, regulations and procedures for application, admission, etc. and statutory compliance, applicable to international students. This includes a client friendly service environment and international student recruitment in line with the enrolment plan. The International Office will play an administrative support and advising role with respect to client services to international students on a regular basis.

The Resources and Operations units of CUT will play a service support function to internationalisation in respect of the Web and publications, international student fees, post-doctoral fellows, immigration aspects of international staff appointments, IT support, a safe environment to international students and visitors, and international student welfare and health services, including housing, orientation, counselling and support from the SRC and student societies. The role of the International Office in this regard will be liaison and a suite of client support and advice services to international and local students, international visitors, and the CUT community.





THE INTERNATIONALISATION STRATEGY



CONCLUSION

The simplified approach as above will help explain to stakeholders where we are going with this programme. Detailed activities of different domains and units are given as annexures to this document.

The internationalisation strategic plan proposed in the position paper, CUT as a University of the 21st Century, calls for a comprehensive internationalisation programme. The Strategic Plan proposed here must thus be read with the set of goals and objectives to be realised, and activities to be undertaken in order to achieve it, as indicated in the position paper. The strategic plan though is based on the current set of conditions facing the University and the challenges within the higher education intellectual space. Furthermore, its uniqueness lies in CUT's strategic positioning with respect to its STEM programme and other niche areas, to face these national and regional challenges, and the resources it is willing to commit to the process.

Clearly we cannot undertake the full suite of internationalisation activities proposed immediately. The strategic plan is thus a road map for the path ahead to finally reach Vision 2020. It calls for a focused and committed start, with stages of evaluation and reorientation, to build towards realising that vision.

James HP Ellis Internationalisation Consultant 24 June 2013

INTRODUCTION

CUT will launch its internationalisation Strategy during the IEASA Conference on 21 August 2013. The strategy proposed below, is based on the position paper, CUT as a University of the 21st Century, prepared after an assessment of the level of internationalisation at CUT and consultation with selected stakeholders. Following individual consultations, this Internationalisation Strategy has been discussed with different groups of stakeholders, including the Academic Division of Deans and HoDs, the Registrar's Office, Welkom Campus leadership, and Resources and Operations staff members. Comments received from these discussions are incorporated into the revised document.



WHY INTERNATIONALISATION AT CUT

CUT as a University of the 21st Century is a part of the knowledge society where increasing global connections, challenges and imperatives call for redrafting and realigning its vision, academic directions, and purpose in line with this reality. Internationalisation as an encompassing academic enterprise to strengthen the academic programme, foster intercultural cooperation and exchange, and build global engagement, is the University's response to this.

Internationalisation at CUT is first of all an academic enterprise to strengthen and add value to the academic programme, operating at multiple levels in the institution, but particularly recognising its specific mission and mandate as a University of Technology. Furthermore, it encompasses the strategic and administrative services to support it.

Therefore, Internationalisation at the CUT is the process of integrating an international, intercultural and global dimension into the purpose, functions or delivery of programmes in science, technology, engineering and mathematics and other key niche areas, that will promote and produce quality social and technological innovations in socio-economic developments.

Internationalisation at CUT will thus lead to enhancement of its reputation nationally and internationally, an internationalised but technologically focused and innovative curriculum, a globally connected and engaged faculty cohort with more international exposure and experience, more globally mobile and competent students, and overall institutional ability to deal with the challenges of globalisation to produce technologically innovative local solutions.

THE CONTEXT

The Current reality at CUT

• The assessment of the nature and levels of internationalisation revealed a rather limited scope of activities and engagement. There is no policy on internationalisation, no coherent set of rules for operation, or any organised programme. A small number of active research collaborations operate particularly in Engineering and Information Technology, Management Sciences, and Health and Environmental Sciences.

A low level of internationalisation exists with respect to the following:

- Academics with international experience or exposure at CUT are extremely limited. Five (5) departments had indicated that a total of 11 faculty members had international exposure.
- Out of a total of 272 academic positions at CUT, international academics teaching at CUT number 20 in total.

- Functioning collaboration agreements, involving faculty exchanges and research, exist with five (5) European institutions; Aalen University, Ulm University of Applied Sciences, Harz University of Applied Sciences, in Germany, the Katholieke Hogeschool Mechelen in Belgium, and Hanze University of Applied Sciences, Netherlands. These agreements include teaching and learning and research and innovation strategies.
- There are only two active partnerships between CUT and its regional counterparts; Kigali Institute of Science and Technology in Rwanda and Lesotho Institute of Personnel Administration and Management.
- Full time International students at CUT show very low levels in both outbound and inflow. Currently international student numbers stand at 573 (2012), \pm 4,4% of the total student body, the students from other African countries constituting 97% of all international students. Exchange of students is extremely limited, involving an average of 20 from Europe and an average of South African students going abroad, annually.



International Student enrolments as benchmark of internationalisation

CUT's Vision 2020 calls for at least 10% of students to be international by 2020; a further growth of 5,6% or at least 0,7% growth on average per annum. A significant part of this growth should be at the post-graduate level as well, currently an insignificant percentage. The plan to grow the current SET programme from 43,7% in 2012 to 46% by 2019/2020 (against 50% DoHET targets), implies that 50% of the international student growth be in these areas as well.

THE INTERNATIONALISATION STRATEGY FOR HOW TO ACHIEVE OBJECTIVES AND TARGETS

CUT's endeavour to grow a strong Science, Technology, Engineering and Mathematics (STEM) programme as a hallmark of its institutional type and of its regional and national development contributions, will thus aim to embed this uniqueness as key focus in its internationalisation strategy.

For this reason the uniqueness of the internationalisation strategy would lie first of all in the manner in which CUT identifies and supports its institutional STEM research strengths and the research groups in niche areas, and aligning it in partnerships with that of selected peer institutions as partners. The academic planning accents and research priorities at CUT, and academic excellence of institutions abroad as it pertains to these accents and priorities, will be the principal points of departure for collaboration agreements. It will also inform the recruitment strategies of full-time international students, particularly post-graduate students as part of research teams.

Given the CUT commitment to STEM, research collaboration and alignment should not only be in terms of such strengths and skills, but also by the manner in which these research agendas of proposed partners address in similar fashion local, regional and national conditions, challenges and imperatives in the areas of sustainable and renewable energy, technology innovations and solutions, food safety and biotechnology, water resources, etc., as it does.

Similarly, the strong academic programmes and research in Management, and Health Sciences, particularly the hospitality and tourism management programmes (of immense international significance and a niche area of CUT), and agricultural sciences, should feature prominently in the internationalisation strategy.

This, it is argued, will contribute to cooperation that will promote and enhance productive and sustainable academic collaboration that will be more than mere agreements on paper.

The advantages for our faculty members is that it would involve

- the potential for staff development and growth through increased international exposure,
- engagement in and learning from international research with international counterparts,
- focused research support at home,
- engagement in internationalisation of the curriculum,
- post-graduate co-supervision, and
- increased publication and student outputs at research and post-graduate levels.

For our students there is the potential for

- increased international exposure and mobility between institutions and countries,
- increased and improved learning opportunities through diversified international curricula,
- better "fitness for purpose" to address regional and national issues in the world of work,
- international quality and recognition of their qualifications, and
- being part of the next generations of scholars and the new cohort of global citizens.

For our curriculum there is

- the importance of embedding an international and global dimension into the curriculum,
- equipping students with the relevant skills for the global market, and
- the attraction of relevance to international students seeking a study abroad experience.

For our institution there is opportunity to

- gain and enhance its international recognition and reputation,
- promote internationalisation at home,
- utilize its location in, and enhance contributions to, a major city and the region, in the heartland of South Africa through international exposure and partnership, and
- meet the institutional needs and challenges related to global exposure, address national transformational needs, and position it to collaborate in programmes directed at international demands to address global challenges.

The primacy of these academic foci in the strategy should be undergirded by sound Executive Management and Senior Administrative support, and academic and administrative planning processes. These would involve curriculum review and development, recruitment and enrolment planning, administrative alignment with increased student demands and challenges, quality care and control, and provision and upgrading of services to students and international visitors.

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KEY ELEMENTS AND STAGES OF THE INTERNATIONALISATION STRATEGY

The following action plan, with particular evaluation stages, will assist in implementing the strategy.

STAGE 1. IMPLEMENTATION PHASE: 2014 - 2015

This will comprise most of 2014, with some elements of planning commencing in 2013, including the appointment of the Director and other staff members of the International Office. Further unfolding and International Office evaluation will occur during 2015. New Policies and practices are put in place. Programmes designed in 2014 will be implemented in 2015.

STAGE 2. CONSOLIDATION AND FIRST MAJOR EVALUATION: 2016 - 2017

A full-scale review of key elements of the programme will be conducted in 2016, with a quality review to determine if targets were achieved or on course, with adjustments made. Benchmarks will be designed.

STAGE 3. REALIGNMENT WITH OBJECTIVES AND SECOND REVIEW PERIOD: 2018 - 2019

A five year major review of the programme across the board will commence in 2018 with possible redesign of objectives and targets, where necessary, and realignment with strategic objectives of Vision 2020. New programme initiatives will be added and the International Office expanded in 2018.

STAGE 4. TOTAL PROGRAMME REVIEW WITHIN VISION 2020 CONTEXT: 2020

A total programme review with full quality control and assessment of outcomes for 2020 and programme redesign. Evaluation will also be in terms of HEQC criteria for institutional assessment of the contribution of the internationalisation programme to overall institutional efficiency and development.

KEY ELEMENTS OF THE INTERNATIONALISATION STRATEGY

The following action plan will assist in implementing the strategy. While overlaps may occur, it only emphasizes the integrated operational focus.



	ACTION	RESPONSIBLE	TIMEFRAME	OUTCOME
1	 Endorse the strategic role of Internationalisation and formally adopt the strategy Executive oversight of the Internationalisation programme Establish and endorse the operation of a Unit for Internationalisation and International Programmes (DIIP – International Office) Commit to Resource Allocation and develop a budget for Internationalisation Roll out the Launch of the Strategy at the 17th Annual IEASA Conference on 21 August 2013 Recruit and appoint International Office staff Planning a series of Executive visits to selected institutions abroad exploring partnerships. 	VC (SEU)	May 2013 On-going June 2013 June 2013 July 2013 August 2013 September 2013 September 2017 October 2013 & ongoing annually	Adopted by Mancom, Senate & Council Direction and execution ensured International Office established Budget for Internationalisation developed and accepted Launch plans adopted. Media prepared Strategy launched at Conference Staffing for IO secured and appointed Plan developed for visit by VC and other Mancom members for April 2014
2	 Establish Senate University Internationalisation Committee Adopt the Constitution for the functioning of the UIC Global Citizenship and International Partnership Colloquium Plan Internationalisation of the Curriculum (IoC) Plan Workshop on IoC Encourage individual departments to undertake own academic planning to pay attention to the international content Develop criteria for prioritizing agreements Review and prioritize all academic collaboration agreements Plan establishment of new agreements in line with priority criteria Revisit and review policies, practices and procedures on programmes and programme mixes for internationalisation at home (I@H) Plan the quality care of the internationalisation programme (QC) Develop benchmarks for internationalisation review Conduct first academic review of the internationalisation programme Plan second (major - across the board) review of the programme Major 5 year review ito institutional &HEQC criteria 	DVC Academic Dean Ac Devt Dean Ac Devt	August 2013 August 2013 August 2013 October 2013 October 2013 & ongoing annually October 2013 & ongoing annually September 2013 October 2013 & ongoing annually October 2013 February 2014 February 2014 February 2014 November 2015 March-July 2016 September 2017 March-July 2018 March-July 2020	Senate UIC established Constitution ratified and adopted Partnerships deepened, focus sharpened Ensuring international, intercultural and global dimension to teaching-learning, research and service functions Focused international academic planning Criteria agreed on and review planned Review and prioritising linkages done. Negotiations/plan on new linkages underway with partner institutions Local students can join study abroad students in special programmes (I@H) Criteria for QC and action plan in place Benchmarks developed and agreed on Academic reviewed completed Sept. '16 Review plan in place. All stakeholders. Review completed- report October 2018 Review done. Redesign & realign.



	ACTION	RESPONSIBLE	TIMEFRAME	OUTCOME
3	 Formulate and internationalisation programme around Science, Technology, Engineering and Mathematics (STEM) and the management of research in the programmes: This should include: Research programmes and collaboration Faculty mobility through exchange and visits Attendance of international conferences and delivering papers for publication Curriculum review and design Develop WIL strategies that can involve international partners and students Recruitment of international students, both under- and post-graduate Review the programme periodically Review existing linkages in terms of the strategy key foci Establish new partnerships in SADC and rest of Africa Establish new partnerships in BRICS countries Identify niche programmes (research & teaching) in faculties slated for continued existing and potential new linkages. Suggested areas: New product development and design Automated material handling and radio frequency identification Hydro-informatics Information and Communication Technology Applied food safety and biotechnology Bio-environmental studies Applied health technology Future programmes as per STEPS planning: Logistics and Transport Management Renewal Energy Technologies Sustainable Energy Advising Hydrology and Water Management Negotiate and establish priority international research collaboration partnerships around key foci Design a recruitment strategy for international students, particularly post- graduate students as part of research teams Review to determine if numerical targets achieved Develop a faculty international exchange/visits programme with a view to staff exposure and development and curriculum enrichment Encourage individual departments to undertake own academic planning to pay 	STEM faculties' respective Deans Dean: EIT Dean: H & ES Dean: Hum. Faculty Deans Research Dean to make input to strategy With Registrar, Research Dean and IO	September 2013 and on-going September 2015 September 2017 September 2020 October 2013 and periodic in terms of MoU clauses - on-going annually April/May 2014(2) April/May 2014(2) April/May 2018(4) April/May 2018(4) April/May 2016(3) April/May 2016(3) April/May 2018(4) April/May 2020(3) November 2013 and on-going March 2014 and on-going November 2013 February 2014 Review annually March until 2020 August 2013 & on- going annually September 2013 and on-going	Focused internationalised programme in place displaying uniqueness of focus and activities Exchanges of international and local students on WIL programmes Gradual increase of ± .7% pa in numbers to reach target of10% by 2020 Sharpened outcomes and engagements Realigned priorities Objectives achieved and reformulated Redundant linkages terminated, existing ones deepened/strengthened and new ones established Partnerships in SADC established Partnerships in rest of Africa established Partnerships in rest of Africa established Partnerships in rest of Africa established Partnerships in Brazil established Partnerships in Brazil established Partnerships in Brazil established Partnerships in Brazil established Partnerships in Russia established Partnerships in Russia established Partnerships in Russia established Partnerships in Kussia established Partnerships in station programmes become part of internationalisation programme mix for student recruitment, faculty cooperation and exchange, and joint research Joint research established and research skills and outputs increased Focused recruitment of students for the STEM areas and post-graduate research Targets achieved and adjusted where necessary Regular programme of exchange visits to partners established ensuring mutually agreed-on outcomes Ensuring departments' academic review have an international criterion



	ACTION	RESPONSIBLE	TIMEFRAME	OUTCOME
4	 Formulate and internationalisation programme around key faculty niche areas and the management of research in the programmes: This should include: Research programmes and collaboration Faculty mobility through exchange and visits Attendance of international conferences and delivering papers for publication Curriculum review and design Develop WIL strategies that can involve international partners and students Recruitment of international students, under- and post-graduate Review the programme periodically Review existing linkages in terms of the strategy key foci Establish new partnerships in SADC and rest of Africa Establish new partnerships in SADC and rest of Africa Identify the niche programmes (research & teaching) in the faculties slated for continued existing en potential new linkages. Suggested areas: In the Faculty of Management Hospitality training Tourism and Event Management In the Faculty of Health and Environment Sciences Agricultural Biomedical Technology Food Science and -Biotechnology In the Faculty of Humanities Design and Studio Art Maths, Science, Engineering and Technology Education Negotiate and establish priority international research collaboration partnerships around key foci Design a recruitment strategy for international students, particularly post-graduate students as part of research teams Develop a faculty international exchange/visits programme with a view to staff development and curriculum enrichment Encourage individual departments to undertake own academic planning to pay attention to the international content 	Other Faculties' respective Deans Dean: Mgt Dean: HES Dean: Hum Dean Faculty of Management Dean Faculty of Health & Envt. Sciences Dean Faculty of Humanities With Research Dean making input to strategy	April/May 2016(2) April/May 2018(4) April/May 2020(4) April/May 2014(2) April/May 2016(3)	Focused internationalised programme in place displaying uniqueness of focus and activities Exchanges of international and local students on WIL programmes Gradual increase of ± .7% pa in numbers to reach target of 10% by 2020 Sharpened outcomes and engagements Realigned priorities Objectives achieved and reformulated Redundant linkages terminated, existing ones deepened/strengthened and new ones established Partnerships in SADC established Partnerships in rest of Africa established Partnerships in rest of Africa established Partnerships in SADC established Partnerships in India established Partnerships in Brazil established Partnerships in Brazil established Partnerships in Russia established Partnerships in Russia established Partnerships on India established Partnerships on Parzil established and research skills and outputs increased Focused recruitment of students for the niche areas and post-graduate research Regular programme of exchange visits to partners established ensuring mutually agreed-on outcomes Ensuring departments' academic review have an international criterion



	ACTION			OUTCOME
	ACTION	RESPONSIBLE	TIMEFRAME	OUTCOME
	 Design a recruitment strategy for international post-graduates and as part of research teams Design strategic plan for increased post-graduate outputs at the masters and doctoral level. Increase the number of international joint-research outputs in accredited journals Facilitate the through-put of international postgraduate students in the minimum time Sustain and promote research through international research donor agency funding Promote regional (African) and international research collaboration Develop research skills of staff and students through seminars, workshops by, and personal interaction and publication opportunities with, international scholarly visitors to CUT Establish partnerships with international funding agencies and regional, national and international universities for research funding Identifying, review and update criteria for attending international conferences, symposia and workshops of staff members and senior post-graduate students. Identify, review and update criteria for international post-doctoral fellows 	Faculty Deans with inputs by Research Dean	November 2013 February 2014 March 2014 On-going On-going April 2014 Periodic March 2014 and on-going March 2014 On-going February 2014	Increased international post-graduate enrolment at masters and doctoral level. Plan is in place Targets for joint publication achieved Students complete studies with support and without unnecessary delays More International donor funding for research available More research with African partners International scholarly visitors' services used maximally Partnerships in place and database for donor funding and criteria established Policy on international attendance of conferences in place Attendance international conferences, etc. become part of performance management of staff Clear definition of who are post-docs and how to manage their engagement
6	 Plan an internationalisation programme of activities of the IO indicating institutional priorities (unit's annual strategic plan) Design a strategy for collaboration/consultation with different units at CUT Establish a programme of liaison with international partners Design an Office Charter for service delivery to international students and visitors, and CUT staff Develop and maintain an IO Webpage Develop an office database on international students, agreements and partner institutions Develop a data base on mobility and other academic opportunities for students and staff 	International Office (once established)	January 2014 and annually reviewed February 2014 March 2014 March 2014 February /March 2014 and updated annually April 2014 and updated annually May 2014.	A plan of action giving priorities for attention is in place. Integrated operational procedures are established. Relationships with Partners established. Service Level Agreement for service on quality and turn-around times in place. The webpage is in place and functioning. The database is established and managed to ensure efficiency of service. The database is established and managed to ensure efficiency of service.

	ACTION	RESPONSIBLE	TIMEFRAME	OUTCOME
	 Develop marketing and promotional material for recruitment of international students Develop information brochures for prospective international students to CUT Develop pre-registration advising and facilitation programme for international students Develop an International student welfare and hospitality programme, including orientation, advising, counselling, housing, cultural events and students' social activities (clubs, societies, etc.) Plan the implementation of special International Education Programmes Develop a proposal on a Study Abroad Programme (SAP) Establish a liaison strategy with related Government Departments and Offices Establish a liaison strategy with Foreign missions and international education support organisations and services (scholarships, etc.) Periodic review of agreements as per agreement clauses Representing CUT at international education organisations, conferences, seminars, colloquia on internationalisation 	With Comm. & Marketing With Comm. & Marketing With Registrar With Govern. & Student life	Revise annually if dated May 2014. Revise annually if dated. October/Nov '14 Update Registrar Nov. 2013 plan June 2014 and revise and update annually with plan June 2014 September 2014 May 2014 and update regularly May 2014 and update regularly On-going annually and ito MoUs On-going annually	Materials developed and disseminated to relevant client publics at fairs, etc. Brochures developed and disseminated to prospective students on application One-stop, fluent, efficient client service to internationals students during registration and orientation period An efficient, coordinated and integrated advising and client support service to international students is in place Proposals on short-term study Winter/ Summer programmes developed The SAP proposal submitted The strategy developed and a database with contact details, etc. is established The strategy developed and a database with contact details, etc. is established Ensure terms of agreements are adhered to and links kept active Representing CUT in IEASA, Directors' Forum, and other organisations
7	 Centralise administration of all aspects of international student services to enable proper referrals Plan International student recruitment and growth of student numbers in terms of planned targets and a strategic enrolment plan Design a recruitment strategy for international students, particularly post- graduate students as part of research teams Review to determine if numerical targets achieved Design an application and admissions process for international students (the pre-registration, registration and orientation process) Develop criteria for international admissions of undergraduate and post- graduate students to CUT (the statutory requirements, etc.) Develop pre-registration advising and facilitation programme for international students Develop criteria for international post-doctoral fellows Develop an office database on international students, agreements and partner institutions 	Registrar Research Dean With Int Office	September 2013 November 2013 February 2014 November 2013 February 2014 Review annually March until 2020 November 2013 Update regularly November 2013 Review with IO in 2014 and annually November 2013 March 2014 and updated annually	One-stop, fluent, efficient client service to internationals students Gradual increase of ± 0,7% pa in numbers to reach target of 10% by 2020 Focused recruitment of students for the niche areas and post-graduate research Targets achieved. Adjusted if necessary Ease of access to information and efficient processing of students Compliance with regulations and rules of CUT and statutory requirements Fluent, efficient client service to internationals students during registration and orientation period Clear definition of post-doc fellows and compliance with statutory requirements Proper record keeping of student details an terms of partnership agreements



	ACTION	RESPONSIBLE	TIMEFRAME	OUTCOME
8	 Revisit policies with respect to employment of foreign citizens Establish a one-stop clearing house for handling immigration procedures for foreign appointments Revisit and review policies, practices and procedures on Governance and Student Life and Welfare wrt international students Design an orientation and peer support programme for international students Revisit and review policies, practices and procedures on international student accommodation Develop an advising and support service for international student accommodation off-campus Facilitate service support delivery in IT, Library, campus access and other support services for short-term (temporary) international students Provide an international student health and safety orientation programme and action plan on and off-campus Design an Internationalisation at Home programme in residences and other student structures to enable cultural exchange and diversity management between local and international students Review the internationalisation at home programme Organise annual international cultural events (International Festival) on campus involving entire CUT community Establish a liaison an support service for international students with student governance structures and societies Investigate the possible provision of international housing for visitors to CUT 	Resources & Operations Human Res. Student Life With Int.Office Student Life With Int.Office Student Life With Int.Office IT & Logistics Library Logistics Student Life With Int.Office With Int.Office Student Life with Int Office Student Life Student Life SRC Logistics	September 2013 November 2013 September 2013 & review annually February 2013 Annual update February 2013 March 2014 March 2014 March 2014 and annually reviewed May 2014 and updated annually Annually in May September of each year March 2014 March 2014	An efficient human resource client service on immigration matters in place International students are fully integrated into university life International students orientation and peer support programmes in place Policy on international student residence procedures in place Off campus accommodation for international students accredited and advice service in operation Efficient client service delivery to short-term international students provided A client friendly, healthy and safe campus environment for international students A CUT unique international students A CUT unique international students A CUT unique international students , cultural exchange & diversity management objectives achieved International and local students showcase culture, cultural exchange and diversity enhanced, students integrated International students fully integrated into student activities and represented in student governance structures Safe and comfortable housing for periodic international visitors to CUT procured

HOW THE INTERNATIONAL OFFICE RELATES TO CUT AS A WHOLE

Traditionally Internationalisation is about international curricula, staff - and student exchanges, collaborative research and teaching, and services to the international student body at institutions of higher education, and often seen as the responsibility of the International Office. Yet, it is more than the sum of its parts and the International Office acts merely as the enabling arm of the programme.

Because of the need to establish and consolidate the International Office and its operations as new institutional structure, it is recommended that initially it will report to the Strategic Execution Unit.

At CUT Internationalisation will be an academic enterprise to strengthen the academic programme, foster intercultural cooperation and exchange and build global engagement. In this the Academic Division, headed by the Deputy Vice-Chancellor: Academic, and the Deans will play an important leadership and implementation role. This will include:

- a) Engaging in International Academic Relations (partnerships, linkages,);
 b) International academic mobility and collaboration (exchanges);
- c) International research collaboration;
- d) Internationalisation of the Curriculum (Academic planning of departmental and other internationalisation programmes, workshops on internationalisation of the curriculum [IOC]] and on engaging international students in Work Integrated Learning [WIL]); and
- e) Quality Care of International Academic Activities.

The international Office will play an advisory, support and administrative execution role in this respect. This will include

- a) Liaison and cooperation with international partners and CUT staff;
- b) Administration of aspects of student and staff mobility programmes, particularly student exchanges;
- c) Facilitation of administrative aspects of the visits of international researchers, particularly post- graduate students and post-doctoral fellows;
- d) Advising on and facilitating practical aspects of internationalisation of the curriculum; and
- e) Engagement in the quality assessment of all internationalisation programmes.

The Strategic Execution Unit will largely be responsible for positioning the University internationally and enhancing its reputation. In this the following strategic issues will be key:

- a) Planning and facilitating the representation of CUT by the VC and other Executive members at international forums and with peer institutions abroad;
- b) Aligning the internationalisation programme with strategic objectives of Vision 2020;
- c) Monitoring the outcomes of key internationalisation objectives;
- d) Provision of the requisite resources and procurement, including marketing and communication, to execute the internationalisation programme; and
- e) Executive review of the progress and impact of the internationalisation programme on the international, regional and national institutional reputation of CUT.

The International Office will in this regard

- a) Advise on the particular international institutions and forums, as well as key personnel,
 - that can contribute to enhancing the reputation of CUT;
- b) Formulate the objectives of internationalisation in line with the strategic objectives imbedded in Vision 2020, including international student enrolment targets, key strategic partners, etc.;
- c) Report regularly on key indicators and outcomes, and indicate the strategic interventions necessary to achieve objectives;
- d) Preparing regular budgets and reports that would realistically indicate needs and challenges, and planning activities, such as international fairs, information brochures and publications; and
- e) Report regularly on progress of specific programmes, develop benchmarks for measurement and prepare documentation for assessment.

The Registrar's Office play a crucial role in international student affairs as it pertains to rules, regulations and procedures for application, admission, etc., applicable to international students. This includes;

- a) A streamlined client friendly application process for international students, including on-line application, electronically recording biographic and other data, with timeous feed-back;
- b) An admissions and registration process in line with statutory requirements for international students;
- c) Recording and managing data on international students;
- d) Aligning academic programme mixes with internationalisation at home student needs; and
- e) An enrolment plan that informs the international student recruitment strategy.

The International Office will play an administrative support and advising role with respect to

- a) Providing client information through the Office Webpage, brochures and personal responses to enquires;
- b) Managing a pre-registration and follow-up service to international students ensuring compliance with statutory requirements (study permits, medical cover and fees payable);
- c) Updating data on students and informing students, the Registrar and Government offices (Home Affairs) of international student movements and changes on statutory requirements;
- d) Providing information to CUT and international students on study opportunities at CUT to ensure internationalisation at home; and
- e) Developing and managing an international student recruitment plan in line with the CUT enrolment plan.

The Resources and Operations sections of CUT will play a service support function to internationalisation in respect of

- a) Web administration and production of publications to market and promote internationalisation;
- b) Administering international student fee payments and rewards to post-doctoral fellows;
- c) Administering the immigration and other aspects of international staff appointments;
- d) Providing IT support and a vibrant and safe environment to international students and visitors; and
- e) Contributing to internationalisation at home and international student welfare and health services, including housing, orientation, counselling and support through the SRC and student societies.

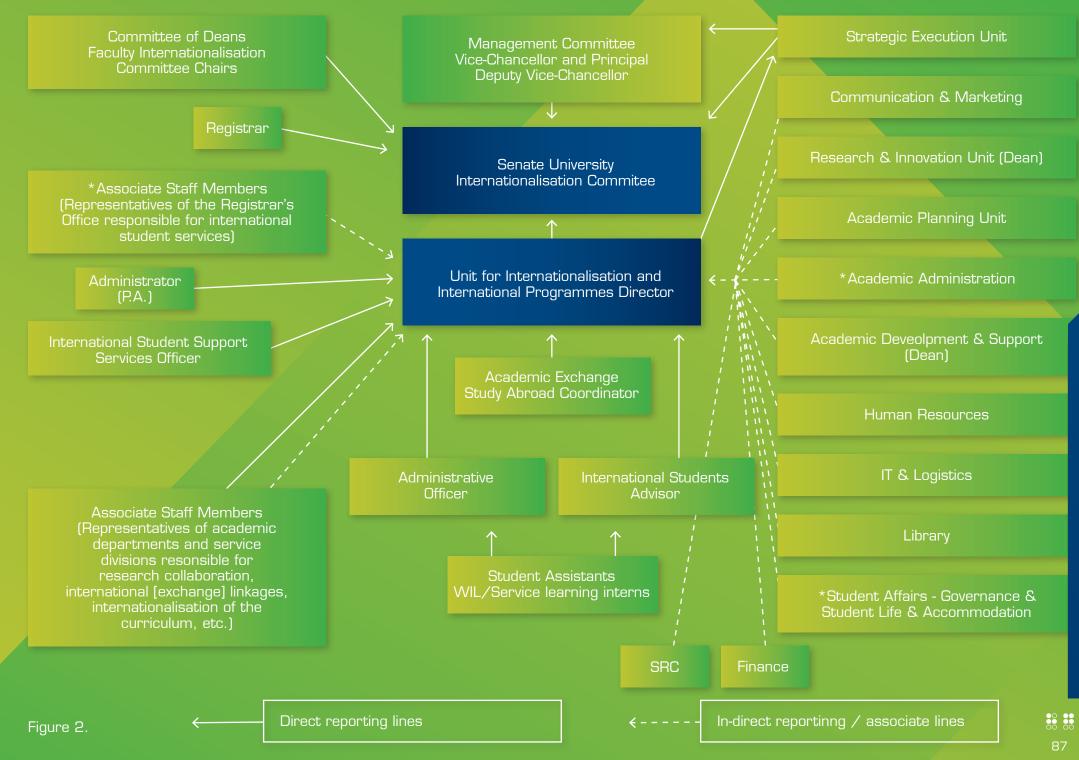
The role of the International Office in this regard will be a suite of client support and advice services to international and local students, international visitors, and the CUT community. This will be done in consultation, liaison and cooperation with key staff members in the responsible Support Services sections at CUT.

Thus the entire University will be engaged in the process in the integrated manner as illustrated below.



Figure 1. How the International Office relates to the CUT as a whole

Figure Credit: David Himbara



THE INTERNATIONALISATION STRATEGY

CUT STRATEGICPLAN 2016-20

ANNEXURES

INTRODUCTORY NOTES

- Table 1. Co-operation Agreements Between CUT and International Partners
 Activities with regard to Internationalisation: Liaison of the Academic Division and the International Office
 Activities with regard to Internationalisation: Liaison of the Registrar's Division and the International Office
 Activities with regard to Internationalisation: Activities of the International Office

ANNEXURE 1

Table 1. CO-OPERATION AGREEMENTS BETWEEN CUT AND INTERNATIONAL PARTNERS



NAME OF INTSITUTION	AGREEMENT END DATE		
The Katholieke Hogeschool Mechelen: Belgium	16/02/2010 (Active) – Community development – Arts and Culture. Locating student traineeship opportunities for internship.		
Hochschule Harz: Germany	Active – Management Sciences/Engineering		
Aalborg University: Denmark	(Dormant)– To promote international friendship stimulating and supporting academic and intercultural activities and projects amongst students, academic and support staff, and promote goodwill between the two institutions.		
Lerotholi Polytechnic: Lesotho	Dormant - Exchange opportunities for staff, especial library staff and students.		
Missouri University of Science and Technology: USA	Dormant – Joint research activities, joint organization of seminars and academic meetings and exchange of academic materials.		
Emaar Education	22/05/2013 (Not Active) – Mutual recognition of qualifications in Hospitality Management awarded by both institutions.		
Kajaani University of Applied Sciences: Finland	22/05/2014 (Not Active) – Development of students and staff exchange.		
Fachhochschule ULM University of Applied Sciences: Germany	Active. – Science and Technology – Engineering.		
University of Northumbria: Newcastle, United Kingdom	Not Active – opportunities for SA and UK students and staff. to study abroad.		
Vrije University: Brussel	Not Active – improvement of research and education programmes and to exchange professors, researchers, administrative, technical staff and students.		
Aalen University: Germany	Active – No specific outcomes as per the MoU, but will concentrate on Humanities and Management Sciences.		
Hanze University Groningen: Netherlands	Active – Experiential Training for Health Sciences – placements in local Hospitals		



NAME OF INTSITUTION	AGREEMENT END DATE
Jinan University: China	Passive – renewable energy and sustainable development
Spokane Falls Community College: USA	Not Active – provide opportunities for SA and overseas students to study abroad. Opportunities for exchange of periodicals and other academic material
Australian International Hotel School.	Not Active – to enable both institutions to respond jointly to the educational, research and training needs of the tourism and hospitality industry and in particular management areas of the hospitality sector.
National University of Rwanda	Not Active – Cooperation in teaching and research in Engineering and Technology, Health Professionals and Technology, Management Sciences, Support Services and Technology Transfer.
Kigali Institute of Science and Technology: Rwanda	Active – Environmental Health and Engineering – treatment of Rwandan students the same as South African students in terms of fees and other opportunities that applies to students in general.
Waiariki Institute of Technology	Dormant
Twente University - Netherlands	Not Active – Joint research by staff, exchange of post graduate students and the exchange of scientific and educational literature.
Karlstad University	Dormant: Afford faculty members of both institutions to teach and engage in research. Exchange for undergraduate programmes and graduate levels.
Hochschule Fur Technikon Wirchaft Mittweida	Passive

Some collaborations may not be given as it does not form part of the institutional record/database.

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ANNEXURE 2

Activities with regard to Internationalisation

Liaison of the Academic Division and the International Office

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	TASKS	RESPONSIBLE	OUTCOMES
Α	ACTIVITIES OF THE INTERNATIONALISATION SERVICES IN THE DOMAIN GENERAL ACADEMIC PROGRAMMES AND PARTNERSHIPS	DVC: ACADEMIC	
1	Generally administering CUT's internationalisation programme with respect to general academic policy and planning, curriculum development, advising, liaison, quality care and reporting on international cooperation in teaching and learning, research, community engagement, and international exchange and global engagement.	DVC: Academic Deans International Office	Academic oversight, control and management of the programme of internationalisation and partnerships
2	 Establish control structures for managing the internationalisation programme Establish and manage the Senate University Internationalisation Committee (UIC) Adopt and periodically review the Constitution for functioning of the UIC Develop and manage an Internationalisation Policy Manage the operation of the Unit : Internationalisation and International Programmes (International Office) 	DVC: Academic Senate UIC	
3	Gathering and channelling of the relevant information about aspects of internationalisation with respect academic planning and programmes, curriculum development, research collaboration, student recruitment and enrolment planning and international partnerships to • The Senate • The MANCOM • Central Administration (Registrar, Deputy-Registrar: Academic Administration, Deputy-Registrar: Student Services) • The Faculty Deans • Departments • Resources and Operations	DVC: Academic Senate UIC Deans International Office	Regular planning, reporting and liaison on internationalisation programmes across CUT, including the Welkom campus. An informed and involved CUT community on academic, staff and student development aspects of internationalisation

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	TASKS	RESPONSIBLE	OUTCOMES		
4	 Engaging in International Academic Relations (partnerships and linkages) Developing and applying criteria for selection and prioritizing of international collaboration partnerships Review and prioritize all academic collaboration agreements Plan establishment of new agreements in line with priority criteria Proposals and recommendations to departments and faculties about cooperation opportunities Suggesting initiatives for and facilitating partnerships with selected universities in collaboration with other support service Units at CUT Facilitating and establishing networks with international academics through electronic means and through meetings at local and international conferences Providing advice and support where departments and individuals want to establish linkages or are already involved in collaboration. Implement and operate quality international collaboration partnerships around STEM niche programmes and other key niche areas at CUT 	DVC: Academic DVC:A/Fac. Deans DVC:A/I0 DVC:A/I0 DVC/F.Deans/I0 DVC:A/I0 Faculty Deans	Strengthening international partnerships and research collaboration, to enhance the academic capacity and prestige Selection of partners according to "institutional fit" Opportunities for prioritizing links in line with niche areas Connecting faculty members around areas for active partnerships A focused internationalised programme in place displaying uniqueness of focus activities		
5	 Manage international academic mobility and collaboration Increase international exposure of faculty members through mobility programmes Develop an international programme of mobility of faculty members to selected partner institutions with programme objectives and monitoring mechanisms Utilise mobility programmes for faculty and departmental academic planning and development purposes Utilise mobility programmes for academic staff development Devise criteria for performance management assessments of international mobility participation Facilitation, in conjunction with: Communication & Marketing, of the presentation of public lectures by visiting academics. 	DVC:A/Fac. Deans DVC:A/Fac. Deans DVC:A/Fac. Deans DVC:A/Fac. Deans DVC:A/F.Deans/HR DVC:A/IO	Optimal use of mobility schemes Staff skills, perspectives and capacity enhanced Focused mobility linked to goals set in departments Internationalisation of the curriculum is enhanced Personal development enhanced Greater importance and credit attached to visits abroad Maximising benefit from visitors to the broader CUT community		



	TASKS	RESPONSIBLE	OUTCOMES
6	Academic planning and development	DVC: Academic DVC: Academic DVC: Academic DVC: Academic DVC: Academic DVC/F.Deans/IO DVC/F.Deans/IO DVC/F.Deans/IO DVC/F.Deans/IO DVC:A/Fac. Deans DVC:A/Fac. Deans DVC:A/Fac. Deans DVC:A/Fac. Deans DVC:A/Fac. Deans DVC:A/Fac. Deans	Academic planning priorities as internationalisation motivation Equipping our student for global participation and citizenship Neither happens in a vacuum and mutually informs each other International, global dimension to core functions ensured Insert new thinking on programmes Focused international academic planning in departments Ensuring student mobility is purposely linked to curriculum Potential for enriching academic exposure in mobility exchanges Meaningful programme offerings to exchange and other students from abroad Exchanges contribute to course requirements fulfilled Options for local with study abroad students to get credit Clarity to international short-term students on assessment credits Expanding choices for students in exchange programmes Opportunity to market short-term and other programmes of interest to internationals



TASKS	RESPONSIBLE	OUTCOMES
 International research collaboration and post-graduate student recruitment and development. Formulate and manage an international research collaboration programme around STEM and other key faculty niche areas Establish research support structures and programmes to facilitate timely execution of research projects Design a recruitment strategy for international post-graduate students and as part of research teams Design strategic plan for increased post-graduate outputs at the masters and doctoral level. Design a strategy, including securing the necessary funding and other resources, for recruiting post-doctoral fellows, particularly from partner institutions Identify, review and update criteria for international post-doctoral fellows Increase the number of international research cullaboration Develop research skills of staff and students through seminars, workshops by, and personal internation and publication opportunities with, international scholarly visitors to CUT Procure and allocate resources for International research collaboration through national research (NRF, CSIR, HSRC, etc.) funding Establish multilateral international research partnerships/consortia on niche research areas Establish partnerships with international funding and donor agencies for International research collaboration through national research collaboration funding (EU, Ford Foundation, Carnegie, Mellon, etc.) Manage attendance of international research conferences, congresses, symposia and workshops of staff members and senior post-graduate students. 	DVC: Academic Deans Research Dean	A focused research engagement and post-graduate output A focused research engagement linked to international goals Projects completed with support and without unnecessary delays Increased international post-graduate enrolment at masters and doctoral level. Outputs of international post-graduate students increased Increased post-doctoral fellows engaged in research and teaching Clear definition post-docs & how to manage their engagement Targets for joint publication achieved More links with African partners International scholarly visitors' services used optimally Focused institutional support for niche projects Local research support for key research projects obtained Opportunity for uitlising available funding for multilateral consortia More International donor funding for research available Attendance of international conferences, etc. become part of staff performance management

	TASKS	RESPONSIBLE	OUTCOMES
8	 Guality Care of International Academic Activities Plan the quality care of the internationalisation programme Regular reporting by the International Office on implementation of programmes, visitor programmes and student activities to DVC: Academic Reporting from Departments to Faculty Internationalisation structures Reporting by Deans to Faculty Boards Reporting by DVC to Mancom, Senate Develop criteria and benchmarks for review of the internationalisation programme Conduct regular academic review of the internationalisation programme according to specific time-lines in 2016, 2018 and 2020 Redesign internationalisation objectives of Vision 2020 Conduct a total programme review with full quality control and assessment of outcomes in terms of institutional & HEQC criteria, 2020 	DVC: Academic Deans Research Dean International Office	Criteria for QC and action plan for reviews and audits in place All stakeholders are regularly informed about programmes and progress and opportunity for assessment, extension, review and corrective action in place The institution sets own benchmark for its programme Opportunities for review, audit, affirmation, redirection, realignment and growth of the programme Assessment of whether the specific and general objectives of Vision 2020 achieved

	TASKS	RESPONSIBLE	OUTCOMES
В	ACTIVITIES OF THE INTERNATIONALISATION SERVICES IN THE DOMAIN OF THE TEACHING AND LEARNING, RESEARCH & WIL IN STEM PROGRAMMES	FACULTY DEANS	
1	 Formulate and internationalisation programme around Science, Technology, Engineering and Mathematics (STEM) and the management of research in the programmes: This should include: Research programmes and collaboration Faculty mobility through exchange and visits Attendance of international conferences and delivering papers for publication Curriculum review and design Develop WIL strategies that can involve international partners and students Recruitment of international students, both under- and post-graduate Review the programme periodically 	Faculty Deans	Focused internationalised programme in place displaying uniqueness of focus and activities Exchange of international & local students on WIL programmes Gradual increase of ± .7% pa in numbers to reach target of10% by 2020 Sharpened outcomes and engagements Realigned priorities Objectives achieved and reformulated
2	Academic Collaboration Partnerships • Review existing linkages in terms of the strategy key foci • Establish new partnerships in SADC and rest of Africa • Establish new partnerships in BRICS countries	Faculty Deans	Redundant/dormant linkages terminated, existing ones deepened/strengthened and new ones established Partnerships in SADC established Partnerships in rest of Africa established Partnerships in China, Brazil, India and Russia established
3	 Identify niche programmes (research & teaching) in faculties selected for continued existing and potential new linkages. Suggested areas: New product development and design Automated material handling and radio frequency identification Hydro-informatics Information and Communication Technology Applied food safety and biotechnology Bio-environmental studies Applied health technology Future programmes as per STEPS planning: Logistics and Transport Management Renewal Energy Technologies Sustainable Energy Advising Hydrology and Water Management 	Faculty Deans Dean: Faculty of Engineering & IT Faculty Deans Dean: Faculty of Engineering & IT	Focused international cooperation around niche areas Ensuring new academic programmes become part of the internationalisation programme mix for student recruitment, faculty cooperation and exchange, and joint research

	TASKS	RESPONSIBLE	OUTCOMES
4	 Negotiate and establish priority international research collaboration partnerships around key foci 	Faculty Deans Dean: Research	Joint research established and research skills and outputs increased
5	 Recruitment of students for the STEM Programmes Design a recruitment strategy for international students, particularly post-graduate students as part of research teams Review to determine if numerical targets achieved 	Faculty Deans With inputs by Dean: Research	Focused recruitment of students for the STEM areas and post-graduate research Targets achieved and adjusted where necessary
6	 Encourage individual departments to undertake own academic planning to pay attention to the international content 	Faculty Deans	Ensuring departments' academic planning & review have an international criterion
7	 Develop a faculty international exchange/visits programme with a view to staff exposure and development and curriculum enrichment 	Faculty Deans	Regular programme of exchange visits to partners ensuring mutually agreed-on outcomes
С	ACTIVITIES OF THE INTERNATIONALISATION SERVICES IN THE DOMAIN TEACHING AND LEARNING, RESEARCH & WIL IN OTHER ACADEMIC PROGRAMMES	FACULTY DEANS	
1	 Formulate and internationalisation programme around key faculty niche areas and the management of research in the programmes: This should include: Research programmes and collaboration Faculty mobility through exchange and visits Attendance of international conferences and delivering papers for publication Curriculum review and design Develop WIL strategies that can involve international partners and students Recruitment of international students, under- and post-graduate Review the programme periodically 	Faculty Deans	Focused internationalised programme in place displaying uniqueness of focus and activities Exchange of international & local students on WIL programmes Gradual increase of ± .7% pa in numbers for 10% target by 2020 Sharpened outcomes engagements,realigned priorities Objectives achieved and reformulated
2	Academic Collaboration Partnerships • Review existing linkages in terms of the strategy key foci • Establish new partnerships in SADC and rest of Africa • Establish new partnerships in BRICS countries	Faculty Deans	Redundant/dormant linkages terminated, existing ones deepened/strengthened and new ones established Partnerships in SADC established Partnerships in rest of Africa established Partnerships in China, Brazil, India and Russia established

Ú.

	TASKS	RESPONSIBLE	OUTCOMES
3	 Identify the niche programmes (research & teaching) selected for continued existing en potential new linkages. Suggested areas: In the Faculty of Management Hospitality training Tourism and Event Management In the Faculty of Health and Environment Sciences Agricultural Biomedical Technology Food Science and –Biotechnology In the Faculty of Humanities Design and Studio Art Maths, Science, Engineering and Technology Education 	Dean Faculty of Management Dean Faculty of Health & Environment Sciences Dean Faculty of Humanities	Focused international cooperation around niche areas Ensuring academic programmes become part of the internationalisation programme mix for student recruitment, faculty cooperation and exchange, and joint research
4	 Negotiate and establish priority international research collaboration partnerships around key foci 	Faculty Deans Dean: Research	Joint research established and research skills and outputs increased
5	 Recruitment of students for the priority Programmes Design a recruitment strategy for international students, particularly post-graduate students as part of research teams Review to determine if numerical targets achieved 	Faculty Deans Dean: Research	Focused recruitment of students for the priority areas and post-graduate research Targets achieved and adjusted where necessary
6	• Encourage individual departments to undertake own academic planning to pay attention to the international content	Faculty Deans	Ensuring departments' academic planning & review have an international criterion
7	• Develop a faculty international exchange/visits programme with a view to staff exposure and development and curriculum enrichment	Faculty Deans	Regular programme of exchange visits to partners ensuring mutually agreed-on outcomes
D	ACTIVITIES OF THE INTERNATIONALISATION SERVICES IN THE DOMAIN RESEARCH AND INNOVATION	DEAN: RESEARCH	
1	Overall goal • To facilitate all research and to support the development of research		The creation and implementation of new (innovative) knowledge
2	International Research Collaboration • Promote regional (African) and international research collaboration		More research with African partners
3	• Increase the number of international joint-research outputs in accredited journals		Targets for joint publication improved
4	 Utilise visiting international research scholars Develop research skills of staff and students through seminars, workshops by, and personal interaction and publication opportunities with, international scholarly visitors to CUT 		International scholarly visitors' services used maximally Contributes to Int. @ Home
5	 Recruitment of international post-graduate students Design a recruitment strategy for international post-graduates as part of research teams 	Faculty Deans	Increased international post-graduate enrolment at masters and doctoral level.
6 	 International post-graduate student outputs Design strategic plan for increased international post-graduate student outputs at the masters and doctoral level. Facilitate the through-put of international postgraduate students in the minimum time 	Faculty Deans	Increased international post-graduate student outputs Students complete studies with support and without unnecessary delays

	TASKS	RESPONSIBLE	OUTCOMES
7	 International research funding Sustain and promote research through international research donor agency funding Establish partnerships with international funding agencies and regional, national and international universities for research funding 		More International donor funding for research available Partnerships in place and database for donor funding and criteria established
8	 Attendance of international conferences Identifying, review and update criteria for attending international conferences Manage attendance of international research conferences, congresses, symposia and workshops of staff members and senior post-graduate students. 		Policy in place on attendance of international conferences Attendance of international conferences, etc. become part of staff performance management
9	International post-doctoral fellows • Design a strategy for attracting international post-doctoral fellows • Identify, review and update criteria for international post-doctoral fellows		Clear definition of who are post-docs and how to manage their engagement

ANNEXURE 3

Activities with regard to Internationalisation

Liaison of the Registrar's Division and the International Office



	TASKS	RESPONSIBLE	OUTCOMES
А	ACTIVITIES OF THE INTERNATIONALISATION SERVICES IN THE DOMAIN GENERAL ADMINISTRATION AND PARTNERSHIPS	REGISTRAR	
1	Generally administering CUT's international students' issues, particularly on the maintenance of specific rules and procedures to facilitate international student compliance and involvement	Registrar International Office (IO)	Administrative oversight and management of internationalisation
2	 Gathering and channelling of the relevant information about aspects of international students w.r.t. compliance issues, enquiries about admissions, pre-registration, etc. to The MANCOM (Registrar), Central Administration The Faculty Administrations Departments 	Deputy Registrar: Academic Administration (DR: AA) IO	Regular reporting and liaison on internationalisation programmes. An informed and involved campus community on formal rules and requirements aspects of internationalisation
3	 Building and maintaining databases regarding: International Students (Records: academic, origins, permits, etc.) International Students (personal/social details) Information on current and identification of potential new partnerships International agreements involving international students International agreements on student exchanges and student visitors International funding opportunities for local students to study abroad Identification of International study opportunities for local SA students 	DR: AA/IO Deputy Registrar: Student Services (DR: SS) & IO DR: AA/IO DR: SS/IO DR: SS/IO DR: SS/IO	Proper record keeping to facilitate execution of processes and maintaining integrity of data on students, agreements and ensure execution of procedures to follow in selection of partners and review of agreements.

	TASKS	RESPONSIBLE	OUTCOMES
4	 Administering CUT's international relations and advising on the maintenance of specific rules and procedures to facilitate international liaison and involvement. Centralise administration of all aspects of international student services to enable proper referrals Plan International student recruitment and growth of student numbers in terms of planned targets and a strategic enrolment plan Design a recruitment strategy for international students, particularly post-graduate students as part of research teams Review to determine if numerical targets achieved Design an application and admissions process for international students (the pre-registration, registration and orientation process) Develop criteria for international admissions of undergraduate and post-graduate students to CUT (the statutory requirements, etc.) Develop pre-registration advising and facilitation programme for international students Revisit and review policies, practices and procedures on programmes and programme mixes for internationalisation at home (I@H) Develop an office database on international students, agreements and partner institutions 	Registran IO Registran DR: AA Registran IO Registran/IO/Deans DR: AA/IO Registran/Deans DR: AA /IO Registran/DVC:A/Deans Registran/Research Dean IO	Compliance with CUT academic and statutory requirements One-stop, fluent, efficient client services to international students Meeting planned targets for international student growth Focused recruitment strategy for niche areas Corrective strategies employed Easy access to information and efficient processing of students Compliance with CUT regulations & rules & statutory requirements Fluent, efficient client service to internationals students Options for local students in study abroad programmes increased Clear definition & compliance with statutory requirements Proper records of student details & partnership agreement terms
5	Ensuring that the provisions of agreements are complied with and the evaluation of the needs for sustained collaboration agreements	Registrar IO	Agreements are regularly checked and reviews done
6	 Administration of student exchanges: The administration of exchange of students from foreign partner institutions in collaboration with faculties and departments The administration of exchange of CUT students to equivalent foreign (partner) institutions in collaboration with faculties and departments Administration of Work integrated learning (WIL) exchanges utilising regional foci and structures 	DR: AA /IO DR: AA /IO Deans/HoDs DR: AA / Dean: Ac. Devt., HoDs & IO	Efficient services to client publics, including academic departments and other partner International Offices and students Opportunities for more focused learning for exchange students
7	Developing guidelines for studies of international students at CUT and for our students to study at equivalent foreign institutions. Preparation and distribution of information material to prospective international students	DR: AA /IO	Clarity across CUT on policies & rules pertaining to international- and CUT students going abroad.



	TASKS	RESPONSIBLE	OUTCOMES
В	ACTIVITIES OF THE INTERNATIONAL STUDENTS ADVISING SERVICES IN THE DOMAIN ACADEMIC ADMINISTRATION	DEPUTY REGISTRAR ACADEMIC ADMIN	
1	 Key areas of activities of the International Students Advising service on Academic Administration: Handling international student enquiries about studying at CUT in conjunction with other relevant student support services Proper referral of international student enquiries Liaison with Academic Structure and Student Enrolment Services, Academic Administration and Faculty Officers, departments on student enquiries Advice to international students regarding admission requirements, accommodation, student permit applications, work permits and medical coverage Advice to international exchange students on study permit applications and medical coverage Advice to local CUT students regarding visas/work permits Issue support documentation for international students employed on campus in compliance with Home Affairs requirements Managing the pre-registration process in respect of international students Development of a database on admission requirements and accreditation Liaising with the Unit Administration of Financial Aid on Student Accounts, Bursaries & Loans Liaising with Finances on fees payable by international students Updating the international student data on the Information system Advising international students on and liaison with Centre for Teaching and Learning on language proficiency and other related issues Liaison with Home Affairs on international student permit applications/ renewals Liaison with Home Affairs on international student movement (reporting on students completing/terminating studies) Liaison with organisations/companies providing international student medical cover. 	Deputy Registrar Acad. Admin. Intern. Office IO DR: AA /IO DR: AA /IO DR: AA /IO DR: AA /IO DR: AA /IO IO IO DR: AA /IO DR: AA /IO DR: AA /IO DR: AA /IO DR: AA /IO DR: AA /IO DR: AA /IO	One-stop, fluent, efficient client service to international students Efficient turn around strategies in responding to enquiries Good communication between all internal stakeholders An informed international student client public Students procure proper documentation in time International students allowed to do work on campus Students efficiently serviced and properly channelled International students' admission equitably handled Intercession for international students for bursaries, etc. A proper policy of fees in place & students advised properly Integrity of data maintained International students with problems assisted Ensure students and CUT comply with statutory requirements Provision of on-campus services to students and compliance ensured
2	Client Services delivered as International Students Advising in the domain Academic Administration Collaboration in establishing a client friendly and accessible campus for international students through contributions with regard to physical planning and delivery of information services through:	International Office	Ensuring that international students, their agents and other agencies are properly informed of and assisted with academic support services

	TASKS	RESPONSIBLE	OUTCOMES
	 Provision of on-going support and client services to international students with respect to compliance issues and admissions requirements Provision of specialist information brochures to provide information about CUT to international students. Distribution of such brochures to diplomatic missions, universities and other institutions abroad. Advising on and provision of information on the language policy as admission requirement in respect of students from countries where English is not the national language Cooperation with Academic Administration, faculty administrations and other service UNits with the registration, orientation and on-going assistance and support of international students General assistance with orientation, advice and guidance to and support of international students at CUT. 		Students are assisted when issues /problems arise Students are properly informed beforehand of relevant rules Agencies providing assistance to students are informed Clear guidance to students where applicable Students services are provided in coherent and integrated way Overall efficient client services to international students
	ACTIVITIES OF THE INTERNATIONAL STUDENTS SUPPORT SERVICES IN THE DOMAIN OF STUDENT SERVICES	DEPUTY REGISTRAR STUDENT SERVICES	
1	Administering CUT's international students' relations with the campus community and advising on the integration, adaptation and involvement in student life on campus, the City of Bloemfontein, the Town of Welkom and South Africa, and on the maintenance of specific rules and procedures to facilitate international student involvement.	Deputy Registrar: Student Services (DR:SS) International Office	International students are fully integrated; a healthy, secure & safe campus environment for international students ensured Internationalisation @Home.
2	 Gathering and channeling of the relevant information about all aspects of international student life to The MANCOM (Deputy Vice-Chancellor) The Manager: Governance and Student Life Other Service UNits on the Bloemfontein campus Other Service UNits on the Welkom campus Student structures: SRC and a CUT International Students Society (to be established) 	DR: SS IO	Regular reporting and liaison on particular internationalisation programmes for all students. An informed and involved campus community on aspects of internationalization ensuring internationalisation at home
4	 Administration of student exchanges: The administration of some aspects of services to exchange of students from foreign partner institutions in collaboration with faculties and, departments, including advice and assistance on accommodation, orientation to local conditions, peer mentorship, on-going support advising on relevant issues The administration of exchange of CUT students to equivalent foreign (partner) institutions in collaboration with the International Office, faculties and departments 	DR: SS IO DR: SS IO	Ensuring that international student exchanges occur with due diligence to expectations of all parties with respect to student welfare and support, including health, safety and security.

	TASKS	RESPONSIBLE	OUTCOMES
5	Orientation for international students regarding CUT/Bloemfontein/ Welkom/ Free State/South Africa.	10	Ensuring international students are fully integrated into CUT
6	Developing guidelines for student and social life at CUT and for our students to live at equivalent partner institutions abroad.	DR: SS/IO	Ensuring student life abroad is fulfilling & meets expectations
7	Organising of international cultural events/functions	10	Cultural exchange and diversity objectives achieved
8	 Client Services in Student Services. Collaboration in establishing a client friendly and accessible campus for international students and the campus community through contributions with regard to physical planning and delivery of information services through: Provision of a comprehensive programme of on-going support and client services to international students. Publication of specialist brochures to provide information about CUT to international students. Distribution of such brochures to diplomatic missions, universities and other institutions abroad. Planning for the provision of and assisting in obtaining accommodation for international students and visitors. Promotion of and disseminating information about study opportunities for CUT students and academics at universities abroad. Creating awareness among undergraduate and post-graduate students of international opportunities for study at institutions with which we have international linkages. Coordinating visits of students from abroad. Orientation, advice and guidance to and support of CUT students who will engage in student exchanges abroad or want to undertake studies at foreign institutions. Organising welcome receptions and other functions for international students. 	International Office IO IO IO DR:SS/IO IO IO DR:SS/IO DR:SS/IO DR:SS/IO DR:SS/IO DR:SS/IO	Ensuring internationalisation at home objectives are achieved. International students feel at home and supported Proper marketing of CUT services is provided Plan and programme for housing visiting students in place CUT students informed and encouraged to seek exchange and other opportunities abroad Maximizing opportunities resulting from partnerships Efficient public relations services Proper integration of students into campus and social life and facilitating cultural exchange Ensure CUT students gain enough information for adapting to living abroad Making international students feel welcome and part of CUT

	TASKS	RESPONSIBLE	OUTCOMES
9	 Internal Liaison with the following stakeholders: Campus community (MANCOM, Manager: Governance and Student Life, Academic departments and Service units - ResOps) Student Representative Council and other organisations such as an International Students' organisation (to be established) and others Communicating information with regard to international bursary opportunities, scholarships and fellowships Coordinating visits from international student groups or organisations with internal stakeholders 	10	An informed and involved campus community, aware of and attending to aspects of international student life at CUT in an integrated manner. Ensuring benefits available are utilized Client services to occasional student visitors.
10	 External Liaison Contacts with foreign Embassies, High Commissions, Consulates Contact with South African Embassies abroad. Other relevant stakeholder groups (e.g. Alumni), organisations, institutions 	DR:SS/IO DR:SS/IO DR:SS/IO	Maintaining diplomatic mission & other links to inform of CUT programmes and utilize opportunities available

ANNEXURE 4

Activities with regard to Internationalisation

A. Activities of the International Office (In the domain General Administration and Partnerships)

- 1. Administering CUT's internationalisation programme with respect to general administration, planning, policy, advising, liaison, correspondence and reporting.
- 2. Administering CUT's international relations and advising on the maintenance of specific rules and procedures to facilitate international liaison and involvement.
- 3. Ensuring that the provisions of agreements are complied with and the evaluation of the needs for sustained collaboration agreements
- 4. Administration of Collaboration Agreements

The International Office will, in consultation with the academic sector, facilitate the establishment of creative and extensive cooperation agreements with selected international universities to enhance the competitive edge of the University, through:

- Proposals and recommendations to departments and faculties about cooperation opportunities
- Facilitating and establishing networks with international academics through electronic means and through meetings at local and international conferences
- Advice on recruitment of international students through publications and participation in international exhibitions, programmes and conferences
- Involvement in workshops, consultations, etc., which may lead to adaptations of existing courses to promote internationalisation
- Suggesting initiatives for and facilitating partnerships with African universities in collaboration with other support service units at the University.
- Handling the administration of institution to institution cooperation agreements in consultation with departments/individuals.
- Handling the administration of all student exchange agreements
- Providing advice and support where departments and individuals want to establish linkages or are already involved in collaboration.
- Ongoing liaison with faculties and departments about the internationalisation programme.
- 5. Facilitating Administration of Exchange of Foreign Academics:

The following emphases will characterise the activities of the Office in this regard:

- Planning and implementation, in conjunction and collaboration with academics, of visitors' programmes.
- Maintaining a database regarding visits to and on behalf of CUT.
- Preparation and availability of orientation material.
- Organization of orientation programmes in collaboration with academic departments.
- Continual evaluation of the terms of agreements for visitors to CUT as contained in collaboration agreements.
- Facilitation, in conjunction with the Unit: Communication & Marketing, of the presentation of public lectures by visiting academics.

- 6. Building and maintaining databases regarding:
 - International agreements
 - International funding opportunities
 - Identification of possible partnerships
 - Identification of International study opportunities for staff and students
- 7. Administration of student exchanges:
 - The administration of exchange of students from foreign partner institutions in collaboration with faculties and departments
 - The administration of exchange of CUT students to equivalent foreign (partner) institutions in collaboration with faculties and departments
 - Administration of Work integrated learning (WIL) exchanges utilising regional foci
 and structures
 - Liaison with partner institutions on student exchanges
 - Liaison with CUT Departments and Service units on exchange students
- 8. Developing guidelines for studies of international students at CUT and for our students to study at equivalent foreign institutions.
- 9. Keeping the MANCOM and other relevant colleagues abreast of developments at home and abroad regarding student fees and service fees for foreign occasional student and lecturers.
- 10. Advice on Academic Planning:

Given the primary link between academic planning and internationalisation, the following focus points are particularly important:

- Strengthening of the relationship between academic planning and internationalisation
 - through advice and workshops.
- Liaising and consulting with departments and faculties on academic planning that could create new possibilities regarding internationalisation.
- Advice on internationalisation of the curriculum and "internationalisation at home"
- Advice on facilitation of international student mobility through academic planning
- Identifying specific foreign academic programmes that could be of value to CUT.
- Identifying specific CUT academic programmes that could be of value to foreign academics and students to promote the internationalisation of their curricula and study programmes.

STRATEGY

11. International Education.

The International Office will cooperate in and advise on establishing a comprehensive Programme of International Education directed at our local students and the international market through:

- Recommending and facilitating the presentation of an academic planning workshop on Internationalisation of the Curriculum
- Identifying internationally marketable courses at CUT for short-term programmes to be marketed at institutions abroad
- Recommending proposals to faculties and departments, to in support of the core business, develop and implement short-term Study Abroad Programmes
- Plan and implement agreements with institutions abroad about utilizing such Study Abroad programmes
- Encourage faculties and departments to present short courses, (Study Abroad programmes) aimed at the "foreign market", during regular semesters and university holidays
- Plan and develop marketing material (brochures, pamphlets, posters, DVDs, etc.) for distribution to universities and other institutions abroad
- Visiting institutions abroad and international conferences to market these programmes
- Marketing these programmes on the International Office Webpage.
- Marketing these programmes in the International Education Association of South Africa (IEASA) publication Study South Africa

12. Client Services

Collaboration in establishing a client friendly and accessible campus for international visitors and the campus community through:

- Promotion of and disseminating information about study opportunities for CUT students and academics at universities abroad.
- Creating awareness among undergraduate and post-graduate students of international opportunities for study at institutions with which we have international linkages.
- Coordinating visits of academics and students from abroad.
- Periodic receptions for local and international visitors to the campus.
- Support (hospitality) services to international students.

13. Liaison Services

Internal Liaison with the following stakeholders:

- Campus community (MANCOM, Deans, Academic departments and Service UNits)
- Coordinating visits from international partners, guests and representatives from organisations with internal stakeholders.

14. External Liaison

- Contacts with foreign Embassies, High Commissions, Consulates
- Contact with South African Embassies abroad.
- Contact with alumni based abroad (in collaboration with the faculties, departments and the Alumni Office).
- Recruitment of foreign students (in collaboration with the faculties and departments).
- Visits to international partner institutions and organisations
- Attendance of international conferences, workshops seminars and student fairs to keep abreast of new trends and strategies.
- Membership of or liaison with national (e.g. IEASA) and international organisations on internationalisation

15. Managing the Quality Care of the Internationalisation Programme

- Developing institutional benchmark criteria for evaluating internationalisation
- Monitoring and evaluation of progress, quality, outcomes and impact of the process of internationalisation
- Evaluation of the strategic contribution of CUT's internationalisation to higher education
- Measuring the quality of CUT's individual and collective internationalisation
- Conduct of periodic review of collaboration agreements in line with agreement clauses and CUT prioritisation of partnerships criteria.



ACTIVITIES OF THE

(IN THE DOMAIN CENTRAL ADMINISTRATION)

- 1. Administering CUT's international students' issues and particularly advising on the maintenance of specific rules and procedures to facilitate international student compliance and involvement.
- 2. Gathering and channelling of the relevant information about aspects of international students w.r.t. compliance issues, enquiries about admissions, pre-registration, etc. to
 - The MANCOM (Registrar),
 - Central Administration (Deputy-Registrar: Academic Administration)
 - The Faculty Administrations
 - Departments
- 3. Building and maintaining databases regarding:
 - International Students
 - International agreements involving international students
- 4. Key areas of activities of the International Students Advisor's Office:
 - Handling international student enquiries about studying at CUT in conjunction with other relevant student support services
 - Proper referral of international student enquiries
 - Liaison with Academic Structure and Student Enrolment Services, Academic Administration and Faculty Officers, departments on student enquiries
 - Advice to international students regarding admission requirements, accommodation, student permit applications, work permits and medical coverage
 - Advice to international exchange students on study permit applications and medical coverage
 - Advice to local CUT students regarding visas/work permits
 - Issue support documentation for international students employed on campus in compliance with Home Affairs requirements
 - Managing the pre-registration process in respect of international students
 - Development of a database on admission requirements and accreditation
 - Liaising with the Unit for the Administration of Financial Aid on Student Accounts, Bursaries & Loans
 - Liaising with the Department of Financial Administration on fees payable by international students
 - Issuing information to international students on student fees
 - Updating the international student data on the Information system
 - Advising international students on and liaison with the Centre for Teaching and

Learning on language proficiency and other related issues

- Liaison with Home Affairs on international student permit applications/renewals
- Liaison with Home Affairs on international student movement (reporting on students completing/terminating studies)
- Liaison with organisations/companies providing international student medical cover.
- 5. Client Services delivered by the International Students Advisor's Office Collaboration in establishing a client friendly and accessible campus for international students through contributions with regard to physical planning and delivery of information services through:
 - Provision of on-going support and client services to international students with respect
 - to compliance issues and admissions requirrements
 - Provision of specialist information brochures to provide information about CUT to international students.
 - Distribution of such brochures to diplomatic missions, universities and other institutions abroad.
 - Advising on and provision of information on the language policy as admission requirement in respect of students from countries where English is not the national language
 - Cooperation with Central Administration (Deputy-Registrar: Academic Administration),

faculty administrations and other service units with the registration, orientation and on-going assistance and support of international students

- General assistance with orientation, advice and guidance to and support of international students at CUT.
- 6. General Internal Liaison with the following stakeholders:
 - Campus community (MANCOM, Deans, Academic departments and Service units)
 - Student Representative Council and other organisations such as the International Students' organisation and others

ACTIVITIES OF THE INTERNATIONAL STUDENTS SUPPORT SERVICES OFFICE

(IN THE DOMAIN OF STUDENT AFFAIRS)

- 1. Administering CUT's international students' relations with the campus community and advising on the integration, adaptation and involvement in student life on campus, the City of Bloemfontein, the Town of Welkom and South Africa, and on the maintenance of specific rules and procedures to facilitate international student involvement.
- 2. Gathering and channelling of the relevant information about all aspects of international student life to
 - The MANCOM (Deputy Vice-Chancellor)
 - The Manager: Governance and Student Life
 - Other Service units on different campuses
 - Student structures: SRC and a CUT International Students Society (to be established)
- 3. Building and maintaining databases regarding:
 - International Students
 - International agreements on student exchanges and student visitors to CUT
 - International funding opportunities for local students to study abroad
 - Identification of International study opportunities for local SA students
- 4. Administration of student exchanges:
- The administration of some aspects of services to exchange of students from foreign
 - partner institutions in collaboration with faculties and, departments, including advice and assistance on
 - accommodation,
 - orientation to local conditions,
 - peer mentorship,
 - on-going support advising on relevant issues
 - The administration of exchange of CUT students to equivalent foreign (partner) institutions in collaboration with the International Office, faculties and departments
- 5. Orientation for international students regarding CUT/Bloemfontein/Welkom/Free State/South Africa.
- 6. Organising of international cultural events/functions.
- 7. Developing guidelines for student and social life at CUT and for our students to live at equivalent partner institutions abroad.

8. Client Services

Collaboration in establishing a client friendly and accessible campus for international students and the campus community through contributions with regard to physical planning and delivery of information services through:

- Provision of a comprehensive programme of on-going support and client services to international students.
- Publication of specialist brochures to provide information about CUT to international students.
- Distribution of such brochures to diplomatic missions, universities and other institutions abroad.
- Planning for the provision of and assisting in obtaining accommodation for international students and visitors.
- Promotion of and disseminating information about study opportunities for CUT students and academics at universities abroad.
- Creating awareness among undergraduate and post-graduate students of international opportunities for study at institutions with which we have international linkages.
- Coordinating visits of students from abroad.
- Orientation, advice and guidance to and support of international students at CUT.
- Managing the peer support Buddy programme for new international students
- Orientation, advice and guidance to and support of CUT students who will engage in student exchanges abroad or want to undertake studies at foreign institutions.
- Organising welcome receptions and other functions for international students.
- Periodic receptions for local and international student visitors to the campus.
- Any other client services resulting from our internationalisation programme in general.
- 9. Internal Liaison with the following stakeholders:
 - Campus community (MANCOM, Academic departments and Service units, Deputy-Registrar Student Services, the Manager: Governance and Student Life)
 - Student Representative Council and other organisations such as the International Students' organisation and others
 - Communicating information with regard to international bursary opportunities, scholarships and fellowships
 - Coordinating visits from international student groups or organisations with internal stakeholders.
- 10. External Liaison
 - Contacts with foreign Embassies, High Commissions, Consulates
 - Contact with South African Embassies abroad.
 - Other relevant stakeholder groups (e.g. Alumni), organisations, institutions

(IN THE DOMAIN COMMUNICATIONS AND MARKETING)

- 1. Facilitating Administration of visits of Foreign Academics and Students:
 - Facilitation, in conjunction with the Unit: Communication & Marketing, of the presentation of public lectures by visiting academics.
 - Develop and manage the International Office Webpage
 - Plan and develop marketing material (brochures, pamphlets, posters, DVDs, etc.) for distribution to universities and other institutions abroad
 - Visiting institutions abroad and international conferences to market these programmes
 - Marketing these programmes on the International Office Webpage.
 - Provision of specialist information brochures to provide information about CUT to international students.
 - Distribution of such brochures to diplomatic missions, universities and other institutions abroad.
- 2. Preparation of publicity material on the University's Internationalisation Programme through:
 - Publication in IEASA's Study South Africa: Guide
 - · Participation in IEASA's annual NAFSA & AEIE booths
 - Publication in other docs
- 3. Organising Marketing and Recruitment Fairs in neighbouring SADC and other African countries

000 000 000 11⊡ "Would you tell me, please, which way l ought to go from here? That depends a good deal on where you want to get to" (Lewis Caroll, Alice in Wonderland).

CUT STRATEGICPLAN 2016-20

ANNEXURE F RESEARCH AND DEVELOPMENT AT CUT The next chapter

PART 1

WHERE ARE WE?

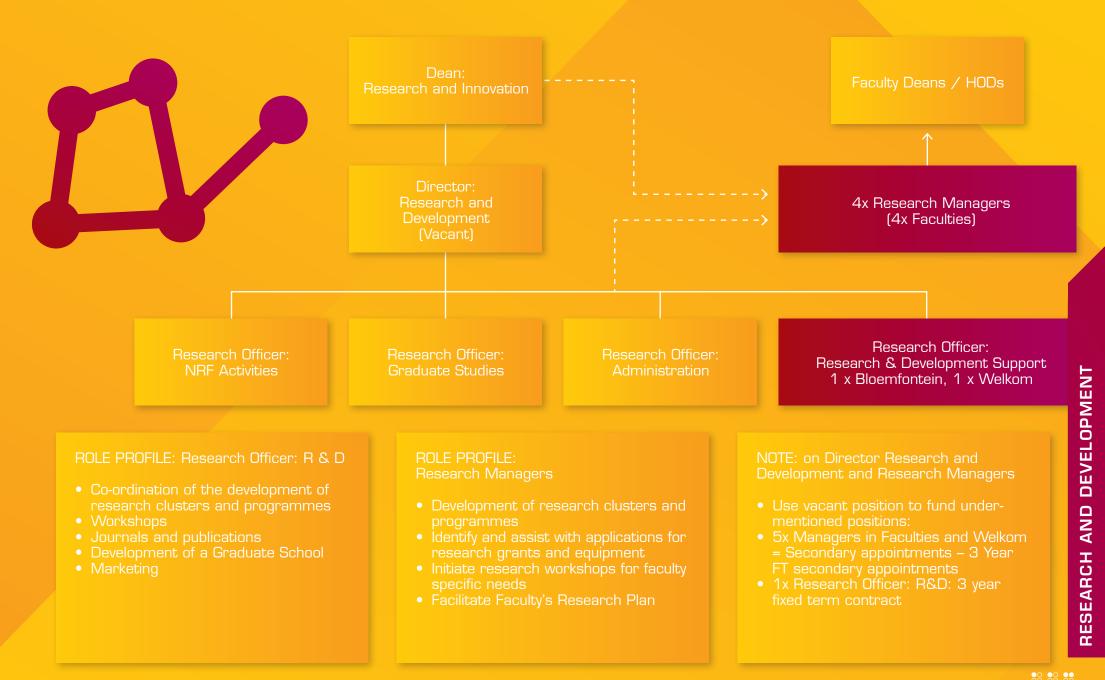
In 2002 a Research and Development Office and a Technology Transfer Office were introduced to support Faculties with their Research and Technology Transfer projects. These Offices functioned separately and both reported to the DVC: Academic. In 2009 these Offices were integrated into a combined portfolio focusing on Research and Innovation. The objective of this portfolio is to support Faculties in their Research and Innovation projects. The focus is on academic staff, postgraduate students and postdoctoral fellows.



The Research and Development Unit performs a number of core activities

- Implementation of research and development policies.
- General Administration of all research activities and their funding.
- Monitoring and evaluation of research and development activitie
- Annual Report to Senate, Council and DHET on research and development activities
- Annual submission of research publications to DHET as per DHET policy.
- Roll-out and implementation of research development activities (workshops, funding calls and applications, Interim Journal)

The Research and Development Unit administered a virtual Graduate School with no additional staff. The purpose of this School is to provide collective support to supervisors and postgraduate students to grow their research capacities and to have access to best practice resources in support of research. Consequently a research programme on research education was developed and a number of books and a journal were published to support the academic staff, postgraduate students and postdocs in their research projects.



For the period 2005-2010 and 2011-2013 two respective research and development plans were steering the development of research at the university. The overall-emphasis of these plans is on:

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

For the period 2005-2010 the objectives of the plan were on:

- Objective 1: The development of staff and student researchers
- Objective 2: Postgraduate retention and throughput
- Objective 3: Increase in accredited publications
- Objective 4: Accreditation of Journal for New Generation Sciences
- Objective 5: Sustainability of existing external funded research projects
- Objective 6: Ongoing development of new SET research niche areas
- Objective 7: Develop and sustain partnerships with public and private funding agencies and regional, national and international universities

- Objective 8: Develop and sustain partnerships with business and industry
- Objective 9: Increase the income through research projects
- Objective 10: Develop postdoctoral research fellows as future research fellows of the CUT
- Objective 11: Market the CUT as regional leader in SET research
- Objective 12: Develop opportunities to read papers at national and international conferences
- Objective 13: Measuring the impact of the research

For the period 2011-2013 the focus is on:

- Scholarly development through Research and Innovation Training
- Research partnership development
- Development of research clusters and programmes
- Development of technology transfer and innovation

During this period the emphasis was on building critical mass in research activities. Two driving forces were (i) research clusters and associated research programmes (common to many research systems) and (ii) a shift away from disciplinary-driven research to multi-, inter- and transdisciplinary research (as a result of the STEPS 2010-2012).

The indentified research clusters and programmes are enablers for building a research and innovation culture. The identification of a research programme is based on the critical mass in a particular field of research, research outputs, completed qualifications, funding awarded, etc. The cluster is based on a collection of related research programmes. The following clusters and programmes were approved in 2005 with an update of programmes during 2012. These clusters and programmes are:



CLUSTER	PROGRAMMES
Industrial design, communication and development	 New product development and design Evolvable manufacturing, automation and vision systems Sustainable engineering Water Resource Management Information and Communication Technology
Quality of health and living	 Applied food safety and -biotechnology Sustainable farming systems Applied health technology Environmental assessment and management Biotechnology
People and skills development	 Socio-economic development studies Leisure management Education (sub-themes: health science education, general education, service learning, vocational pedagogy) Research education

Table 2: Research clusters and programmes, 2011-2013

RESEARCH AND DEVELOPMENT

From these plans it is important to note the difference between (1) research participation and research productivity, (2) the areas of research activities and areas that are subsidised / earning income and (3) research activities depending only on university funding and self-funded research activities.

In acknowledging the research development 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 trainin
- Publication writing
- Conference presentations
- Postgraduate supervision
- Research grants
- Professional research engagement (editorial boards, review panels, assessment panels, etc)

Table 3: Draft Research and Innovation Plan, 2014-2020:

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the execution of the research ries for research participation and plan (2014-2020) as supplementary plan to the approved Academic Plan 2014-2020. The proposed plan is based on the foundations of the 2011-2013 Plan and will be extended based on the strategies recommended in Section 3 of this document.

Research participation and productivity increase as staff members improve their research training and experience. Ideally speaking should junior lecturers engage with the

FUCUS	UBJECTIVE	ACTIVITY
Scholarly development through Research and Innovation Training	Scholarly engagement with the research process and research cycle	 Staff and student development programmes Programme on postgraduate supervision Programme on scientific writing Programme on research ethics and integrity Programme on tech transfer and innovation Annual Faculty Research Seminars Colloquiums and discussion groups
Research partnership development	Capacity growth of research projects	 Multi-, inter- and transdisciplinary research Joint ventures with national and international universities, research bodies and research councils Joint ventures with government/business/industry
Development of research clusters and programmes	Strengthening of research capacity	 Student retention and throughput Publications Conference attendance Patents Rated researchers Research Funding
Development of technology transfer and innovation	To develop the institutional level of involvement and expertise in technology transfer and innovation	 IP Act of 2008 and Technology Transfer Office training Training of staff and students in innovation cycle Identification of research outputs for possible innovation Studying sustainable technological development Supporting the community in innovation and new product development

The final plan should be read in conjunction with the following extract from the Academic Plan as approved by Senate on 12 November 2012:

RESEARCH AND INNOVATION IMPROVEMENTS

Strategic aims: The key integrated improvement elements would be to improve:

- The quality and quantity of research and innovation output, especially in social and technological innovations that advance Vision 2020. Among others, this would require improving the research and innovation impact on developing CUT's comparative advantages in human, technology and economic development.
- The sustainability of and talent management within Vision 2020 high-impact/outcome niche research and innovation areas.

AP outcome 5: By 2020, the following research and innovation targets would be achieved.

Research and innovation performance targets

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MEASURE	CURRENT TARGET / STATUS	2020 TARGET
1.1. Percentage of postgraduate student residency period spent at an accredited foreign partner institution, preferably within SADC; the time spent could be for project or course work, including online coursework.	Not measured	15%
1.2. Research output credits per fulltime equivalent instructional/research professional	0.1603 Year 2011	0.565
1.3. Percentage of grants secured for research projects, including partner research projects, funding needs of "mature niche research areas". The executive-in-charge must define the human and intellectual input and output characteristics of "mature niche research areas"	Not measured	25%
1.4. Number of biennial international or national academic events with at least 70% external attendance-paying participation per "mature niche research area"	Not measured	1

Provisional lead fund #2: In support of these research and innovation performance targets, the following provisional lead fund would be provided (subject to the CUT budget):

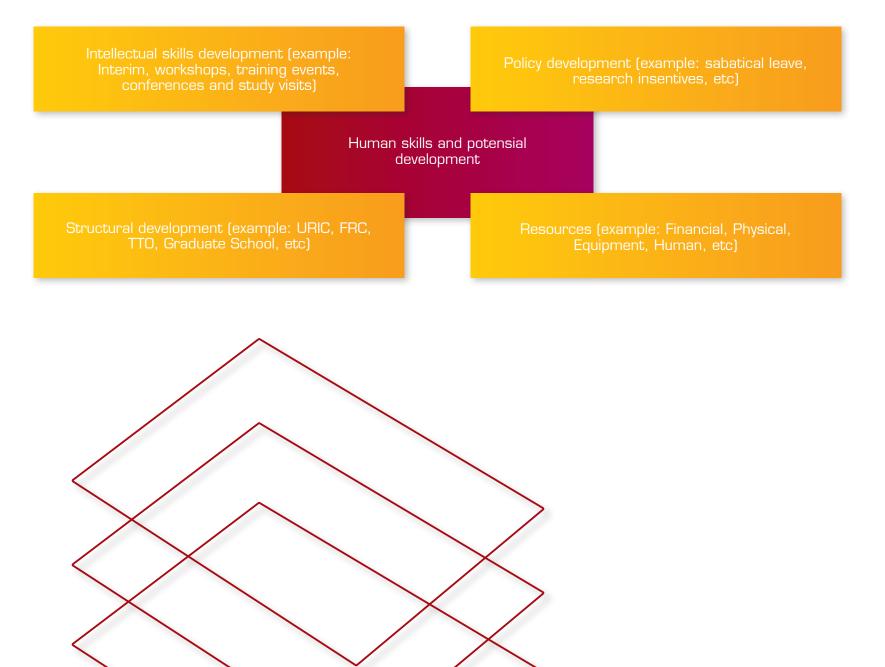
Provisional lead fund # 2



2013 for ('mil)	2014	2014 for 2015 ('mil)	2015 for 2016 ('mil)		Primary aims: Providing the transitional human and other resources to support the research and innovation
R 6.020		R 5.910	R 5.930	R 5.950	performance improvement targets

The Research and Development Unit also developed a managerial model in support of its monitoring and evaluation function. The plan is based on (i) a multi-focused approach to capacity development where human skills and potential development form the core of the capacity development activities and (2) levels of performance indicators for research and development. This model can graphically be presented as follows:

GRAPH 1: RESEARCH MANAGEMENT MODEL



GRAPH 2: RESEARCH INDICATORS

Input Indicators: (What is available in the system= Number of staff, students, budget, etc)

Process indicators (Roll-out of the research programmes = Training, conferences, funding applications)

Dutput indicators (numerical results = number of qualifications, publications, grants awarded, etc); Oucome indicators (overall results = completed projects, growing of international footprint, qualification mix,, etc) and Impact indicators (commercialisation, citatsion, rated researchers and development of new policies, social change, etc.) It should be evident that the focus of all research development activities is to 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. This approach corresponds with Vision 2020 and international best practice in research management.

The university has invested substantially in the development of academic staff, postgraduate students and postdocs the last ten years. A cumulative amount of R 28 124 228 for the period 2001-2013 can be reported.

The collective performance of the Faculties for 2012 (Table 4) and 2013 (Table 5) can be reported as follows. It is evident that all input and process targets were exceeded in 2012.

Table 4: Research Outputs and Progress - 2012

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in The publication and M Degree output also surpassed the targets. The D Degree target reached only 75%. Although it is highly recommendable the output targets were above the targets set by the Faculty, it is still below the expected DHET target, it is 0.565 output unit per full-time academic staff. In 2012 the CUT had 274 full-time academic staff members.
According to the DHET criteria 155 credit output units should have been produced. The calculation for 2012 suggests almost 110 credit units [55.36 article units, 36 M Degree units and 18 (6x3) D Degree units]. This is approximately 71% of the expected norm.

Faculty Targets for 2014-2020 is reflected in Table 6. Table 7 and Table 8 outline the budget parameters for 2013 based on the CUT and DHET's research and development grants.

ITEM	EIT COMMIT- MENT	EIT PROGRESS	HES COMMIT- MENT	HES PROGRESS	HUM COMMIT- MENT	HUM PROGRESS	MAN Commit- Ment	MAN PROGRESS	TOTAL COMMIT- TED	TOTAL PROGRESS	PERFOR- MANCE
Accredited article credit units	10	4.48	14	11.65	12	25.57	14	13.66	50	55.36	>100%
Papers read at SA Conferences (1st author)	5	6	20	20	15	9	15	19	55	54	98%
Papers read at international conferences (1st author)	8	9	11	14	10	10	7	9	36	42	>100%
Patents (1st inventor)	1	0	0	0	0	0	0	0	1	0	
Staff with M Degrees	43	33	18	14	22	27	19	30	102	104	>100%
Staff with D Degrees	14	13	19	19	21	20	19	18	73	70	95.9%
Students enrolled for M Degrees	39	37	67	61	40	51	38	42	184	191	>100%
Students enrolled for D Degrees	7	10	12	12	26	37	25	23	70	82	>100%
Completed M Degrees	7	3	11	14	8	14	7	5	33	36	>100%
Completed D Degrees	2	2	2	1	1	1	3	2	8	6	75%
Rated researchers	0	0	3	4	2	2	1	1	6	7	>100%
External Funding (excluding student grants & block grants)	R 3m	R332 000	R1.1m	R947 000	R500 000	R130 000	R300 000	R199 000		R1 608 000	



ITEM	EIT COMMIT- MENT	EIT PROGRESS	HES COMMIT- MENT	HES PROGRESS	HUM COMMIT- MENT	HUM PROGRESS	MAN COMMIT- MENT	MAN PROGRESS	TOTAL COMMIT- TED	TOTAL PROGRESS	PERFOR- MANCE
External: MRC		0		0		0		0		0	
External: ARC		0		R100 000		0		0		R100 000	
External: Other											
NRF Block grants										R3 179 996	
PA Malan Trust										R75 000	

Table 5: Committed Research Outputs and Progress - 2013 (14-June-2013)



ITEM	EIT COMMIT- MENT	EIT PROGRESS	HES COMMIT- MENT	HES PROGRESS	HUM COMMIT- MENT	HUM PROGRESS	MAN COMMIT- MENT	MAN PROGRESS	TOTAL COMMIT- TED	TOTAL PROGRESS	PERFOR- MANCE
Accredited article credit units	11	4	20	1.25	25	3.66	14	2	70	10.91	15.61%
Papers read at SA Conferences (1st author)	10	4 (+1)	17	9 (+9)	18	4 (+1)	16	3	61	20 (+11)	32.78%
Papers read at international conferences (1st author)	11	7 (+2)	8	2 (+11)	12	4 (+10)	8	7 (+1)	39	20 (+24)	51.82%
Patents from Faculties (1st inventor)	3		1		0		0		4	0	0%
Patents from Technology and Innovation	3								3 (Under evaluation)	0	0%
Staff with M Degrees	36		23		30		38		127	116	91.34%
Staff with D Degrees	16		19		25		19		79	73	92.41%
Students enrolled for M Degrees	34	42	59	59	45	56	35	37	173	194	>100%
Students enrolled for D Degrees	9	9	14	16	30	40	22	18	75	83	>100%
Post Docs	2	1	3	3	0	0	1	1	6	5	83.3%
Completed M Degrees	12	1	12	5	10	2	6	1	40	9	22.25%



ITEM	EIT COMMIT- MENT	EIT PROGRESS	HES COMMIT- MENT	HES PROGRESS	HUM COMMIT- MENT	HUM PROGRESS	MAN Commit- Ment	MAN PROGRESS	TOTAL COMMIT- TED	TOTAL PROGRESS	PERFOR- MANCE
Completed D Degrees	2	2	2	0	2	0	3	0	9	2	22.22%
Rated researchers	0	0	5	4	2	2	3	1	10	7	70%
External Funding (excluding student grants & block grants)	R250 000	R1 911 170	R1 500 000	R574 150	R40 000	R127 450	R150 000	R40 000	R1 950 000	R2 652 770	
External: MRC				R250 000						R250 000	
External: ARC											
NRF Block grants				R250 000						R3 280 000	
PA Malan Trust											

Table 6: Summary of Faculty projections toward Research Outputs 2014-2020



TOTALS OF FACULTY PROJECTIONS Accredited articles/credit outputs Papers read at South African conferences Papers read at international conferences Patents З З З Staff with M-Degrees Staff with D-Degrees Students enrolled for M-Degrees Students enrolled for D-Degrees Post-doctoral Fellows Completed M-Degrees Completed D-Degrees Rated researchers External funding, excl. block grants 2.550 000 2.675 000 3.200 000 3.300 000 3.820 000 3.970 000 4.020 000

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ITEM	TOTAL COMMITTED	CONTENTS	BUDGET PER ITEM	TOTAL BUDGET	COMMENTS
Accredited article credit units	70	(1) Publication fees(2) Incentives	(1) R 5000 per paper (2) R 23580 per credit unit	(1) R 350 000 (2) R1 000 000*	
Papers read at SA Conferences (1st author)	61	(1) Travel, accommodation, day fees	(1) R 12 000	(1) R 732 000	
Papers read at international conferences (1st author)	39	(1) Travel, accommodation, day fees	(1) R 40 000	(1) 1 560 000	
Students enrolled for M Degrees	173				See DHET Grant
Students enrolled for D Degrees	75				See DHET Grant
Post Docs	6	(1) Living expenses (2) Project cost	(1) R 120 000 (2) R 100 000	(1) R 240 000 (2) R 600 000	See DHET Grant
Rated researchers	10	(1) Project incentive	(1) R 280 000	(1) R 280 000	
External Funding supplementation: (excluding student grants & block grants)	R1 950 000	(1) Supplementation	(1) Depends on applications	(1) R 1000 000	See DHET Grant
Fellow commitments				(1) R 1000 000	
Projects: Research and Development		(1) Workshops, breakaway, journals, annual reports		(2) R 200 000	
Projects: Transfer and Innovation`		(1) Innovation development``		(2) R 100 000`	
Total				R 7 062 000	

SEU Grant for 2013 – R 3000 000 Roll-over 2012-2013 – R 2 300 000 *Payable by Finance Total: R 5 300 000

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	Staff and postgraduate student development initiatives	Research costs and research infrastructure development projects	Incentives for academics and other researchers	Research project cost and other fees
Postgraduate bursaries	R1 590 000			
Postdoctoral fellowships	R 945 000			
Capacity building among staff, including qualifications and mentorship	R350 000			
Research related training workshops e.g. how to write or publish or supervise etc.	R320 000			
Academic exchanges		R180 000		
Funding for research activities (local and international)			R610 000	
Topping up NRF grants				R435 000

TOTAL: R4 430 000

The Research and Development Unit supports the Faculties in setting platforms for student participation in research. Typical examples are:

- Faculty Research Seminars
- Departmental Research Colloquiums
- Guest Lecturers on research ideas/projects
- Various student competitions
- External collaboration projects
- Student exchange programmes

Faculties have also drafted Faculty Research Plans for 2014-2020. From these plans Faculties are advised to attend to the six priority areas for which Research Professors were appointed, how Faculties intend to develop these areas and how these activities will be mainstreamed in a Faculty's Research Plan.

The university takes note of the progress the JNGS has made since its inauguration - to obtain DHET accreditation, the focus of the JNGS (applied sciences in the context of Mode 2 Knowledge Production), the management of the JNGS in the context of the DHET policy for accredited publications and the intension of the editorial board to obtain ISI status.



"Would you tell me, please, which way I ought to go from here? That depends a good deal on where you want to get to" (Lewis Caroll, Alice in Wonderland).

CUT STRATEGICPLAN 2016-20

RESEARCH AND DEVELOPMENT AT CUT



WHERE DO WE WANT TO BE?

The next phase in developing a responsive research community is based on a number of agreed-upon principles and practices (reference URIC meetings, AMF meetings and Mancom Targets). These principles and practices are:

- Growing the number of postgraduate enrolments to reflect 5% of all enrolments by 2020.
- Growing the seniorisation of the academic profile (senior lecturers, associate professors and professors) to 50% of the total academic staff component by 2020.
- Academic staff participating in studies towards higher qualifications in their disciplines (aimed at decreasing the juniorisation of the system to the seniorisation thereof) and increased participation in research outputs (primarily grant awards, publications, completed postgraduate studies and rated researchers.)
- Growing the number of rated researchers to 10% of senior academic staff by 2020.
- Growing the number of publication outputs to be at 75% of the expected DHÉT norm by 2020. (Currently the norm is 1.1 credit output unit per fulltime academic staff.)
- Increasing the number of completed M Degree studies by 100% by 2020.
- Increasing the number of completed D Degree studies by 150% by 2020.
- Decreasing the number of years to complete postgraduate studies to fit into 36the current residential period for postgraduate studies. (Currently one year for full-time Masters and two years for full-time Doctorate studies and four years for part-time Masters and five years for part-time Doctoral studies.)
- Decreasing the dependency on institutional funding and growing the number of successfully awarded research grants.
- Increasing national, continental and international research participation through partnerships, joint projects, joint funding and joint postgraduate offerings and supervision.

The university is mindful that growing the research culture is depending on a number of institutional challenges that should be addressed. Some of these challenges as reported by the Faculties are:

- Workload too much teaching time.
- Uneven participation in research activities (internally supervision, publications and externally grant applications)
- Limited funding for staff and students (because of limited internal resources and low participation in external research grant applications)
- Absence of well-equipped laboratories, outdated infrastructure, non availability of relevant academic programmes and postgraduate students and a small critical mass contributing to limited participation in research activities.



"Would you tell me, please, which way l ought to go from here? That depends a good deal on where you want to get to" (Lewis Caroll, Alice in Wonderland).

CUT STRATEGICPLAN 2016-20

RESEARCH AND DEVELOPMENT AT CUT The next chapter

PART 3

WHAT STRATEGIES DO WE NEED?

Based on the capacity-development model presented in Table 1 the following strategies are proposed:

HUMAN SKILLS AND POTENTIAL DEVELOPMENT STRATEGIES

It is proposed that an integrated strategy should be followed directed at academic staff, final year undergraduate, postgraduate students and postdoctoral fellows to offer opportunities for research growth and strategic positioning. The following ten programmes are suggested:

Strategy 1: The roll-out of ten strategic research programmes to grow human skills and potential development strategies. These programmes are:

Table 9: Human skills and potential development strategies



PROGRAMME	ACTIVITY	TARGETS/EXPECTED OUTCOMES		ESTIMATED BUDGET
Undergraduate to graduate students programme	(1) An annual workshop on the research process(2) Workshop to prepare for funding applications		Possible funding through NRF B Tech Block Grants, NRF Grantholder-linked funding	R 100 000
Masters Education Programme	 Workshops to focus on research design, methodology, literature review and scientific writing. Workshops to prepare for funding applications Support to read one conference paper at Faculty's prestige research day Participation in Research and Development's Five minute conference presentation 	(1) Completion of studies in residential period	(1) CUT Masters Funding	R 1.1m (for grants) R 100 000 for conference support



PROGRAMME	ACTIVITY	TARGETS/EXPECTED OUTCOMES	SUPPORT AND ENABLERS	ESTIMATED BUDGET
Doctoral Education Programme	 Workshops to focus on methodology, statistical analysis and scientific writing. Workshops to prepare for funding applications Support to read one conference paper at a national conference and one colloquium presentation Participation in Research and Development's Five minute conference presentation 	(1) Completion of studies in residential period	(2) CUT Masters Funding	R 1.7 m (for grants) R 100 000 (conference support)
Next Generation Researchers Programme	(1) Staff to complete D Degree studies	Completion of D Degree studies	Training for supervisors to act as supervisors. As staff members – waiving of tuition fees. Project cost of R 30 000 per year for residential period of study.	R 300 000
Postdoc Fellowships Programme	Three types: Full-time postdoc fellows for three years	Participate in official research programme.	Full-time postdocs: R 200 000 per annum. (Status to be discussed.)	R 1.4m
	All staff who completed D Degrees for three years in Postdoc Programme All students who completed D Degrees and employed full-time to be three years in Postdoc Programme	Focus on development of research competencies Writing-up and publication of research results	Submission of application to develop research competencies to the value of R 100 000 per application for the duration of postdoc fellowship. R 30 000 for the duration of posdoc fellowship	R 1 m R 300 000
Emerging Researcher Programme	Preparing for research career after completing doctorate and completion. (This is for newly appointed staff who graduated in the two years before joining CUT.)	Focus on development of research competencies	Submission of application to develop research competencies to the value of R 100 000 per application for a three year period. Five competitive grants will be available.	R 500 000
Mid-career Researchers Programme	Developing own research programme with participating members and students	Research competencies and infrastructure in support of research	Submission of application to develop research programme to the value of R 150 000 per application for a three year period. Five competitive grants will be available.	R 750 000



PROGRAMME	ACTIVITY	TARGETS/EXPECTED OUTCOMES	SUPPORT AND ENABLERS	ESTIMATED BUDGET
Established Researchers Programme	Becoming an international leader in a research programme	through international funding, collaboration and joint programmes	Submission of application to develop research competencies to the value of R 200 000 per application for a three year period. Five competitive grants will be available.	R 1m
Black Female Researchers Career Programme	Enabling black female researchers to complete doctorates and (2) for researchers with doctorates to develop their careers		Submission of applications to supplement funding for short period study visits or sabbatical leave.	R 100 000 (available via SEU)
Rated Researchers Programme	Maintaining rating	National and International recognition	R 200 000 for duration of rating period	R 2 000 000
Total				R 10 250 000

Strategy 2: The university is also mindful of the limited number of full-time postgraduate students registered for postgraduate studies. The Research and Development Unit noted that students take a considerable time of the residency period to submit an approved study proposal / protocol. Not all students who applied for extension complete their studies during the first year of extension. It is proposed that the students have a preregistration as M Degree or D Degree students for six and twelve months for part-time and full-time students respectively (as per assessment policy) whereafter they are registered as M Degree or D Degree candidates. In addition, it is recommended that enrolment for the next year is based on a formative assessment process towards October-November each year.

Strategy 3: An assessment of the research participation of senior academic staff (2010-2012) suggests that guidelines should be set based on seniority in the research process, research productivity and academic commitments. Next to specific output indicators (see Strategy 6 under Intellectual skills development strategies) the following areas of participation should be encouraged depending on the level of seniority: 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 and assessment panels).



Strategy 4: The academic portfolio wants to introduce a system of research leave for researchers. It is suggested that one day per month is allocated for research leave and that this leave should be based on a 50-50 proposal. Academic Staff should be afforded the opportunity to use 6 days of the current annual leave for research purposes which will be supplemented by another 6 days leave granted by the university. The research leave can be used for writing of publications, study visits and/or research projects. The leave can be accumulated over a five year period whereafter it can be used for sabbatical leave.

STRUCTURAL DEVELOPMENT STRATEGIES

The university empowered the research system by adding a Research and Development Office to support Faculties in their research activities, provided funding in support of a Research Manager to manage and promote research in the Faculties, to move away from a centralised to a decentralised research management system, to decentralise research funding to Faculties driven by RAM principles and to advocate for a budget system for Faculties to budget for research activities.

The following structural related strategies are proposed:

Strategy 1: The reactivation of the Graduate School to serve as a support to Faculties to empower academic staff and students to make progress with the completion of their studies. The services will be aimed at identifying opportunities for funding and assistance with applications, training for supervisors and students and developing scientific writing skills. The Graduate School will also administer and manage institutional funding in support of postgraduate students and attend to academic integrity and respectful and responsible research conduct (through promoting a code for research ethics and integrity, programmes such as Turn-it-in and awareness programmes on responsible research conduct).

Strategy 2: The Senate approved constitution of the URIC will be implemented during 2013 to be in full operation during 2014. This will necessitate the introduction of a Research Ethics and Integrity Committee and a Research Grants Awards Committee to streamline the awards of grants to academic staff and students.

Strategy 3: A training course for Faculty's Research Managers will be offered before the first quarter of 2014.

Strategy 4: Research and Technology and Innovation administrative support will be implemented at the Welkom campus from 2014.

INTELLECTUAL SKILLS DEVELOPMENT STRATEGIES

The university provides opportunities to travel to conferences and to develop scientific writing skills as input and process indicators in support of the output, outcome and impact indicators. The following strategies are proposed:

Strategy 1: The Graduate School will offer a training programme in support of scientific writing skills to next generation researchers, emerging researchers, postgraduate students and postdoctoral fellows.

Strategy 2: As from 2013 the INTERIM will be published as (i) an institutional edition managed by the Research and Development Unit and (ii) two Faculties each to publish either jointly or individually editions on a biennial basis . One representative from the Research and Development Unit, one from the Graduate School and one from each Faculties will constitute the Editorial Board. The purpose of the INTERIM is to develop scientific writing skills, to publish research meeting an acceptable standard of scientific writing and research, to publish research in progress and to develop the editorial skills of the board. The Research and Development Unit will provide administrative assistance to support the publication of the INTERIM. The Dean: Research and Innovation, who currently acts as Editor, will edit one more institutional edition in 2014 whereafter nominations for an Editor will be invited for a three year period.

Strategy 3: In order to increase the research outputs of the postgraduate students the current assessment policy is confirmed namely a publication submitted at least to the INTERIM before a student can graduate.

Strategy 4: Where funding is required from the university the following policy strategies are confirmed. The attendance of a national conference (South Africa and SADC country) is subject to at least a submission of a paper based on a previous conference attendance. For an international conference the benchmark of at least ten credit units and for an

RESOURCES STRATEGIES

The following resource-related strategies are proposed.

Strategy 1: Faculties to receive 70% of the annual Institutional Research Grant and 30% of the DHET Research and Development Grant based on their research outputs (publications and awarded postgraduate qualifications as per DHET guideline) over a three year rolling period. (For 2013 the Institutional Grant was R 3m and the DHET Research and Development Grant was R4 430 000). This money should be used for all activities associated with the research process (research fellows, conference attendance, staff training, publication fees, research running expenses, equipment and infrastructure, etc). The university should increase its grant for researcher activities as well as the operational funds associated with research. In this regard should the subsidy earned through the research activities be made available to the Research and Development Unit and Faculties in support of research activities. For 2013 the total value for research is R 3m (CUT) + R 2m roll-over from 2012 (ca) and R 4.430m (DHET) = ca R 9.4m.

international study visit also ten credit units. It is further recommended that a study visit is linked to a conference. It is adviseable that the conference attendance is approved in the context of how it fits into the targets set by the Faculty (example the number of conference applications), how an activity can contribute towards research outputs (example publications, patents and qualifications) and how the budget fits into the overall budget available for research.

Strategy 5: The Research and Development Unit will offer four institutional training programmes a year: Postgraduate Supervision, Scientific Writing, Research Ethics and Integrity and one general workshop on the research process reflecting on general aspects of the research process and support offered by the university for research.

Strategy 6: It is common practice in the higher education system that a norm is set for senior academics to publish a number of research publications in a three year cycle and to successfully supervise students for M and D Degrees. It is expected from staff at the junior level to study towards a Doctorate within their given discipline. The following publication credit outputs (as per DHET calculation) are proposed in a three year context: Research Professor: 9; Full Professor 6; Associate Professor 4,5 and Senior Lecturer 3. The following supervision credit outputs (as per DHET calculation) are proposed in a three year context: Research Professor: 9; Full Professor 5; Associate Professor 3 and Senior Lecturer 1,5. (These credits depend on Masters and Doctoral completion.)

Strategy 2: The Research and Development Unit will use the 30% of the Institutional Research Gant and the 70% of the DHET to fund the supportive research development activities (primarily training, funding proposal development, students grants and support for the research development programmes).

Strategy 3: The university is currently paying an incentive to all researchers who published research outputs as per DHET categories. The pay-out is based on the submission of outputs (n) to the DHET (n+1) and the subsidy received (n+2). The objective was to pay an incentive (not salary) to researchers to promote research outputs and for the researchers to use these funds in support of their research. Evidence suggests that very few researchers support their research through these incentives. For 2013 the total pay-out of incentives will be closed to R 1m. This is not sustainable anymore if these funds are not used in the promotion of research. The proposal is to increase this incentive to a maximum of R 30 000 per publication output unit of which R 10 000 per unit can be taken as personal incentive whilst the remaining R 20 000 should be used in support of the candidate's research activities.

Strategy 4: Cutting edge research demands high state of the art research equipment and facilities. Evidence from the higher education system suggests that universities are generally not in a position to finance all required infrastructure and facilities. The evidence further suggests that these requirements are best supported through national collaborations / teamwork, awarded grants and joint projects. The proposal is for the Faculties to (i) identify their needs by October 2013 whereafter (ii) a consultant can be recruited to assist Faculties to draft relevant funding applications to be ready by February 2014. (iii) The Research and Development Unit will assist to identify appropriate funding agencies. (iv) The Research and Development Unit will release R 25 000 per Faculty in support of such applications.

Strategy 5: The university should be recommended for its awarding of close to R 28m to staff and students to grow their research capacities. The current grants for staff and students were aiming to support academic staff and postgraduate students to grow their research capacities and to serve as seed funding to increase their opportunities and capacities to apply for external grants. Currently very few students hold external research support concurrent with their institutional research grants. It is proposed that the grants are revised to be more competitive in nature. For full-time students it is recommended that

a total of 20 grants to a maximum of R 70 000 for M Degree Students and R 100 000 for D Degree Students to a maximum period of two years for M Degree Students and three years for D Degree Students are available. The grants must be used for tuition, R 30 000 for project expenses and the remainder for living expenses paid-out twice a year based on a satisfactory progress report approved by the supervisor and Research Manager. For part-time students it is recommended that a total of 20 grants to a maximum of R 40 000 for M Degree Students and R 60 000 for D Degree Students to a maximum period of three years for M Degree Students and four years for D Degree Students are available. The grants must be used for tuition and project expenses. These grants should be available during the next year (n+1) of award (n) based on satisfactory progress approved by the supervisor and HOD. Awards are based on applications that will be externally reviewed by peers. Applications can be submitted end July for award the next year and end February for award in July. The review will be organized by the Graduate School. It is further proposed that the awards granted up to end 2013 should be managed in the context of the current policy. Postgraduate students are entitled to have one more grant concurrent with the university's grant subject to the external funding agency's conditions of grant.

POLICY STRATEGIES

The existing institutional research policies will be revised to reflect the new institutional framework for Research and Development and the agreed-upon strategies.

Drafted by Laetus OK Lategan, 12 July 2013



CUT STRATEGICPLAN 2016-20

ANNEXURE G TECHNOLOGY AND INNOVATION PLAN 2014 - 2020

BACKGROUND

The following describes the institutional strategies in support of the Technology and Innovation. The technology and innovation strategies as expressed in the innovation value chain will be facilitated by Technology and Innovation for the period 2014 to 2020.

The Unit for Technology and Innovation has been created as an element of the 2009 institutional restructuring. In particular the following activities are currently performed by the unit:

- Providing support with the innovation and technology transfer activities of the university, and its staff and students.
- Functioning as the technology transfer office of CUT.
- Managing the CUT incubator.
- Overseeing the functioning of the CRPM with special reference to its involvement in commercial activities as well as the Medical Device Innovation Platform.
- Overseeing the functioning of the PDTS and ensuring its continued role as one of the I
 argest providers of WIL and advanced pseudo-industrial exposure for students in
 Mechanical Engineering.
- Overseeing the functioning of the Fablab.

At present the attention of the unit is primarily to:

- Launching a substantive TTO through the development and implementation of suitable structures, policies and practices.
- Support to the Faculties to grow their technology transfer, innovation and incubation projects, to identify possible patents, and to grow commercialisation of research as a result of the Faculties' technology transfer, innovation and incubation projects.
- Optimise the functioning and utilization of the CUT incubator by taking corrective measures regarding the nature of incubator tenants.
- Establish an incubator on the Welkom campus.
- Secure the continued successful operation of the CRPM and PDTS, as well as to provide support with the strategic development of these units.

From the above it is obvious that the Unit is indirectly involved in the socio-economic development of the region and beyond – considering that most projects these units are involved in, are done on behalf of individuals and enterprises based beyond the borders of the Free State.

WHAT IS INNOVATION?

With innovation imbedded as an important tenet of Vision 2020 it is appropriate to again consider the CUT definition of innovation in general, as well as social innovation:

Innovation is the conversion, through experimentation and learning, of a well-researched solution to a problem into a manufacturable and/or marketable product, process or service that is superior to previously known equipment, processes and services in such a manner that value is added with the value of Benefit/Cost exceeding one.

This definition can be adapted for the purpose of social innovation into:

Social innovation is the conversion and implementation of a well-researched solution to a social problem in terms of intellectual growth, culture and social wellbeing.

Meeting this daunting task will necessitate a significant effort by staff and students of the CUT, whilst accompanying changes in institutional policies and practices may be required to facilitate this process. It has been said by Ivan Illich that trying to transform the outcomes of a university without adapting the institutional structure is like "doing a face-lift on New York from the twelfth-floor upwards". Therefore a sound and effective institutional structure that promotes innovation at all levels needs to be put in place at CUT – a principle that might necessitate the involvement and support of management.



The following is considered as essentials for successful innovation:

- Innovation is everyone's business.
- Innovation is usually a cross-cutting activity and should break down silo's.
- Innovation is hard work and normally a slow process.
- Innovation needs champions that instill trust and confidence.
- Innovation is not a management style or a vision, it's a passion.
- People innovate, not systems, yet systems can either facilitate or obstruct innovation.
- Innovation depends on a conducive institutional environment.
- Innovation typically requires multi-, inter- and trans-disciplinary research.
- Successful innovation and the commercialization of the outcome is usually the product of the efforts of a group of collaborating individuals with different educational and business backgrounds.
- Real growth from innovation depends on innovation capability (technological and business expertise) and an inclination to innovate.
- The presence of substantial, functioning partnerships is critical for effective innovation. This is especially true for cases of regional innovation.

Hence, in order to realize the university's expectations of Vision 2020, special emphasis should be placed on the following measures for the foreseeable future.

THE WAY FORWARD

The following strategies must be addressed successfully in the period leading up to 2020 for CUT to realize its vision of realizing high levels of successful innovation and commercialization with a positive socio-economic impact on the region:

Table 1: Strategies to guide the future functioning of Technology and Innovation.



STRATEGY	DESCRIPTION	TARGETS
1. Enhancement of innovation activities at CUT and the roll-out of funding initiatives in this regard	 Improved educational practices w.r.t. education for innovation and entrepreneurship Increased sensitisation of academics for identification of innovation possibilities Enhance the understanding of all academic units of the innovation value chain – from idea to commercialised product. 	• An information booklet about education for innovation compiled and distributed to all faculties
	 Identification of viable projects for innovation and IP protection Maintaining focus of the current innovation programme of CUT Enhance the accessibility and level of commercialization support to innovators by rolling-out of the Vision 2020 Innovation and Incubation Programme (IIP) and the TIA Seed Fund Support the establishment and optimization of regional and national innovation and commercialisation networks. 	 Monthly assessment of research proposals for possible development of new IP for commercialization Effect the roll-out during 2014 of three grant holders in the Innovation and Incubation Programme and/or TIA Seed Fund
		 Expand needs and funding capacity of IIP to R1 mil/yr.
		 Attend and take part in Regional Innovation Forum activities
	• The possible creation of a physical innovation hub should be supported.	 Take actively part in the possible development of a physical innovation hub
Developing and Implementing a rigorous CUT Innovation chain	• Articulation of the various steps in the innovation chain in the CUT context	• Actionable CUT innovation framework



STRATEGY	DESCRIPTION	TARGETS	
2. Revitalization of the CUT Incubator programme	 Formulation of a substantive document guiding CUT's efforts and responsibilities relative to incubator tenants, and vice versa. 	 An formal guide regarding incubation activities at CUT compiled and implemented 	
	 Revitalisation of existing incubator and the stepping-up of business development services to tenants. 	 Recruitment of five new tenants for the Bloemfontein incubator and implementation of business clinic services during 2014 	
	• Establishment of an (business) incubator on the Welkom campus.	 Formal launch of the Welkom Incubator and the recruitment of five participating entities before the end of 2014 	
 Pro-active identification/ registration of IP and its possible commercialization. 	 Establishing an improved institutional understanding of the need for compliance with Act 51 of 2008 and converting the TTO into a successful entity. 	 Hold quarterly meetings of the IP Steering Committee and fully functional TTO Office. 	
	• Properly roll out the practice of the disclosure, development and assessment of potential new IP.	 Produce and distribute a regular newsletter on the identification and disclosure of new IP 	
	 Register patents, design registrations and/or trademarks for commercial purposes The principles of "patent mining" should be introduced to the campus. 	 Register at least 30 new patents, designs and/or trademarks by 2020 	
	• T&I should develop a scheme by which staff and students whose work result in the registration of patents, design registrations or copyright will be recognized and incentivized.	• Prepare and submit an incentive scheme in support of developers of new IP	
	 Ensure the effective participation of the CEO of CSET in the IP Steering Committee Establishing good communication links with CSET to ensure the optimal identification of IP suitable for commercialization. 	• Secure the participation of the CEO of CSET in the IPSC	
4. Enhancement of THRIP and similar related activities	The T&I unit should create an information platform for researchers, faculties and commercial centres regarding the THRIP programme, as well as other funding programmes, as an enabler for innovation on behalf of Research and Innovation,.	 Information sessions regarding the THRIF programme and other possible funding initiatives held with all research managers and faculties Provision of technical assistance in completion of THRIP and other 	

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STRATEGY	DESCRIPTION	TARGETS
5. Participation in regional innovation activities	 Assist with the roll-out of a Free State Regional Innovation Forum (RIFFS) aligned with the relevant TOR and expectations of DST Assist with the establishment of CUT structures to articulate with the RIFFS – including the CUT Innovation Centre Participate in institutional and regional discussions regarding the formulation of a FS innovation strategy, including a science park 	 Assist with the establishment of patent mining principles at CUT, establishment of a pitching den Assist with the establishment of an RIFFS steering committee and participate in such if nominated Assist in securing funding from DST for the RIFFS. Assist with the formulation of a business plan and funding application to the SEU for the establishment of a CUT innovation centre Participate in communications with the UFS regarding the establishment of a science park
6. Providing managerial support to CRPM, PDTS and Fablab	• Maintaining the current financial status of CRPM (Taking CRPM to the next level) and PDTS	 Maintaining a positive nett income for CRPM Realising an income of R6,9 million for PDTS during the 2014/2015 financial year Realising a 7% annual increase in funding secured
	• Expanding the human resources of CRPM	• Extending appointed and seconded CRPM staff by 2 people
	• Expanding on the human resources PDTS	 Expending PDTS staff by one staff member
	 Acquiring alternative funding for Fablab to ensure its continued functioning. 	 Operational Budget: R750 000 Enhancement of capacity: R100 000
	 Incorporate a significant design activity in the operations of the Fablab¹ 	 Phasing in of Design Sketching capability: R50 000

⁶ T&I acted as facilitator in the creation of awareness in the relevant units of a need for formal training in engineering design sketching. This facilitation process has been completed successfully and a pilot programme is to be rolled out in this regard with students in Mechanical Engineering as from 2014.

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STRATEGY	DESCRIPTION	TARGETS
7. Contribute to the realisation of a research chair in Additive Manufacturing	Assisting with recruitment of chair incumbent	An incumbent in the research chair appointed and accepted by NRF

Technology and Innovation is a facilitating body, assisting institutional operational units to meet set targets, as shown above. Hence, it is incumbent on all units to take ownership of the above with a clear intention of contributing to the attainment of these, whilst making use of the support that Technology and Innovation may provide. An example of this would be if every faculty establishes one THRIP project.

FINANCIAL SUSTAINABILITY

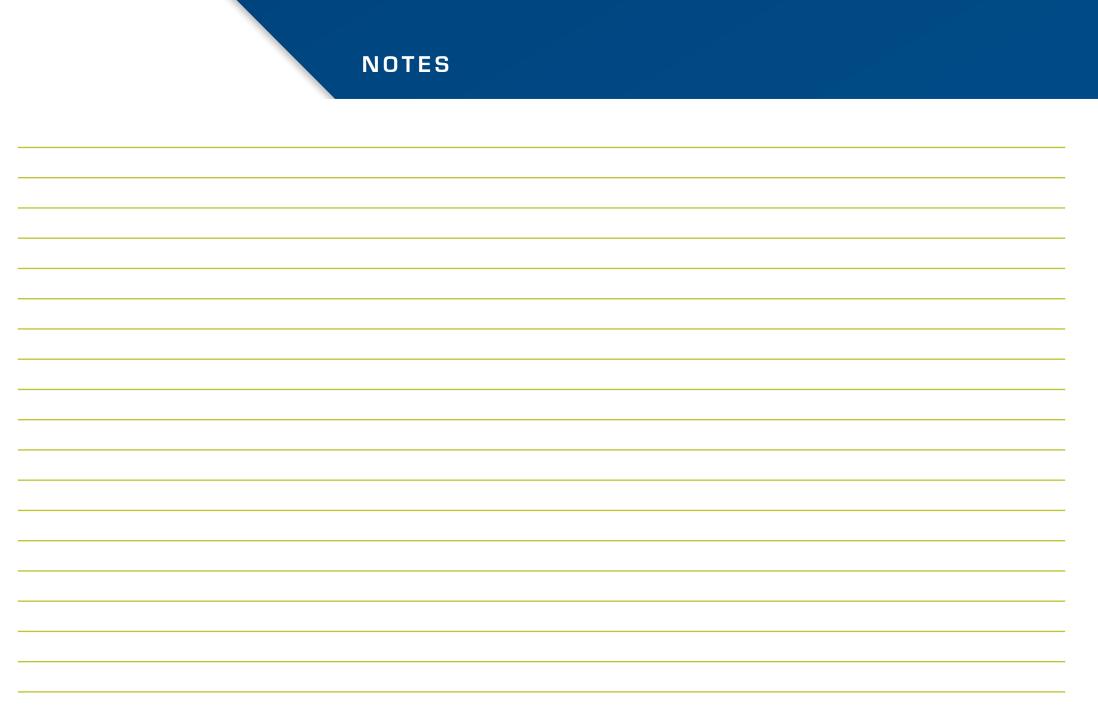
Even though the above table includes a vast array of activities and targets, realisation thereof should be financially attainable. The only specified activities which should result in a relatively large net outflow of finances during the period 2014 to 2020 are:



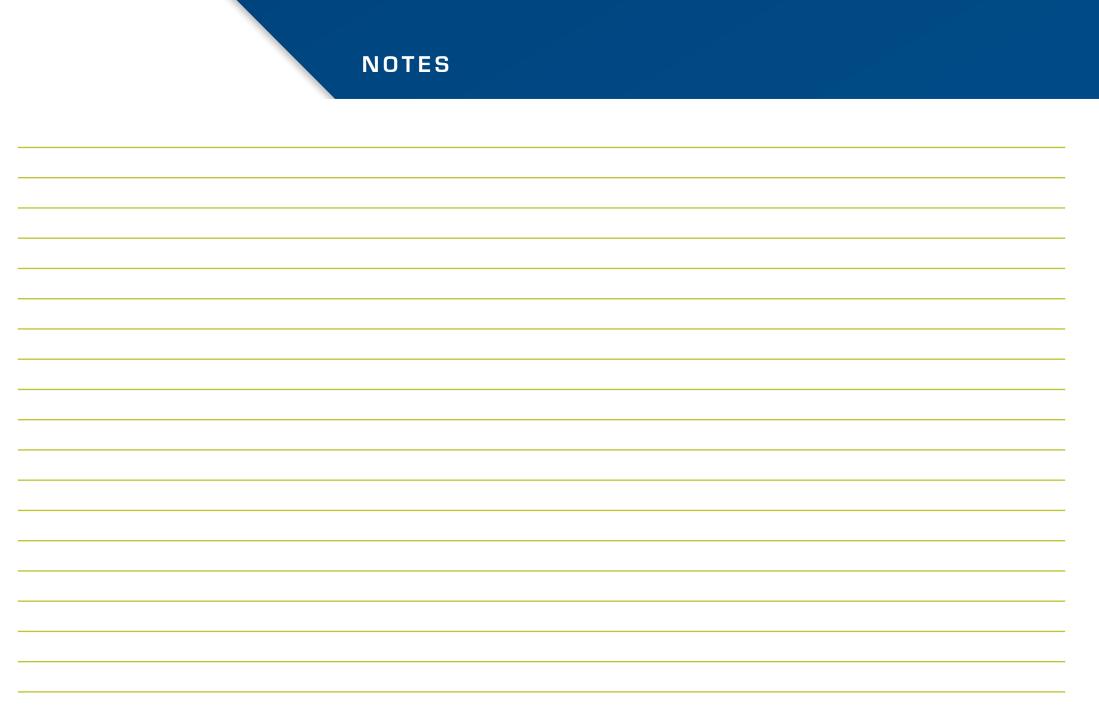
STRATEGY	FINANCIAL IMPLICATION
The implementation of an incentive scheme for individuals producing IP for registration. The registration of an additional 30 cases of IP during the relevant period could cost CUT	R750 000
The future financing of the FabLab due to a discontinuation of funding from the Department of Science and Technology.	R8 million until 2020
Design and construction of a substantial new facility for innovation, incubation and networking activities.	First indications are that this will cost not less than R10 million.

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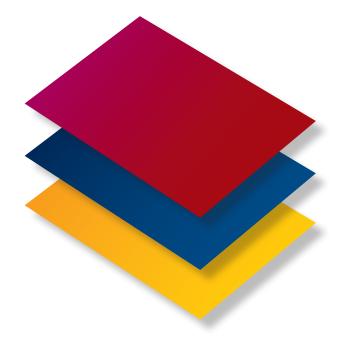


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Bloemfontein: (051) 507 3911 | Welkom: (051) 910 3500

www.cut.ac.za

GRAYDIENT + 27 72 190 8787