of excellence in education

VUT

CELEBRATING FIFTY YEARS

Vaal University of Technology

Your world to a better future

Contents

Foreward

Professor Irene Nohle Ntombikayise Moutlana
Vice-Chancellor & Principal 2007 – 2017

It is not often that an institution of higher learning in South Africa celebrates milestones in short succession. Yet, the Vaal University of Technology (VUT) is one such institution.

On Friday, 8 May 1964, the then government made an announcement that a unique Training Institute, the first of its kind in the Republic of South Africa would be built in the Vaal Triangle to address the skills shortage specifically for our rich industrial area. The building commenced shortly after the announcement was made and the project was completed in 1966 when the Vaal Triangle College for Advanced Technical Education opened its doors to the community. What started off as a Technical College has now developed and grown to be the only fully-fledged University of Technology in Southern Gauteng.

The year 2014 marked 10 years as a University of Technology, and in 2016, the institution celebrated 50 years of existence. The face of the university has changed irrevocably since the 1990s, and as we go beyond our 50th anniversary, we will shift our focus to achieve greater success. In the 50 years of its existence, first as a College of Advanced Technical Education (1966-1979), Vaal Triangle Technikon (1979-2003) and then as Vaal University of Technology (2004-to date), VUT has grown in stature and size as a Higher Education Institution, drawing students from all over the country and the African continent. It is one of the largest Universities of Technology, with approximately 23 000 students. This position enables it to make a substantial contribution to the development of human capital in the region, the country and beyond its borders.

The rich heritage of our region and the presence of metal, steel, engineering and telecommunications companies provide ample opportunities for our graduates to become rounded and fully-fledged citizens of the world.

The impact of globalization, the changing world of work, the information era, new modes of knowledge production and the emergence of a new learning industry, have had a major influence on the transformation of the institution over the past 50 years.

My whole career has been dedicated to bringing about change and developing a strong research culture, which is the heartbeat of a prosperous institution.

The central vision of this celebratory book is to capture and reflect on how the institution realigned itself to grow from a Technical College to a Technikon and ultimately recrafting itself to complement the higher education landscape as the University of Technology it is today. The fundamental mandate of the university is for the upliftment of society and the creating of an affirming environment that navigates people through their expectations, aspirations, and dreams.

Higher education institutions should not only be education hubs, but also be effective sustainable businesses. Knowledge is a highly perishable commodity, so we must constantly revamp that knowledge base; innovate and evaluate its impact in terms of the relevant needs of society and the country. We should never lose sight of our educative role, ensuring that we have a strong ethical background. Educational institutions have a mandate to produce people who have the requisite skills to operate at the requisite levels, being responsible and accountable. My vision is a transformed institution sought after by business and community where all are welcome, a hub for lifelong learning where diversity and equity are promoted, and barriers inhibiting the growth of individuals are broken down.

It is against this background that in 2007 we were mandated by the Department of Higher Education and Training to craft a new vision for a University of Technology.

Hence our vision and mission is:

VISION

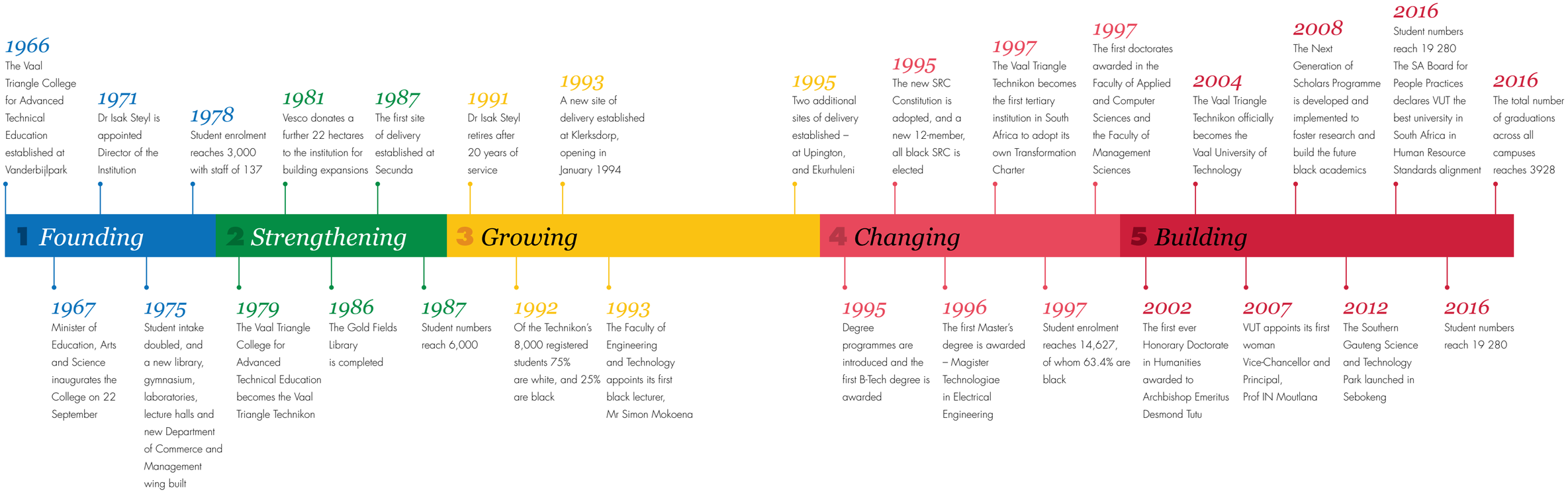
To be a University that leads in innovative knowledge and quality technology education.

MISSION

To produce employable graduates who can make an impact on society by:

- *Adopting cutting edge technology and teaching methods;*
- *Creating a scholarly environment conducive to knowledge creation, learning and innovation; and*
- *Developing a Program Qualification Mix that meets the needs of society in Africa and beyond.*

Major *Milestones*



Dr Hendrik van der Bijl – world-renowned scientist, first chairman of Iscor, Vecor and Vesco and founder of Vanderbijlpark

Prologue

Prologue

A THREAD OF CONNECTIONS

The birth of Vanderbijlpark and formation of the Vaal Triangle

In 1920, an outstanding young scientist called Hendrik van der Bijl, who was working in the United States, was called back to South Africa by the country's Prime Minister, Jan Smuts. And when he came, even he, with his brilliant mind, could not have imagined the thread of connections that would lead to the establishment of an institute of learning that would become a significant part of the very fabric of a new town. A town that would one day bear his name.

Smuts, with his objective of introducing a programme of industrialisation that would place South Africa on a path of development and economic independence in a changing world after the ravages of the First World War, saw in van der Bijl the ideal drive and ability to help plan the process.

Smuts' choice was to be vindicated, as van der Bijl, in helping to devise and drive the ambitious goals of a young modernising country, became one of its most influential figures. Within eight years a state company called Iscor was established in terms of the Iron and Steel Industry Act, No 11 of 1928, with the objective of producing iron and steel products and assisting in creating the jobs that were so sorely needed.

Smuts and his government of course could not have foreseen the global turmoil and strictures that would ensue in yet another world war, when Iscor's newly-built works in Pretoria tapped its first steel on the 4th of April 1934. By 1941, however, with the Second World War raging, and the massive demands for steel far exceeding Iscor's capacity in Pretoria, it was clear that there was a vital strategic imperative to expand local iron and steel production. It was just as clear to van der Bijl that this expansion needed to take place elsewhere than in the capital.

There had already been talk of situating such a works near Vereeniging, the town that took its name from the company that mining pioneer and industrialist Sammy Marks brought to the banks of the Vaal River when he established Union Steel there in 1911, and tapped the first steel ever on the African continent. It was also the town where the African Metals Corporation had been established in 1937 after the discovery of iron ore deposits at Thabazimbi.

It was the urgency of the country's war needs that persuaded van der Bijl that a plate-rolling mill should be built in the area of that town. He saw that the characteristics of the land along the Vaal River somewhat further to the west, were ideal.

Dr HJ van der Bijl, Director-General of War Supplies at the Rand Show inspecting a 3.7 Howitzer of a type that was being manufactured in South Africa

250lb air bombs cast at the Vanderbijlpark Works during World War II

Machining of outer cannon shells during World War II at the Vanderbijlpark Works

In 1878 geologist, Mr George William Stow, discovered coal deposits in the bed of the Vaal River. This discovery along with the financial support of Senator Samuel Marks, the millionaire entrepreneur, made mining the deposits financially viable and was the beginning of Vereeniging.

Mr Sammy Marks – Industrial tycoon and founder of Vereeniging.

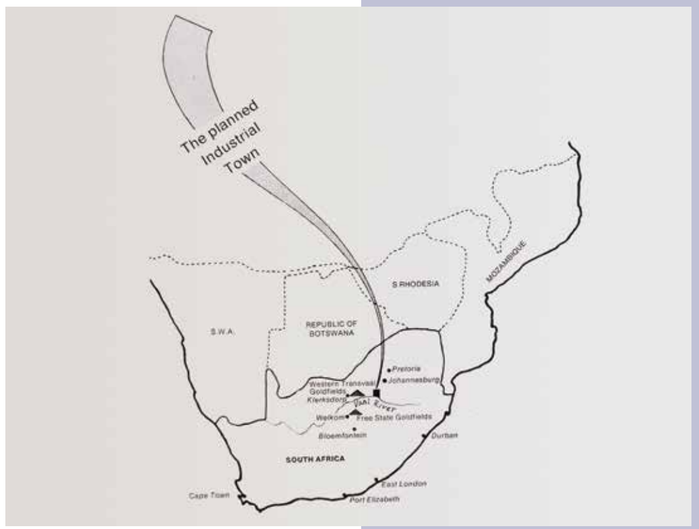
There was drainage towards the river, with a water pumping station upstream, and prevailing winds across the higher ground of the proposed site ensuring that pollution would be effectively dissipated. Iscor's directors were convinced by van der Bijl's arguments, and the construction of the plate-rolling mill was duly completed in 1943.

The Second World War came to an end before there was any further development in the area. A tract of 10,000 hectares was acquired to accommodate the site and a feeder town around it. In early 1947, building was begun on the fully integrated steelworks that had been agreed upon at the end of the hostilities. It was decided that this brand new town would be named in honour of the man who stood behind so much of the country's industrial development: Vanderbijlpark was born.

Iscor's completed Vanderbijlpark Works was officially opened by the Governor General, Ernest George Jansen, on 4 October 1952, with major expansion initiatives taking place in 1956 and 1960. Then, between 1964 and 1969, a second development was undertaken which significantly extended and modernised the plant.

By this time, the technological and industrial development that van der Bijl had envisaged at the behest of the Smuts government of the twenties, had found another expression in the establishment of a facility for refining oil from the abundant coal that was being mined in the country. Founded in 1950, Sasol was the world's first commercial oil-from-coal company, using a technology developed by German scientists and pioneered by Sasol engineers. This Fischer-Tropsch technology, as it is known, was used at the first Sasol plant to produce these synthetic fuels and chemicals in 1954.

The planned Industrial town

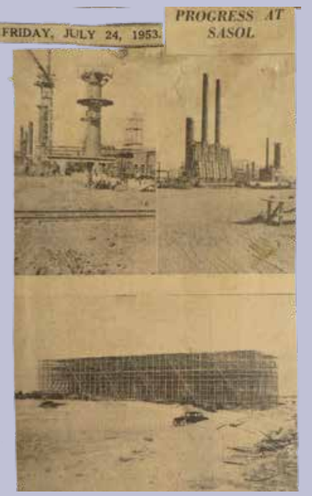


The pumping station at Vereeniging

The pontoon used to cross the Vaal River

Sasol Construction around 1952

Dr HJ van der Bijl discussing Iscor extensions to Vanderbijlpark Works with managers



News cutting of the progress at Sasol in 1953

Four blast furnaces at Iscor's Vanderbijlpark Works

In the same way that Vanderbijlpark came into being, Sasolburg had been established as the feeder and dormitory town for the workforce and suppliers of the Sasol factory. It was these two new towns, along with the older Vereeniging, that came to form what became known as the Vaal Triangle.

Each of these towns of course, in the context of apartheid South Africa, had its own dormitory urban satellites. These were set to house the extensive labour force that was required by the burgeoning industries that were growing up in the region alongside the two state-owned giants of Iscor and Sasol. Sharpeville, planned by the Vereeniging local authority as a five-year resettlement programme in 1935, only became known by that name during the 1950s. In the early part of that decade, Bophelong, Boipatong and Zamdela were established alongside the industrial expansion that was rapidly taking place in the Triangle.

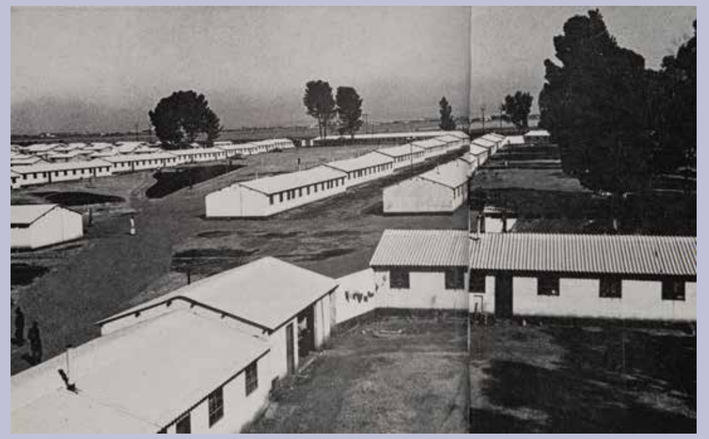
POVERTY AND SKILLS

The industrial development promoted so vigorously by Smuts and van der Bijl in time took on another – social and political – agenda. The decade of the thirties saw a consolidation of a growing Afrikaner nationalism, which was founded on the idea of not only bettering, but economically protecting, the lot and lifestyles of Afrikaans-speaking South Africans.

This movement of cultural assertiveness was to culminate politically in the victory of DF Malan's National Party in the whites-only election of 1948. What had perhaps begun as a project of national industrialisation had now explicitly become one of growing, cementing and reinforcing economic opportunity for a rapidly urbanising Afrikaner population. This meant, among other things, the provision and fostering of better-skilled labour, and the opening up of opportunity for whites in general, and Afrikaners in particular.

The policy of separate development quickly took on the colloquial name by which it became universally known – apartheid. This policy was not only about the fundamental principle of rigorous separation of the races. It was designed in tandem to change the balance of power between Afrikaners and those of English-speaking backgrounds, and more generally, to buttress the newly-achieved Afrikaner hold on political power.

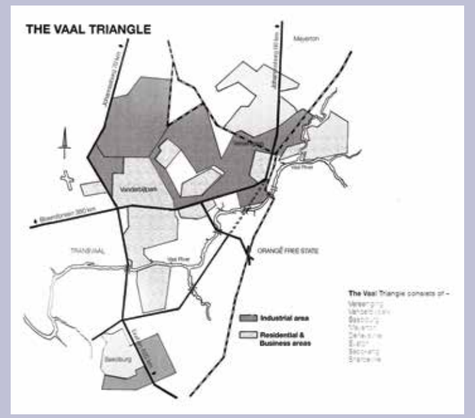
Technical colleges had already been established by the 1920s. It was within this tradition that they came to take on a more politicised role – by empowering white tradesmen through the provision of technical training that would enable them to acquire and improve their skills, and thereby, advance their economic interests. In June 1959, a technological institute was established at Sasol for the purposes of providing just such training to employees of the Young Company.



Single quarters for two thousand workers in Boipatong

Police keep an eye during the 1960 Uprising in Bophelong

Protestors gathering at Sharpeville Police Station 1960



Map of the Vaal Triangle

Providing after-hours instruction, this adult-education establishment was narrowly focused on the needs of Sasol. Indeed, in 1964, the company's personnel manager at the time, Mr Johan van Vollenhoven, became the first of an unbroken line of Sasol people to sit on the governing board of the facility, and later on the council, of what would later become a fully fledged institute of tertiary learning in its own right.

While the adult-education facility continues to function in its original capacity, in 1966 there was a sudden and radical leap in concept and educational goals. This development built on the small operation with the interests of a single company at its heart, to establish another one which could provide a broader base for improving the employability and capacity of a much wider segment of the growing population and the burgeoning industrial complex of the Vaal Triangle.

THE HEART OF VANDERBIJLPARK

Thus it was, that in the early 1960s, it was determined, in line with government policy and industry needs, that the Vaal Triangle College for Advanced Technical Education was gazetted and earmarked for development. With the three municipalities of Vereeniging, Sasolburg and Vanderbijlpark vying for the privilege of hosting the institution, it was eventually decided at national government level that the new college was to be built at Vanderbijlpark.

Vanderbijlpark street scenes 1960

Vesco, the company that was responsible for building the housing for Iscor personnel, donated a tract of land and construction began. By 1966, the first buildings were in place, and the Vaal Triangle College for Advanced Technical Education was ready to open its doors.

While it was industry that had engendered the town, it was this small college that was to grow in stature, capacity, scope and mandate, to become a centre of excellence, and a symbol of educational advancement and progress. As such, it became a pillar not only of the town but of the entire Vaal Triangle. In time, it would turn to be an integral and leading component of the South African tertiary education network.

News cutting from Vaal Weekblad – *Unieke Kollege vir Vaal Driehoek*

VAAL-WEEKBLAD

KOERANT VIR DIE VAAL-DRIEHOEK VAN VEREENIGING, VANDERBIJLPARK, SASOLBURG, MEYERTON

JR. 1, NR. 1. VRYDAG 8 MEI 1964 PRYS 2½c

DUTTON MOTORS
(EDMS.) BPK.
SASOLBURG
wens die uitgewers van Vaal-Weekblad geluk met sy eerste verskyning en vra u om 746-1509 te bel vir u nuwe en gebruikte motors
Volkswagen 1200 Volkswagen Handelvoertuie
Volkswagen 1500 Volkswagen 10-sitplek
Studebaker Motors en Bakkies

Sal eerste in Republiek wees:

(Van ons spesiale beriggewer)

UNIEKE KOLLEGE VIR VAAL-DRIEHOEK

'n Unieke opleidingsinstituut — die eerste in sy soort in die Republiek — gaan in die Vaal-driehoek opgerig word. Die werk moet reeds oor twee jaar afgehandel wees. Die gebou gaan opgerig word op 'n spesiale perseel op die grens tussen Vereeniging en Vanderbijlpark langs die Parys-pad. Dit resorteer onder die Departement Onderwys, Kuns en Wetenskap.

Dit maak deel uit van die Regering se plan om iets daadwerkliks te doen om die ernstige tekort aan opgeleide tegnici a hoof te bied — veral in 'n groot nywerheidsgebied soos die Vaal-driehoek.

Die projek het reeds die gevorderde stadium bereik waar slegs die goedkeuring nakende die perseel deur die Kabinet bekragtig moet word. Die Regering is begerig dat die werk teen 1966 afgehandel moet wees.

DRINGEND GEAG

So dringend word die totstandkoming van die instituut geag, dat die Adjunk-sekretaris van Onderwys, Kuns en Wetenskap, mnr. M. C. Erasmus, Vanderbijlpark persoonlik besoek het vir onderhandelings met die Vanderbijlparkse stadsraad ten einde verdere vertragings uit te skakel.

Die hoofbestuurder van Yskor, C. M. Kruger, het tydens 'n onlangse reis 'n spesiale studie gemaak van dergelike inrigtings in die buiteland wat daarop ingestel is om gevorderde opleiding aan tegnici te verskaf.

AANDAG GESKENK

Tydens mnr. Erasmus se besoek hier het hy ook aandag geskenk aan die oprigting van 'n hoër handelskool en tegniese kollege op Vanderbijlpark.

Die inrigtings wat saam R600,700 sal kos, sal gelei wees tussen die hospitaal en die gebied S.O. 2 en sal na verwagting ook teen die einde van 1966 voltooi wees.

Saam met die tegnologiese instituut, sal die oprigtingskoste vir oor die miljoen rand beloop.

Tender nou al vir nuwe hospitaal

Tenders vir die oprigting van Vanderbijlpark se nuwe hospitaal word nog vandeesmaand ingewag. Daar sal hopelik nog vanjaar met die oprigting van die gebou begin word.

Hierdie hospitaal het 'n skreiende noodsaaklikheid geword.

Vir altesaam 400 beddens word voorsiening gemaak, hoewel begin word vir altesaam 600 beddens, sodat die ekstra 200 beddens later aangebring kan word.

Argitekte het spesiaal oorsee gegaan om moderne metodes daar te gaan ondersoek, sodat Vanderbijlpark se nuwe hospitaal onder die modernstes in die wêreld gereken sal kan word.

'n Nuwe poskantoor wat in die sakesentrum opgerig staan te word, sal sowat R100,000 kos. Die senderaar aan wie die tender verlede jaar toegekom is, het egter intussen teruggetrek. Nou moet nuwe tenders aangevra word.

Sasol-dorp groei met R 3-milj. per jaar

Gedurende die pas afgelope finansiële jaar van die Sasolburgse Dorpsbestuur is bouplanne ten bedrae van R2,868,000 goedgekeur, asook nywerheidsplanne ten bedrae van R1,045,000.

'n Vertenswoordiger van die Dorpsbestuur deel mee dat daar tesame tussen 600 en 800 huise op tender uitgegee is, of in aanbou is. In die drie nuwe woongebiede wat ontwikkel word, en nou in die prosses van proklamasie is, is 630 erwe reeds in beplanning.

Die Dorpsbestuur, wat self reeds byna 170 huise besit, is besig om 130 huise ter waarde van R469,000 te laat bou, en is van plan om nog 200 erwe in die nuwe woongebiede aan te koop. Nuwe munisipale kantore word ontwerp, en tenders sal teen die einde van die jaar gevra word. Hierdie gebou sal in die suidekant, naby die openbare biblioteek opgerig word.

R87,000 word aan nuwe teerstrate en R.27,000 aan die 18 van randstene bestee. As die program afgehandel is sal byna al die strate in die ouer woongebiede geteer wees. Daar is ook reeds 'n begin gemaak met die ontwikkeling van 'n sakestuin in die sakesentrum. Hierdie projek, wat uiteindelik R.20,000 gaan kos, sal glo 'n amfiteater, 'n spuitfontein en 'n kinderspeelpark insluit.

Vanaf 31 Maart is die dorp se nuwe waterskema, wat teen bykans R500,000 opgerig is, in werking. Die druktoring, asook 'n opgaandam met 'n kapasiteit van 10 miljoen gelling, is reeds voltooi, en die dorp ontvang nou water van die Rande watercraad. Die Hoofbestuurder van Sasol, mnr. D. P. de Villiers, is onlangs benoem as lid van die Raad.

WEEFWERK VAN VANDERBIJL

'n Baie interessante demonstrasie van marmer-mosaïek-weefwerk word op Donderdag 14 Mei om 2 nm. in die Yskorklub gehou deur die Suid-Afrikaanse Wolraad se vertenswoordiger, mej. S. O'Grady.

Dit word gehou tydens die maandelikse byeenkoms van die Vanderbijlparkse tak van die V.L.U. Lede van die verskeie ander vroueorganisasies in die omgewing is ook na die demonstrasie uitgenooi.

Die tak het onlangs hul jaarlikse verkiesing gehad en die volgende lede is benoem om weer vir 'n jaar saam te tree: mevv. J. Liebenberg, voorsitster; M. Coetzer, sekreteresse; L. Kuster, tesourieres. Die twee vise-voorsitsters is mevv. M. Louw en A. Kruger. Die komiteelede is mevv. G. Kotze, F. Vorster, R. Edeling, R. Jooste, A. Verreaux, B. Bangert en R. Uys.

'n Onlangse lugfoto van snel-ontwikkelende Sasolburg. Die nuwe waterskema kan heel links op die voorgrond gesien word. Die gebied regs bo, waar op die foto nog net strate te sien is, is reeds byna vol gebou.

Iscor under construction – 1964

Founding

1 *Founding*

ANSWERING A NEED

1966 -1978

By 1962, the Vaal Triangle was already a thriving industrial and urbanised region with a number of burgeoning companies that were contributing not only to the economy of the region, but to the country's economy. These growing concerns, with Iscor and Sasol of course in the lead, included the nascent Cape Gate steel factory as well as a number of engineering firms, electricity generation and water purification stations.

The need that had been identified at Sasol, and which had led to the establishment of the evening technology enrichment and training classes there, grew more acute. With Iscor at the head, Vaal Triangle Industry made an approach to government to establish an institution that could provide not just evening classes for the up-skilling of its existing workforce, but more extended courses and qualifications that would provide a local option for school-leavers of the area. At the same time it would need to be a source for the technical recruitment which was increasingly being required for the future.

Industry found a ready ear for this appeal. Government had in any event already embarked on a course to increase trade and industrial training for whites in South Africa through its technical college programme.

Extensions to Iscor's steel melting plant and cold mill at Vanderbijlpark Works under construction by Dorman Long

Torpedo Ladle Cars manufactured by Vecor for Iscor

Dorman Long – a major contractor to Iscor and many other industries in the Vaal Triangle

A battery of wire netting looms at Cape Gate

Rectisol Tower for Sasol

The bottling plant of Vaal Brothers – source of all Coca Cola sold in the Vanderbijlpark area

Iscor blast furnace D

H Alers Hankey – Expanded metal machines

Construction begins on land donated by Vesco to the College – 1964

With Vanderbijlpark identified as the nexus for this initiative by the Department of Education, Arts and Sciences, construction began in 1964 on the land donated by Vesco.

A CENTRE FOR TEACHING

The first Rector of the college – Mr CAJ Bornman

It was Mr CAJ Bornman who stood at the helm when the newly-constituted Vaal Triangle College for Advanced Technical Education first opened its doors in 1966. As the interim students were mostly employees at one or other of the region's industrial firms, who could only attend classes after working hours, the institution initially operated as a night school. The first fully fledged academic year commenced in 1967. Those who had chosen the name were very conscious of its formulation. More than being simply a place where selected workers could be provided with improved skills, this new college was to be just that – a college – a bona fide institute of tertiary education. It was to deliver not just a certain proficiency, but the opportunity to acquire advanced technical training under a rigorous and harmonised curriculum.

In our words

"After having taught the evening classes at Sasol since 1960, I began here officially in 1967, when the first full courses began. The campus was brand new, the buildings sparkling. There weren't enough people to teach, though, so I found that I had to lecture in subjects of which I had no real experience. I found myself having to study some material the day before I was due to give lectures on it. I taught mathematics, the subject I was trained in, as well as Engineering Drawing and Mechanics, which was in Dr Hendrik Du Plessis' department. I still had to give some classes in the evening for those students who were working during the day. As lecturers we had more than 30 contact hours a week, an amount much less than today's average, and it was very demanding on the body.

There were only a few lecturers at that time, working in a number of departments. There was a single tearoom where we could relax between lectures. There were between 20 and 30 students in a class, most of whom were selected by their companies to attend the courses, and the students were very happy to be able to come to the college. Very strict discipline was maintained, almost military in character, but there was thorough teaching that took place in the lecture rooms, with the students very dependent on the lecturer for information in an age well before the internet. There were no rigid hierarchies between staff, with most people very willing to help their colleagues out. This sense of teamwork has persisted here to this day."

Mr Francois Joubert – Lecturer

The Hon Jan de Klerk, Minister of Education, Arts and Sciences *(right)* opens the new college. With him are Mr CAJ Bornman the first Principal *(centre)* and Dr FP Jacobz, the first Chairman of Council *(left)*

As the only institute in the country that was mandated to provide advanced technical education from its inception, the newly-founded and aptly-named Vaal Triangle College for Advanced Technical Education was unique in South Africa's technical education landscape.

The first classes for students opens in July 1966 at the Vaal Triangle College for Advanced Technical Education, at Andries Potgieter Boulevard SE7 in Vanderbijlpark

Newspaper cutting from The Star May 1967

The college was named in terms of the Advanced Technical Education Act No 40. It was officially inaugurated by the then Minister of Education, Arts and Sciences, the Hon Jan de Klerk on 22 September 1967, as a training establishment to provide the necessary skills to the engineering and chemical industries.

A KERNEL OF FACILITIES

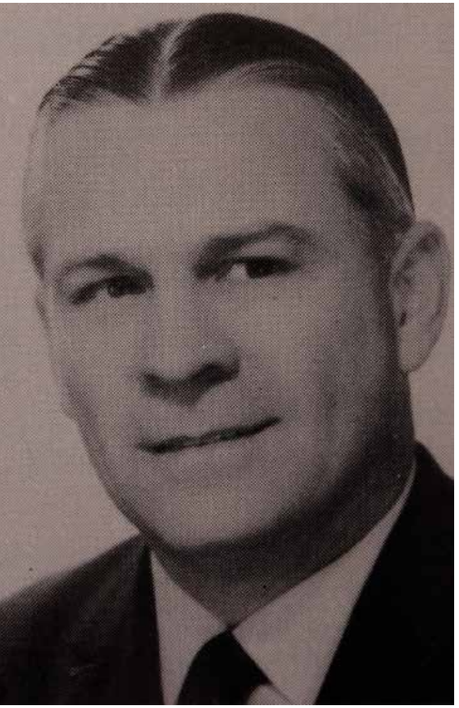
Students had already been admitted during 1966, from advanced technical classes across the Vaal Triangle, such as those conducted at Sasol. That first enrolment consisted of just 189 students, and they were taught by a staff complement of 15, many of whom were required to teach subjects other than their specialties. Afrikaans was the language of social and educational interaction, and in strict accordance with the political policies of the time, both the student body and the teaching and administration staff were exclusively white.

As Rector, Bornman oversaw three departments in that initial year. These departments – Chemistry and Physics, Electrical Engineering and Mechanical Engineering – framed their curricula to answer the needs of manufacturers by advancing the skills of those employees who had been selected to attend. They were also mandated to develop a sound foundation for those young people who would be enrolled in the future, when the college would act as a feeder of skilled and trained personnel who would, in time, be absorbed and employed by local industry. Productive and profitable manufacturing naturally requires efficient administration, and to cater for this need, the Department of Commerce was added in 1968.

No institution can function without ready access to information, and in keeping with this principle, the original planning and construction catered for the provision of a library. Already in 1966, the original facilities included one. However, this initial library housed only 700 books. With no permanently employed librarian, the books were kept under lock and key in what were in later years to become the Council Chambers, and the doors could only be opened on demand by a designated lecturer. The books were roughly classified by department, and it was only in 1969 that an administrative assistant was appointed to take charge of the still small resource.

As with all tertiary educational institutions not all of the students came from the local community. For those whose homes were elsewhere, the original buildings included a hostel which was designed to accommodate 60 students, both male and female.

One of the residence buildings



Dr Isak Steyl is appointed Director of the college in 1971

EXPANDING

Mr CAJ Borman, the founding Principal, remained at his post until 1971, when he resigned. His departure made room for the most influential personality to be associated with the college during its formative years, Dr Isak Steyl. His title was Director, and this was fully in keeping with both his personality and his accomplishments. A man who was determined to realise his vision for the college, Dr Steyl elicited the most devoted loyalty and respect through his able, untiring and focused work in shaping not just the ethos of the institution, but its purpose and physical growth as well.

Although he could be somewhat autocratic in his demands and expectations, and was strict in his adherence to formality, he was always in touch with the needs of both his staff and his students. He was unyielding in his demand for compliance to the values he saw as constituting the college. In his view, discipline, punctuality, neatness and respect for authority were paramount. Despite this, he could be most considerate, and was always able to take an interest in the lives and concerns of those who approached him.

With this kernel of buildings, and its staff and student complement limited by both budget and space, the Vaal Triangle College for Advanced Technical Education firmly built on its humble beginnings, successfully fulfilling the expectations of both government and local industry, who together had laid its foundation.

Aerial view of the college residences

Erecting the initial buildings was one thing – firmly realising the potential of the college, and matching those possibilities with the space and infrastructure required for meaningful growth was another.

Government subsidies alone were never going to be able to help establish the college as the centre of academic and technical excellence that the new Director envisioned.

It was the good fortune of the young college that Dr Steyl established outstanding relationships with the industrial leaders among the corporations of the Vaal Triangle. Thus, Dr Steyl was able during his lengthy stay at the helm of the institution, to obtain from those sources the kind of additional funding required to expand its facilities and capacity.

The Main Hall at the Vanderbijlpark, campus which seats 700, is a popular venue for student activities and graduations

Mr B Eras, Managing Director of Davsteel, presenting Dr I Steyl, Rector, with his company's annual donation. Next to him is Mr D Viljoen, Managing Director of Sharon Wire Mill Corporation and Mr A Kempen (later Dr)

DR FP Jacobz, chairman of the College Council; Dr I Steyl Director of the College; Mr HP Malan, Mayor of Sasolburg; Mr SW van der Merwe, Mayor of Vanderbilpark; Mrs Kotie Steyn, Mayor of Meyerton; Mr CAJ Bornman, first Rector of the College; Mr HJ Ooosthuizen, Mayor of Vereeniging at a diploma ceremony

It was Dr Steyl's persuasive conviction that the Vaal Triangle College for Advanced Technical Education could do more than simply supply a steady stream of qualified people to local industry. He believed it had a central role to play in the development of the town, as well as in the wider landscape of South African tertiary education. As such, it could become a desirable institution for aspirational post-school learning that, through its qualifications, could make a substantial contribution to the economy of the region, and to the quality of life of its alumni.

In our words

"Dr Steyl placed a premium on neatness and cleanliness. For graduation ceremonies he would have the fire brigade come and wash the roads. At one of the ceremonies when a minister was guest speaker, he commented on just how tidy the campus was, and Dr Steyl's ethos had been so absorbed by everyone, that we all felt the same sense of pride. It wasn't just for ceremonies that the campus was maintained in this way – it was like that all the time under Dr Steyl. Despite this authoritarian and conservative approach, he could be extremely kind. He was a hero of mine, and I was one of those who kept up a personal relationship with him."

Prof Christo Pienaar
– HoD Electronic Engineering

In our words

"I started teaching at the college in 1969 when it was just three years old, when there were only Blocks A, B, C, and D. Because we were a central feeder to all the industries of the region, we offered all the engineering disciplines, apart from mining engineering, as well as physics, chemistry and maths. Electrical engineering was my focus, and there was a separation even at the very beginning between heavy and light currents. Both were always strong disciplines. Dr Steyl looked at the fine details of everything. He played a critical role in his time, and he saw the college as his child."

Prof Piet Swanepoel
– DVC Academic

Some of the earliest college students

A CHANGE IN STATUS

For all his autocratic style, for the first year of his tenure as Director, Dr Steyl still presided over what was known as a Departmental College. This meant that it operated under the ultimate direction and auspices of the Department of Education, Arts and Sciences.

The Advanced Technical Education Amendment Act No 40 of 1967 envisaged something different, however. Thus, on 1 April 1972, the Vaal Triangle College for Advanced Technical Education became fully autonomous, with responsibility for its administration officially handed over to its Chairman of Council Dr FP Jacobsz, by the then Minister of National Education, the Hon JP van der Spuy.

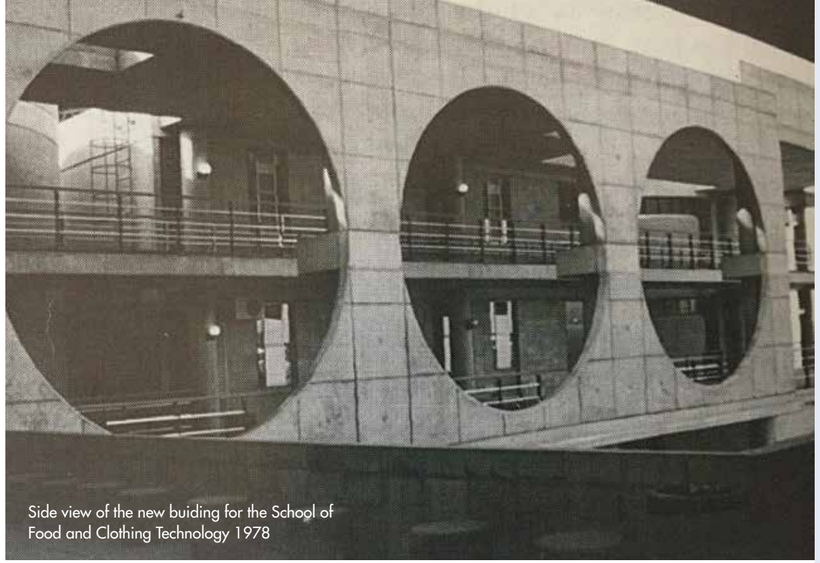
The Vaal Triangle College for Advanced Technical Education, which received autonomous status on April 1, was officially handed over to the College Council by the Minister of National Education, Mr. J. P. van der Spuy, at a ceremony at the College on Friday evening. Here the Minister (centre) is seen with the chairman of the College Council, Dr. F. P. Jacobsz (left) and the director of the College, Dr. I. Steyl.

News cutting April1967

Within a year, in 1973, in a response to an unexpected demand for student places, the Department of National Education approved a plan for extensions to accommodate the increased numbers. The temporary lecture rooms which were established to house the growing facilities would in time be superseded by a concerted and structured expansion. The decade was to see a continual growth not only in student numbers, but in the curricula and the buildings in which they were taught.

A quick succession of Council Chairmen ensued throughout the first half of the seventies, with Dr Jacobzs being replaced over two years in quick succession by Mr JW van der Merwe and Mr JC Steenkamp. It was only when Dr LB Knoll took on the position in 1975 that the position stabilised with a dedicated and long-serving member of staff.

Dr LB Knoll takes on the role of Council Chairman in 1971 and becomes a dedicated and long-serving member of staff.



Side view of the new buiding for the School of Food and Clothing Technology 1978

A CHANGE IN INFRASTRUCTURE

It was in that same year of 1975 that construction was began on new buildings, along with a programme that enabled student numbers to double, and a broader curriculum. Block E, a four-storey building, was soon completed, with a gymnasium and cafeteria providing pleasing options for relaxation that had previously been lacking. The addition of a further 66 hostel places, while increasing the residential capacity, was insufficient to satisfy the rate of growth in student numbers. Naturally, courses and residences were only open to white students.

The expansion of the facilities took a leap forward in 1977 with a two-storey library and the provision of generous reading, studying and shelf space. The new premises fell under the aegis of the college's first professional librarians, among whom was Lynn Hartzenberg, who would later play an important role in the facility. The first task of this team was to harmonise the classification of stocks with the international system, a task that took until 1978 to complete.

Students at work in the early library

In our words

"I was appointed at the end of 1977 to be the person responsible for establishing the School of Art, Design, Food and Clothing Technology. Two people were appointed as my staff, and 13 students were enrolled for January of 1978. I was Director of both branches for 10 years, until Dr Steyl split the Art and Design side from the Food and Clothing Technology, although they remained interdependent. At one stage the student numbers grew to about 400, with a good male to female balance. The idea of a career in art was still a very foreign one, and we often had to advise parents about the potential in what their children wanted to do. Although there was some drop out – with only five of the original 15 students lasting through to the end of the year – after those first three years of the diploma programme we had three graduates. We built up the scope and equipment, and we were the first Technikon to introduce the cutting edge technology of that time – phototypesetting.

There was a certain disdain from the technical side of the institution because we were essentially an art department, and we had to work hard at recruiting among communities that had no real concept of tertiary art and design training. Many parents were opposed, often forcing their children to do a technical course before they would allow them to follow their passion.

School of Art, Design, Food and Clothing Technology: July 1981
Ltr: Ms Sandra Hugo, Lecturer: Clothing, Ms Mari Roelvert, Lecturer: Clothing, Ms Annatjie Murphy, Lecturer: Food. Ms Lettie Boers, Director: School of Food and Clothing, Mr Brent Record, HoD: Food, Clothing and Photography

We would invite people from the advertising and design industry as well as photographers to come and talk to students, and perhaps identify those with whom they might be interested in once they had graduated. The education was career-orientated, and we established an Advisory Committee for each division of the programme so that those aspects of the training that weren't necessary any longer could be identified. When it came to the Food and Clothing section, Mrs van der Merwe was appointed to the committee. As the chief nutritionist of a large hospital in Pretoria she understood the need to train people who could actually work in institutions once they went into the job market. Food Services Management was thus put in place and persisted for 10 years, until it was split up even further.

At the end of the school's first year in 1978 we selected the best work of our remaining students, and put it up in a show. We invited all the top management, from Dr Steyl downwards, to come. This helped to change attitudes somewhat, and the exhibition went on to become an annual event."

Mr Brent Record – Director, Art, Design, Food and Clothing 1977 – 1999

FROM TECHNOLOGY UPWARDS AND OUTWARDS

Technology and the sciences in general continued to be the primary focus of the college, and in keeping with developing this capacity, it was able to offer the National Higher Diploma in Analytical Chemistry for the first time in 1977.

By then however, a new development was well underway. Industries were thirsty for employees with an up-to-date knowledge of current technologies and practices. They knew that these employees were the ones driving productivity, competition and growth.

It was only a matter of time before the need was clearly evinced for the kind of employees who manage, administrate and implement sound business strategies.

This need began to be answered relatively early on, in 1972, when 120 students were enrolled for the brand new Management Sciences programme, and seven members of staff were engaged to teach them the material. Accommodated in Block A, this group produced a Diploma and two Certificates in the graduation at the end of the year.

There was to be a sizeable gap, however, before an even wider curriculum reach was achieved with the establishment. In 1978, of the Department of Art, Food and Clothing Technology, 137 lecturers were engaged in teaching a total student enrolment of 3,000, marking a significant milestone in the growth of the college.

Photographic student setting up a studio shoot

Clothing Technology students

Food Service managers in the Food Technology Laboratory

The Department of Commerce and Management is completed in 1975

In our words

"I began teaching part-time at the college in 1972, when I was still a student. I gave night classes in the Electronics Department. I later taught in the Physics Department with Prof Hendrik du Plessis and Prof Piet Swanepoel. At that time, all exams were external, with external examiners and moderators. All the papers were set by members of staff from other colleges for advanced technical education, or CATEs, who were experts in their fields. The college at that time was rated number one. There were around 20 students in a class, with 90% of them sponsored by the companies in the area.

Dr Steyl was a very neat man, and totally focused on rectitude, discipline and formality. His relationships with industry were exceptional, as they were with municipalities in the region. What later became the Rector's office was then a tea room, where all the staff would congregate in their breaks and for lunch and Dr Steyl would come in from time to time. His kindness and concern for individuals was always apparent. He maintained contact with the students, and was always committed to the highest standards."

Prof Christo Pienaar – HoD Electronic Engineering

Mr Jan Duvenage, Head of Industrial Engineering

In our words

"I started teaching at the College in 1978 as a lecturer in Mechanical Engineering. After some years working in industry, I returned as Head of Industrial Engineering. When I first began teaching there were only the yellow-brick buildings – Blocks A to E, with the hostels on the other side of the stream. The various schools of engineering that we had at the college were all accredited by ECSA – the Engineering Council of South Africa, who approved the programmes. Once they were qualified, our students were able to register with ECSA professionally. We also had our own internal council composed of the real experts we had on our staff, to maintain standards, and ensure that our students were getting the best possible instruction.

Then a change occurred that had a far-reaching effect across the landscape of South African tertiary education. The Advanced Technical Education Amendment Act No 43, of 1979 permitted for the renaming of colleges countrywide to "Technikons", a uniquely South African descriptor. It was felt that this raised the status and capacity of these institutions. The Vaal Triangle College for Advanced Technical Education thus became the Vaal Triangle Technikon. Now it was an institution, like the others countrywide, that could offer a hierarchy of qualifications that included up to six years of study."

Mr Jan Duvenage – Head of Industrial Engineering

Electrical Engineering students busy with advanced logical analysis

Civil Engineering students receive practical training on a laser theodolite

Aerial view of the College

After the publication of the findings of the Goode Commission of Inquiry in 1978, an investigation was initiated that looked into the qualifications being offered by the college. Emerging from this process were a set of recommendations, one of which was a fifth year of study added to the training of technologists, and another proposing that the college be redefined as a College of Technology – although this proposal was in the end not implemented.

Mechanical Engineering students working on a steam turbine test

A HIERARCHY OF QUALIFICATIONS	
Laureatus in Technology (LaurTech)	Six years of study
Master's Diploma in Technology (MDipTech)	Five years of study
National Higher Diploma (NHDip)	Four years of study
National Diploma (NDip)	Three years of study
National Higher Certificate (NHCert)	Two years of study
National Certificate (NCert)	One year of study

The stage was set not so much for a quantum leap forward, as for a series of steps and initiatives that were to take the institution into a period of consolidation and strengthening. These would embed its values, increasing its capacity, and define an ethos of effectiveness, quality and focus.

Mexican Fan Palms, planted in the early 1970s, continue to provide a friendly welcome at the campus entrance

Strengthening

2 Strengthening

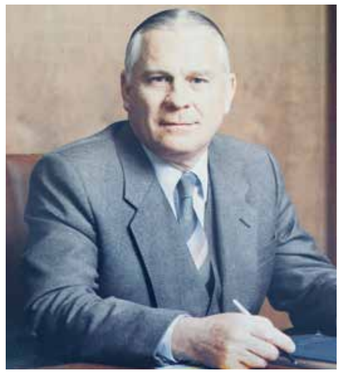
ROOTS OF EXCELLENCE

1979 -1987

The roots of the technikon system in South Africa lie in the structure and purpose of trade apprentice training in the country. Since the early twenties, when the Higher Education Act No 30 of 1923 declared that certain technical colleges were places of higher education, they had over time focused on their community aspects, rather than the theory of apprenticeship training. This is one of the things that set the Vaal Triangle College for Advanced Technical Training apart from its inception. As a CATE the college was firmly situated as a highly-regarded institute of higher education.

The 1974 recommendations of the Van Wyk De Vries Commission of Enquiry into White Universities recommended that a new vertical development should be adopted by universities and technical colleges, which should be mediated by a new focus. This difference in focus was highlighted in the subsequent Advanced Technical Education Amendment Act No 43 of 1979, which clearly delineated the different purposes of universities and CATEs, and introduced the word "technikon".

It was against this legislative background that the name "Technikon" came into use. In keeping with the Euro-centric perspective of the South African government and its education administrators, the classical world seemed the natural place to seek for a word that would adequately describe the new style of institution envisaged by the 1979 Act. It was the Greek word technike, referring to technique and technology, that seemed perfectly defined to capture the spirit of what was envisaged as a parallel track to the universities.



Dr Isak Steyl, Founding Rector of the Vaal Triangle College for Advanced Technical Education

In our own words

"The Vaal Triangle Technikon has a proud record of providing advanced technical education of a high standard. The Technikon has proved its worth, made its mark, and earned the esteem of industry and commerce.

It would appear that South Africa is building up a tremendous shortage of skilled manpower at all levels. The rate of training nowhere near matches the growth potential of our country. South Africa is only training approximately one third of the skilled manpower which is required annually. Consequently, the development of our country is restricted by the limited skills available. At the same time, conditions in South Africa are favourable for achieving a high growth rate and our economy could be doubled by the year 2000 if sufficient and suitably trained human resources were available at all levels.

It is therefore in the area of manpower training that the Technikon has an important role to play and where the main responsibility lies."

Dr Isak Steyl – Rector

"The only certainty you can have in 1980 about the circumstances which will prevail within your chosen careers 10 or 20 years hence, is the uncertainty thereof. We live in an age of rapid change, and in your working life change will be much faster than was the case during my career – faster, because every sensible generation adapts to the demands of its times and the demands of the future South African situation that will develop at an ever-increasing pace."

Dr DF Mostert –
Executive Director of Sasol

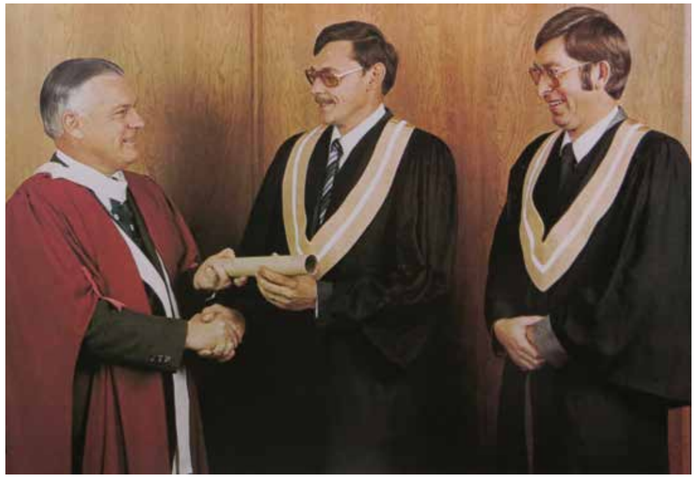
These were the words of Dr DF Mostert, the Executive Director of Sasol, in an address he made in 1980 to the students of the newly-named Vaal Triangle Technikon. Little could he know then that the future dates that he adduced to make his point would see changes beyond anything either he or his audience could have imagined possible in that moment.

The training at the Vaal Triangle Technikon as well as its goals of excellence, were of course reserved for whites, and for the future that the community was aspiring to build for itself. To construct that future meant, in 1980, that it was first necessary to construct the infrastructure that would facilitate the academic effort.

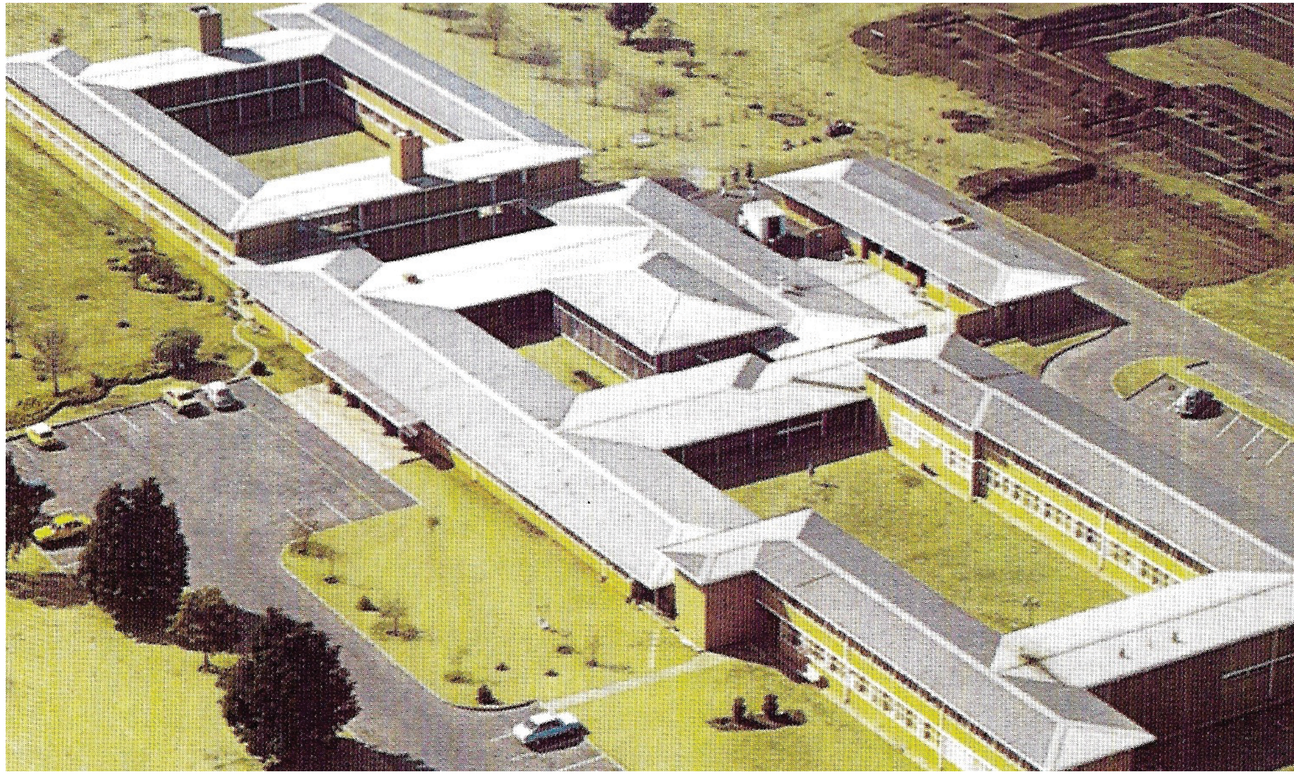
Auditorium 200 was completed in 1980. When the Department of National Education approved a significant building initiative, Vesco donated a further 22 hectares of land which were earmarked for new sports fields. The development of these had to wait until 1987, however, with the resulting facility eventually named after the institution's energetic and influential second director, Dr Isak Steyl.

PURSUING ACADEMIC DISTINCTION

While sport took on an impetus that raised the profile of the Technikon to Dr Steyl's immense gratification, he was of course just as insistent, if not more so, on the pursuit of academic excellence. An important step forward in this regard was taken in 1982, when an assistant librarian was appointed to manage the fast-growing facility.



Dr Steyl awarding diplomas



Excavations begin for a new residence alongside one of the existing residences

INFRASTRUCTURE DEVELOPMENT

The following year the library became a founding member of the South African Bibliographic and Information Network (SABINET). With computerisation still in its infancy, the library was able to install its first terminal, putting itself at the forefront of technological development in managing its 16,000 volumes and 173 periodicals.

With more recruits coming from beyond Vanderbijlpark to study at the Technikon, new facilities were required to accommodate them, and in 1981, a new hostel was opened with place for 140 students. Another similar expansion took place the following year, with a further 140 hostel places becoming available.

In our words

Establishment of the Sports Bureau

“I was recruited in 1982 as a Junior Springbok rugby player of note to establish the Sports Bureau. Prior to my coming, sport had been handled on an ad hoc basis by Dr du Plessis. When I arrived there was nothing in the office – a desk and a government chair in what had been a storeroom in the Mechanical Engineering building. I’m proud to say that we quickly developed into an outstanding institution on the sports field, and after we won the rugby tournament in the Western Cape in my first year as coach, I felt I could ask Dr Steyl for anything. After three years of developing our team of coaches and offerings, I approached Dr Steyl, telling him that I felt we should build our own sports stadium.

Up to that point we had been using the town sports grounds for training. Dr Steyl was doubtful, but I told him that we had done the same thing in Potchefstroom where I had come from, and that I had had experience in managing such a huge undertaking, and he agreed. Land was donated by Vesco, and eventually the funds came through. Mr Chris Booysen was the resident engineer here at the time, and we both worked on the plans, and in due course the stadium was built. The design of the main pavilion received two awards for innovative concrete design, and from the outset the facility became popular. It was

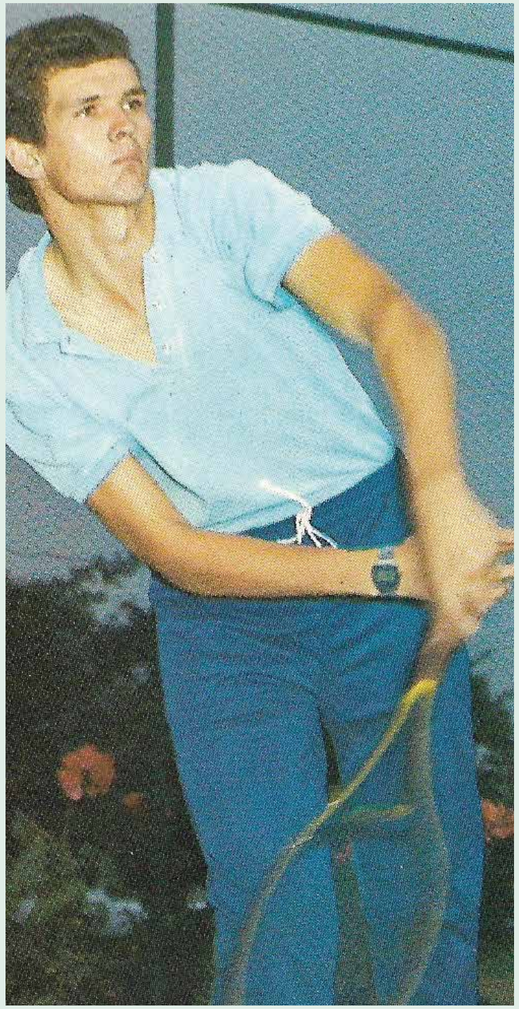
The Sports Bureau:
Front l-r: Ms Thea van Staden, Secretary. Mr Piet Brand, Director and Founder of the Sports Bureau. Ms Susan de Bruin, Sports Officer
Back l-r: Mr Godfrey Skosana, Mr Ian Harries and Mr Pierre van Heerden, Sports Officers

full every Saturday, and became a quality option for the sports needs of both the institution and the Vanderbijlpark surrounds. Another coup was the erection of the pavilion for the hockey fields. It had once been the iconic Bakers Corner at the famous Ellis Park Stadium in Johannesburg, and was bought by the Roodepoort Rugby Club for R3,000. They needed to raise funds, and eventually they offered it to us for R10,000.

Dr Steyl immediately and enthusiastically agreed. We campaigned for the funds with the Afrikaans slogan “Een miljoen vir ’n pawiljoen”. The municipality gave us the funds, and we were soon able to boast a historic stand.

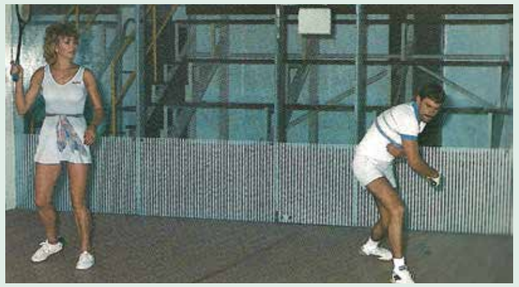
We grew to offer 17 codes, including such interesting ones as badminton, judo, volleyball and skydiving, with coaching and training to match. Since those days, we have regularly produced sportsmen and women who have excelled, and many who have been selected to represent South Africa in various national sports teams.”

Mr Piet Brand – Founder of the Sports Bureau



Tennis

Hockey



Squash

High Jump

Mr CP de Jager – Senior Director of Student Affairs

A VOICE FOR THE STUDENTS

Establishment of Bureau for Student Affairs

The pressing need to provide a formal structure to enable students to make their voice heard and be more active in a participatory role was answered with the establishment in 1982 of the ***Bureau for Student Affairs****. Under the guidance of Mr CP de Jager, who would a decade later play a role in helping to mediate transformation at the institution, the bureau concerned itself from the outset with academic support. This was provided in the form of vocational and study guidance, and the identification of students at risk of failing and remedial action. Personal counselling also formed part of the body's remit, through which it was able to assist students in adjusting to the demands of tertiary education.*

The bureau fulfilled a function that had grown out of a lack of concern for the well-being of students who, certainly during the institution's early years, were viewed as simply a means of sustaining the skills requirements of regional industry. The bureau strove to accommodate the totality of students' needs, across the spectrum of their experience at the college, embracing their academic, social, cultural, recreational and sporting activities.

The academic offering continued to expand during the eighties, with courses in Microbiology and Paramedical Sciences being added in 1980, and the establishment of the Department of Educational Technology in 1984.

The Parliamentary Act 84 of that year was passed to give greater autonomy to the Technikon councils, with a consequent reframing of staff designations. The most important change in this regard was that of the post of Director now being harmonised with those of the Afrikaans Universities. The result was that Dr Steyl and his successors would henceforth become known as Rector. In that year, the first five-year Diplomas in Technology were awarded, and in 1985 an impressive 85 Diplomas were awarded by the School of Management Sciences.

Technikon-studente ontvang ere-kleure vir die eerste keer

Bring and sell

Left During the first ever Academic Honours and Sport Award in 1984, is Head of Student Bureau Mr C P De Jager; Sportswoman of the Year Ms J Viljoen; Mr G Greef from Volkskas; Sportsman of the Year Mr S Forbes, and Mr D Joubert from Volkskas, who sponsored the event and beautiful trophies.

Right Honorary Awards were awarded to Dr Isak Steyl – Rector of the Vaal Triangle Technikon, Mrs C E Brand, Dr H A du Plessis and Mrs A J E Maritz.

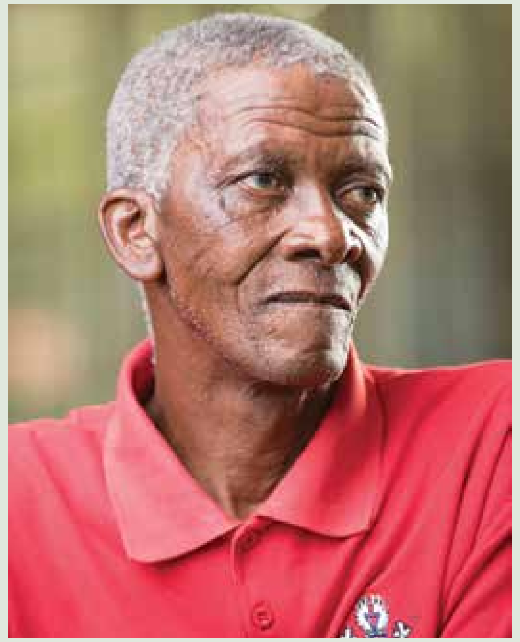
It was in 1996 that the concern of maintaining academic standards across the spectrum of the South African technikons was addressed by the establishment by an Act of Parliament, of SERTEC – the Certification Council for Technikon Education.

Chairman of the Student Representative Council, Mr Louis van den Berg and Senior Director of Student Affairs, Mr CP de Jager toast the new recreation centre

In our words

"I have been working at the Technikon since 3 August 1985, and I have many memories of this institution. I have greatly enjoyed all the years I have spent here, under different Rectors and vice-chancellors. I began in plumbing, and then in 1988 moved on into carpentry, which is where I've been since. The students have always been very good to me, and have always treated me with respect, even in those early days, because respect has always been a part of the institution. They have even felt free to ask me to help them out at their homes, or with personal needs, and call me for help at the residences. This institution has a special place in my heart. It's been there through all my milestones, and I've been there through its growth.

When I started the campus only extended to C Building, and most of the students lived in the town in rented apartments. Even the Sebokeng campus was acquired some time after I had begun working here. I have also done work on all the satellite campuses, and I've always wanted to help ensure that those campuses were maintained just as well as the main campus. When I began I had a team of four – black as well as whites – and I tried to instil my values in them.



Mr Steven Gama – Carpenter – Long-standing employee started at the Technikon in 1985

I have since created a workshop in my house, where I teach painting and other skills like the installation of ceilings to boys from the township, so that they can build a better future for themselves. This is part of my desire to leave a legacy in everything I do, and that extends to my time of working at this institution which has been such a part of my life for so long."

Mr Steven Gama – Carpenter

First Year students' Watermelon Feast 1991

First-year orientation 1991

STUDENT LIFE IN THE 90S

Regatta Committee

Building floats at the Isak Steyl Stadium for the parade through Vanderbijlpark CBD

Miss Technikon 1991

The Students Representative Council in 1990/91

In our words

"I began at Vaal Triangle Technikon in July 1981 under Dr Steyl. There were no grey areas then, and the ethos was absolute. While it did make it easier in many respects to get things done, it was very rigid. The very beginnings of the transformation were not easy. Graduations were very formal, organised by Mr Tom Engela, with all the men having to wear a suit and tie, and the women black. We in the Fashion Department had to make the outfits.

On one occasion, a woman who had come from Morgenson arrived with a baby to attend the ceremony.

As infants weren't allowed, she had to give the baby into the care of the Rector's secretary. She was extremely uncooperative. When I finally showed her and her family to their places, they found that they were sitting next to a black family. She leapt up and charged out, and when I got them new tickets, and they were seated again, another black family came and sat down beside them. There were very entrenched attitudes that were going to have to change radically, and in our department – when our very first black student wanted to join – I had to work for days to get the required permission. Things were not right, and they needed to change."

Ms Sandra Hugo – Senior Lecturer, Visual Arts and Design

The year of 1986 was a landmark year. It was in that year that for the first time black students were admitted to the Vaal Triangle Technikon. At just 3.6 percent of the total enrolment of 3,361 students that year, the numbers were vanishingly small, but the breach of white privilege had been accomplished. While no-one could foresee the dramatic events that lay ahead, or the already rapidly shortening timescale, both for the institution and the country in its entirety, it was clear that there was no way back from the path to a more equitable dispensation.

The Gold Fields Library inaugurated in 1986

A NEW LIBRARY FOR A NEW ERA

In tandem with the growth and changes taking place, the provision of the library facilities were about to take a huge leap forward, with a magnificent donation of R750,000 from mining house Gold Fields. With the government providing R4,250,000, the building was designed by Meyer, Pienaar & Partners. After 18 months under construction by Meumann & Heyneke, The Gold Fields Library was officially inaugurated on 14th March 1986, and it marked the first project completed in the ambitious building programme that had been outlined already in 1983, when its first phase had begun.

Beyond the two storeys set aside for the library, the building was designed to operate with lecture rooms on one of the remaining levels, and the computer and Plato Centre on the other.

It also accommodated a car park in the basement, and a student cafeteria on the ground floor, where there were also banking facilities, a post office, an exhibition centre, a careers information centre and four auditoria for audio-visual presentations. All four levels were earmarked for eventual occupancy by the library when its stock and usage would demand the increased space. At that point the strategy would be to accommodate the other departments housed there in their own buildings.

Students making use of the spacious new library

Symposia for the future

In 1987, Dr Steyl, with his characteristic energy and rigour, initiated a series of symposia which were intended as a platform for leaders to consider and debate the future of South Africa. The tone and purpose of these symposia were well-described in a keynote address given by Mr Harry Oppenheimer when he described apartheid as a vast and relentless experiment that had ended in complete disaster. He urged the importance of considering "the stable foreign relationships that are necessary for our security, allowing us to share on a respected basis in the community of nations." He emphasised the need to proceed to towards an open and democratic state that was fundamentally just and that safeguarded individual rights. Education, he said "makes a people easy to lead, but difficult to drive; easy to govern, but impossible to enslave." It was education, he contended, that would free white South Africans from the fear of democracy.

Many other leaders, including government and industry personalities and academics, contributed to the deliberations of the symposia over time, dealing with matters such as economic and population growth, negotiation and consultation, polarisation, technology, business opportunities, job creation, entrepreneurship and skills development, the role of the technikons, and crucially, the removal of the obstacles that obstructed the full participation of blacks in the economy. Dr Sam Motsuenyane, speaking of black entrepreneurs and their future role, said "The real problem in South Africa is not that capitalism has failed, but that genuine capitalism or free enterprise has never been honestly and sincerely implemented."

The final symposium, the fifteenth, concluded that a tremendous vision of the future had emerged from the observations and views of the various speakers in the series. Nonetheless, that vision still faced considerable obstacles before it could be realised, and it was felt that business and labour had a significant role to play in resolving them.

In the end, of course, other events were to overtake these discussions and conclusions. However, the will at the Vaal Triangle Technikon to help set an agenda, and to deal with the realities the country was facing, was evident in the very conception of these symposia, and the vigour with which crucial aspects of South African society was discussed.

Against this background, there was a strong determination by the institution to make its presence felt across the region. It was fitting that 1986 was the year in which the institution established the first of what would become known as **sites of delivery** – external campuses situated in towns other than Vanderbijlpark. This first new extension of the academic reach of the Technikon was established at Secunda, where it offered part-time classes in Safety Management and Electrical Engineering.

While Sasol supplied some facilities, the students still had to come to the main campus to do their practical assignments in the well-equipped Vanderbijlpark laboratories. This resulted in a number of teething problems, as ways were sought to organise and structure these logistics satisfactorily. In time some basic laboratories were set up at the delivery site, and with the students there all writing the same exams as were set for the main campus, the initiative was successful.

By the following year, in 1987, twenty years after its founding, Vaal Triangle Technikon **student numbers had grown to 6,000**, and in that year, the **first awards of the highest qualification the institution could offer – the Laureatus in Technology**, equivalent to a PhD – were made, with three candidates achieving this high distinction.

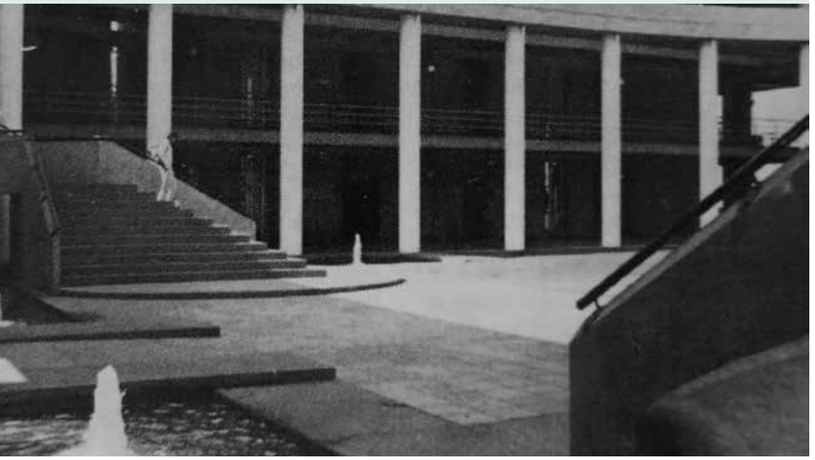
The well-equipped Technikon laboratories

CONFERRING OF THE FIRST THREE LAUREATUS DEGREES IN TECHNOLOGY

[1] Mr FA Auditore – Electrical Engineering, for his thesis "The Development Towards Lighting Resistant 22-kV Woodpole Rural Overhead Transmission Lines

[2] Dr D Tromp – Management, for his thesis "Die Kosterekeningkundige Funksie in Suid-Afrikaanse Handelsbankwese"

[3] Dr PT van Rooyen – Management, for his thesis "Begrotings en Inligtingstelsels in die Bankwese"



Anglo American donates most of the money required for building the School of Applied Sciences

That year was also the one in which it was the turn of the School of Art and Design to obtain new facilities, and construction of the project began. And with the Gold Fields Library already two years in its new premises, another major corporation – global mining giant Anglo American – made a significant donation in 1988. The amount of R746,000 that the company donated, went towards the overall cost of R4.5 million for the construction of what was to become the imposing Anglo American Building for the School of Applied Sciences.

COMING OF AGE

The Vaal Triangle Technikon celebrated the 21st anniversary of its founding at the Riviera International Hotel on 30th October 1987, with a with a banquet attended by cabinet ministers and captains of commerce and industry.

The guest speaker on that occasion was the then Minister of Higher Education FW de Klerk. Only a few years later, and within a time span that no-one present that night could have imagined, it was he, as President of South Africa, who would help steer his government and the country away from disaster, and into a new democratic dispensation.

Mr FW de Klerk, Minister of National Education is guest speaker at the Vaal Triangle Technikon's, 21st Anniversary celebration. He and his wife Mrs M de Klerk receive a gift of appreciation from Dr Steyl

Along the way, vast and permanent changes in thought, deed and perspective would be effected at the Vaal Triangle Technikon, but that night, Mr de Klerk likened the Vaal Triangle to a diamond, with the Technikon being the sparkle at its centre. These were encouraging words at a time when the role, function and capacity of the technikon system were being questioned on commercial, financial and theoretical grounds.

At those celebrations, Dr Steyl once again acknowledged that society was moving into a new era that would require a substantially different outlook in both life and education. Although his words held the faint signals of a willingness to adapt to a fast-changing world, he was not to be at the helm when the qualities he was referring to would sweep the country, and make those very changes a reality at his institution.

Dr Steyl's departure was still some years away, but his determination to face head-on the challenges that were by that time facing society, and by extension, the institution, was apparent. That determination was emphasised once again at the start of the following academic year, when the Rector said that in the face of the ongoing budget cuts, it fell to the students to perform to the very best of their ability in order to help their academic home surmount its difficulties.

Dr Steyl receiving his Honorary Fellowship

The Technikon Council, still under the chairmanship of Dr Knoll, took a decision to honour Dr Steyl with the highest award the Vaal Triangle Technikon could bestow. This was in recognition of the Rector's efforts and accomplishment in leading the institution towards a greater future. It was a future for which he had a very particular vision – one that would make the Vaal Triangle Technikon a leader in providing South Africa with the technical and relevant skills and workforce it would require. This future would be one that he sensed would be very different.

Accordingly, at the graduation ceremonies of 1989, the Rector, Dr Isak Steyl, was awarded the Honorary Fellowship, which had been specially instituted by the Council to recognise distinguished work of special merit in the field of education and for service to the South African community. It was the inaugural installation of this award, and in presenting it to Dr Steyl, Dr Knoll paid full tribute to him for his achievements in education and his matchless contribution to the development of the Vaal Triangle Technikon, and to the technikon fraternity.

Dr Steyl had not only been the leader of the Technikon, but had chaired the Committee of Technikon Principals, and had been a member of the Universities and Technikons Advisory Council, as well as of SERTEC and of a number of other national bodies. It was in those roles, said Dr Knoll, that he had contributed towards the critical legislation that had enabled the progress of advanced technical education.

Economic realities in South Africa began to force a softening attitude in government. The pressures arose from external forces such as sanctions and isolation, as well as from internal forces such as the pressing need for more and better-trained technicians and technologists who could make a meaningful contribution to the national economy. Previously untouchable pillars of apartheid were beginning to crumble, and more and more blacks were being allowed to pursue their studies at the technikon. At the same time, technikons were permitted to offer degree qualifications.

Twenty years of the inspiring and idiosyncratic leadership of Dr Steyl were drawing to a close. While his unparalleled contribution to the growth of the institution was recognised, it was very apparent that only a new style and energy could accommodate the growing clamour for inclusiveness and the breaking down of deeply-entrenched prejudices and practices.

Dr Isak Steyl retires after 20 years at the helm of the institution

CONSIDERING A CHANGING WORLD

As the decade of the eighties drew to a close, it was clear to anyone who gave the matter serious thought, that only a speedy and thorough addressing of the divisive issues that were fragmenting South African society could avert a serious decline into political and social unrest.

As the political process towards irrevocable change began to gather momentum, this clamour was certainly recognised and heard. Solutions and processes, however, were certainly not universally agreed upon. And while there might have been misgivings at the obvious inevitabilities, no-one at that point could quite have envisaged the rocky road that lay ahead. It was not only perceptions that would need to change, but the essence of the very assumptions that to that point had underpinned the very founding, growth and purpose of the Vaal Triangle Technikon.

Newly opened student residence JCI House comprises 12 self-contained flats

Students relaxing on the open grass area at the A-block


VRYDAG 27 OKTOBER 1989

WELKOM

JCI

JCI het onlangs 'n skenking aan die Vaaldriehoekse Technikon oorhandig vir die oprigting van 'n nuwe gebou. Hier is mnr. M. Hofmeyr (voorsitter van JCI) en Dr. Isak Steyl (Rektor van die Technikon).

Mr M Hofmeyer of JCI hands over a donation for a new building to Dr Isak Steyl

Construction begins on the new building for the Department of Human Sciences

3 *Growing*

CHANGING OF THE GUARD

1991 - 1995

In 1991, after 20 years of service, and after presiding over a visionary growth in the Technikon's capacity, infrastructure and reach, Dr Steyl retired. It was the hands-on methods of the influential Director-turned-Rector, and the commitment, quality and belief of the staff that had brought status, recognition to the Vaal Triangle Technikon, and cemented its educational centrality to Vanderbijlpark and the region. The award bestowed on Dr Steyl for his service had been justly earned. And once he had left, the impressive stadium whose construction he had overseen, was named after him.

Sports stadium named after Rector

The lighting on some of the fields at the Isak Steyl Stadium will be of provincial colour TV standard. In front is a basis of one of the masts for these floodlights.

The new sports facilities of the Technikon will in future be known as the ISAK STEYL SPORTS STADIUM after the Rector of the institution, Dr Isak Steyl. This honour was confirmed by the Technicon Council on one of its recent meetings.

And it is indeed an honour as this complex is not only of the most ambitions projects yet undertaken by the Technikon but it is also envisaged that the stadium will eventually be the largest of its kind in the Vaal Triangle.

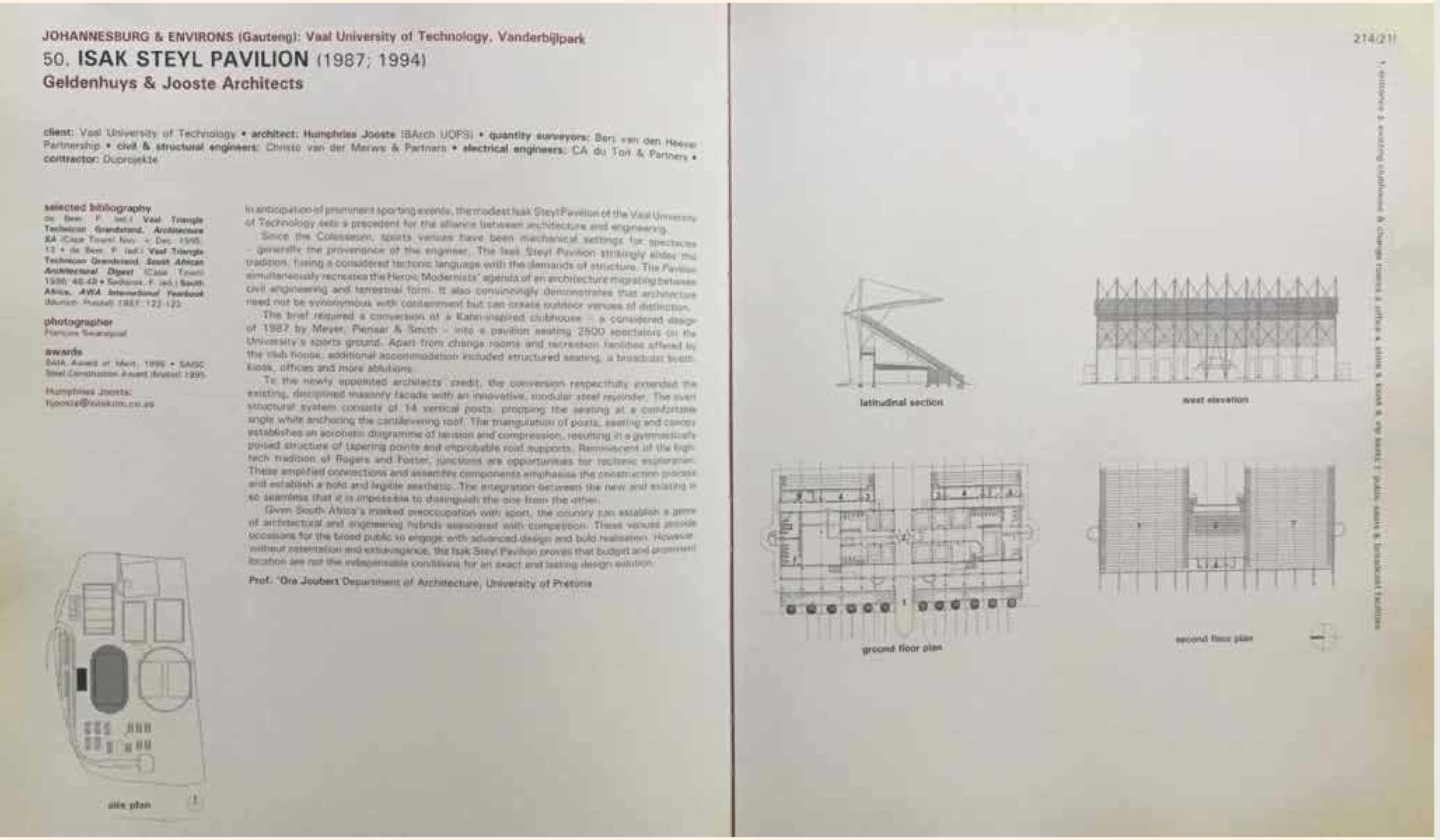
At completion the stadium will consist of a modern pavilion with all the necessary facilities like change rooms, a gimnasium, offices and entertainment areas, two rugby fields, a grass athletic track, a cricket pitch with seperate practice nets, two hockey and two soccer fields, tennis and netball courts while provision will also be made for jukskei and eventually, bowls. A practice area with two cages is also being prepared for athletes in shotput, discus and hammer throwing.

A contract was also recently concluded for floodlights at the stadium. The lighting for the main rugby field, athletic track, cricket pitch and hockey fields will be of provincial TV colour standard while the lights at the two soccer fields and the B rugby field will be sufficient for practice. The work on the lighting should be completed by the end of the year.

A view on part of the Technikon's new sport stadium which has been named after the Rector and will now be known as the ISAK STEYL STADIUM.

All in all, this stadium is a true memorial for a man who has done so much for the overall development of the Vaal Triangle Technikon, Dr Isak Steyl!

News Article on the Sports Stadium



JOHANNESBURG & ENVIRONS (Gauteng): Vaal University of Technology, Vanderbijlpark

50. ISAK STEYL PAVILION (1987; 1994)

Geldenhuys & Jooste Architects

client: Vaal University of Technology • **architect:** Humphries Jooste (BArch UOFS) • **quantity surveyors:** Ben van den Heever Partnership • **civil & structural engineers:** Christo van der Merwe & Partners • **electrical engineers:** CA du Toit & Partners • **contractor:** Duprojekte

selected bibliography

photographer

awards

Humphries Jooste:

In anticipation of prominent sporting events, the modest Isak Steyl Pavilion of the Vaal University of Technology sets a precedent for the alliance between architecture and engineering.

Since the Colosseum, sports venues have been mechanical settings for spectacle – generally the provenance of the engineer. The Isak Steyl Pavilion strikingly elides this tradition, fusing a considered tectonic language with the demands of structure. The Pavilion simultaneously recreates the Heroic Modernists' agenda of an architecture migrating between civil engineering and terrestrial form. It also convincingly demonstrates that architecture need not be synonymous with containment but can create outdoor venues of distinction.

The brief required a conversion of a Kahn-inspired clubhouse – a considered design of 1987 by Meyer, Pienaar & Smith – into a pavilion seating 2500 spectators on the University's sports ground. Apart from change rooms and recreation facilities offered by the club house, additional accommodation included structured seating, a broadcast booth, kiosk, offices and more ablutions.

To the newly appointed architects' credit, the conversion respectfully amended the existing, disciplined masonry facade with an innovative, modular steel rejoinder. The overall structural system consists of 14 vertical posts, propping the seating at a comfortable angle while anchoring the cantilevering roof. The triangulation of posts, seating and canopy establishes an acrobatic diagramme of tension and compression, resulting in a gymnastically poised structure of tapering points and improbable roof supports. Reminiscent of the high-tech tradition of Rogers and Foster, junctions are opportunities for tectonic exploration. These amplified connections and assembly components emphasise the construction process and establish a bold and legible aesthetic. The integration between the new and existing is so seamless that it is impossible to distinguish the one from the other.

Given South Africa's marked preoccupation with sport, the country can establish a genre of architectural and engineering hybrids associated with competition. These venues provide occasions for the broad public to engage with advanced design and build realisation. However, without ostentation and extravagance, the Isak Steyl Pavilion proves that budget and prominent location are not the indispensable conditions for an exact and lasting design solution.

Prof. 'Ora Joubert Department of Architecture, University of Pretoria

Images of the award winning Isak Steyl Stadium

Article and drawings of the Stadium featured in "10 years + 100 buildings – Architecure in a democratic South Africa convened by Prof Ora Joubert"

Manager of the Stadium, Mr Hannes Hattingh – Alumnus and former SRC member

Dr Leon, Knoll Chairman of Council and Mr CT Fenton Deputy Chairman of Council and Managing Director of Gold Fields become recipients of Honorary Fellowship seen here with Dr Steyl

Mr Corrie Meiring Technology Manager, SABC, presenting the Radio Transmitter to Mr Christo Pienaar

With a new decade of political promise just beginning, however, the old ways at Vaal Triangle Technikon were not being given up easily. There was a semblance of the old order prevailing against all odds. Dr Leon Knoll, Chairman of Council, had become the second recipient of the Honorary Fellowship at the 1990 graduation ceremonies, where he was commended by Dr Steyl for his contribution to Technikon education in general and to his own institution in particular. Dr Knoll himself would retire in 1992, to be replaced by Dr de Villiers, who when he was installed as Chairman, had been a member of Council for over ten years.

Before it was Dr Steyl's time to go, however, there were still events, milestones and achievements to be recorded by the Vaal Triangle Technikon. A third award of the Honorary Fellowship was made – this time to MR CT Fenton, Deputy Chairman of Council, and Managing Director of Gold Fields at the time. Then the Gencor Building for the School of Electrical Engineering was officially inaugurated during 1990. Costing nearly R5 million, it was designed to house, in addition to offices, seven laboratories, three auditoria, and a number of lecture, seminar and project rooms.

It was during the same year that the School of Electrical Engineering received the donation of the old Radio Lotus medium-wave transmitter and dummy from the SABC. The significant 1,000W AM power of this piece of equipment was harnessed to demonstrate the measurement of various radio frequencies and percentage modulation.

A new hostel complex was opened in 1991, and at the ceremony it was pointed out that the Technikon had awarded 22 percent more diplomas and higher diplomas in 1990 than in 1989. This was an impressive increase against the background of countrywide statistics, in which no increase was noted at all. The Vaal Triangle Technikon was the fastest growing such institution in South Africa, and its buildings and property, valued at a mere R1.25 million in 1972 when Dr Steyl had begun his tenure, were in 1991 worth substantially more than R140 million, with a further R12 million being invested in the construction of at least three more blocks and hostel units. What's more, the student body had increased in that time from its original few hundred to 8,350.

Students outside new residence building

Dr Steyl noted at the last graduation ceremonies over which he would preside, that the growth of the Technikons would soon lead to an elevation in their status, and the authority to confer degrees. He also spoke on that occasion of the path of the technikons in general, and the Vaal Triangle Technikon in particular, towards leadership in technology transfer and development and career education. This trajectory became even more apparent with the establishment, in 1991, of SIMMTECH, a Centre for Technological Transfer, within the School for Mechanical Engineering. This centre was concerned with promoting the interaction between academia and industry through contract research, problem-solving, services, products and specialised training.

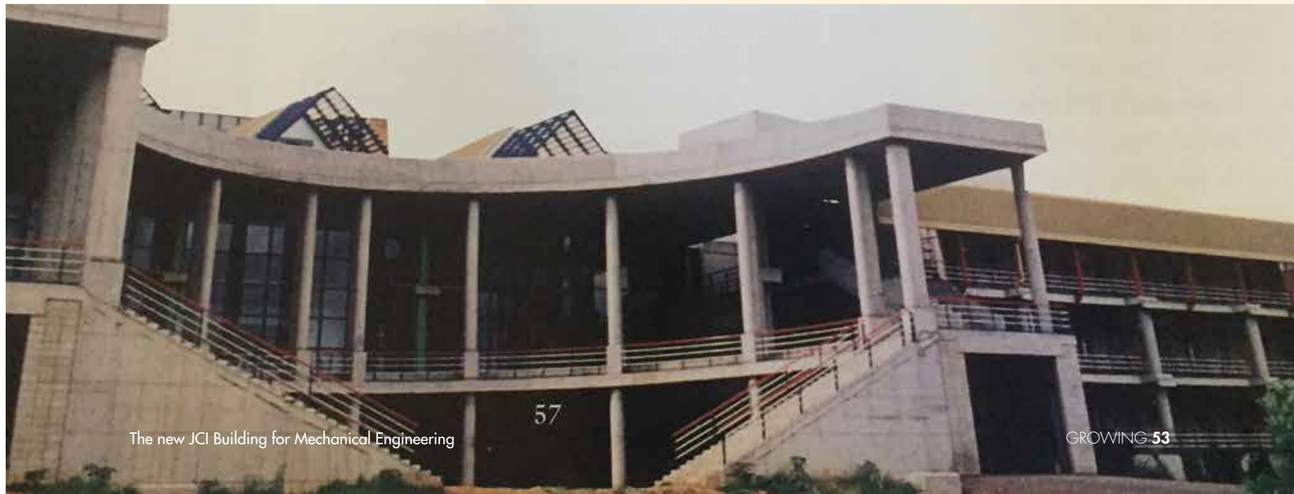
In January 1991, the School of Mechanical Engineering was able to move into its brand new JCI Building for Mechanical Engineering. With various smaller donors contributing different amounts to this impressive new facility, Iscor Pretoria donated around R250,000 towards the establishment of the Extraction Metallurgy Laboratory.

Quantifying priorities

It was at the opening of a new hostel complex in 1991, that the matter of the ratio in South Africa between qualified technicians to scientists was addressed by the then President of the Chamber of Mines, Mr CG Knobbs. In his speech, he articulated the concern that the country was not producing enough of the former, in comparison with other developed and developing countries. He concluded that this shortfall, together with the low number of matriculants who had mathematics as a subject, would severely hamper future economic growth, contribute to joblessness, and promote unrest. This theme was revisited at the opening of the JCI Building for Mechanical Engineering when the country's competiveness was questioned again by the Managing Director of the donor company, who also spoke of the worrying imbalance of technicians to scientists – an imbalance he saw as hindering local companies in their quest to compete in world markets.

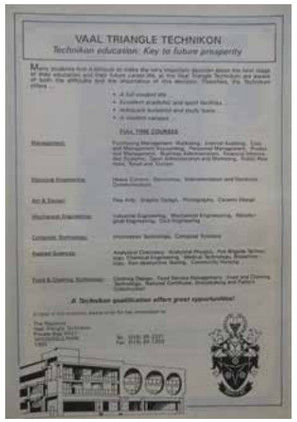
A year later, at the official opening of the 1992 Careers Exhibition at the Technikon, yet another corporate leader, the General Manager of SANLAM, addressed the issue of technical literacy and education directed at vocational training. Later that year, at the graduation ceremony, it was noted by the Chairman of Barlow Rand, another major industrial company, that it was the practically-orientated nature of the qualifications that was heartening to see, as they would provide "the economic engine for society".

These business leaders were all making their comments well before the landmark political change that would take place in 1994. Even if they were only considering broader economic issues and not ethical and human rights matters, it was obvious to them that political, social and educational inclusiveness would need to be high on the agenda of priorities that needed to be addressed.



The new JCI Building for Mechanical Engineering

Professor AJH (Attie) Buitendacht becomes Rector in May 1991, enjoying only a short stay at the Technikon


VAAL TRIANGLE TECHNIKON
Technikon education: Key to future prosperity

Promoting the technikon

The style of leadership changed accordingly. After the direct, proactive and practical approach of Dr Steyl, for the first time strategic thinking became part of the planning. A mission statement was developed and encapsulated in the words "This Technikon endeavours to be a progressive tertiary educational institution committed to producing career-qualified people for South Africa."

Most importantly, however, the sense not only of the inevitability of change but its desirability as well, was captured in a statement of intent that was drawn up, and that all signatories to the mission statement were required to declare.

The Vaal Triangle Technikon is a progressive and autonomous tertiary educational institution which upholds Christian values, and is opposed to any form of racial, sexist or religious discrimination and supports freedom of belief and freedom of association. We also recognise the authority of the State and will not associate ourselves with any political party or group.

The strategic impetus that the new Rector brought to his role was demonstrated by three new committees that he established. The Rector's Management Committee, the Planning Committee and the Rector's Council were all intended to cover the day-to-day running of the institution while devising and implementing the changes required to take it successfully and relevantly into the future.

Professor Buitendacht believed that the Technikon would be in a position to create centres of excellence. He saw this as happening within the Vaal Triangle as well as beyond it. He envisaged this development as facilitating the incorporation into the tertiary education system of similar centres at the University of Potchefstroom, Vista, Unisa, Technikon RSA in addition to other technical colleges and training centres.

While the credo contained in his statement of intent might have spoken boldly about the freedoms of association and belief, and rejected discriminatory thinking and action, Professor Buitendacht had no real plan in his strategy for opening the Technikon to more black students. His view of the inevitable change was that it would take place gradually, that the institution would remain predominantly white, and the introduction of black staff would remain as a development in some unspecified future.

While these apparently retrogressive convictions were communicated through the campus newsletter Bulletin, the Rector nevertheless foresaw that the student mix would change dramatically with the need both to accommodate those who had previously been disadvantaged by an inequitable system, and to reflect within the student body the general mix of the population. This was communicated in a Rector's Message, and he concluded the sentiment by saying "we commit ourselves to affirmative action."

Overall, there was a confused response to what was becoming more obvious by the day. And this confusion is an early indication of the difficulties that lay ahead in the not-too-distant future when the moment for abrupt and radical transformation finally arrived.


Die akademiese opening van die Vaaldriehoekse Technikon is verlede week deur die rektor, prof. P.W. du Plessis, waargeneem. Van die persone in die akademiese prosessie is van links mnr. C.P. de Jager (senior direkteur: Studentesake), prof. P.W. du Plessis (rektor), ds. N. Coetzee wat die skriflesing en gebed waargeneem het en mnr. P.A. Swanepoel (vise-rektor: Akademies).

Technikon daar om te help en drome te bewaarheid

Die rektor van die Vaaldriehoekse Technikon, prof. P.W. du Plessis, het verlede week die akademiese opening van die technikon waargeneem.

Prof. Du Plessis het in sy toespraak gesê dat SA in 'n tydperk van verandering staan en dat die technikon self moet bepaal hoe die instelling homself sal posisioneer in hierdie tye. "Ons is betrokke by beroepsgerigte tersiere onderrig waar ons taak deur die jare baie duidelik uitgespel en gedefinieer is. Hierdie kernmissie van die bestaansreg van die technikon moet nooit ondermyn word nie," het hy gesê.

Volgens prof. Du Plessis is dit die taak van die technikon om 'n inventaris op te stel oor presies waar hy staan. Dit is nodig om sterk punte te identifiseer, swakker punte te kontroleer en nuwe gedagtes van stapel te stuur wat tot die suksesvolle ontwikkeling van die instansie sal lei. "Groot waarde sal geheg word aan die vindingrykheid en inisiatiewe van die verskillende akademiese skole om voorstelle na vore te bring wat onder meer kan lei tot tegnologiese innovasie."

Prof. Du Plessis het aan studente gesê dat die instelling daar is om hulle te help en om hulle drome te bewaarheid. "Hierdie technikon is baie goed toegerus om in die totaliteit van die student se behoeftes te voorsien."

The first ever Academic Opening of the Vaal Triangle Technikon was held in 1990 in the main hall. From left: Mr C P de Jager (Senior Director: Student Affairs), Prof P W Du Plessis (Rector), Rev N Coetzee and Mr P A Swanepoel (Vice-Rector: Academic).

CHANGE BEFORE CHANGE

Professor Buitendacht did not stay long in the position of Rector, however, and after just a year he took up a position at Technikon South Africa. Although the period in which he was at the Vaal Triangle Technikon was far too short for him to have made a lasting impact, he did leave a legacy of strategic thinking behind, and a sense that some very challenging realities were going to have to be faced.

At the end of 1991 Professor Pieter du Plessis became the fourth head of the institution. In addition to being a lawyer, he had had a lengthy academic career, during which he had been Associate Professor in the Department of Business at the University of Pretoria, Head of Department, and later Dean of the Law Faculty at the University of the North. In 1985, he became Acting Rector of the University of Venda, after which he was appointed Vice-Chancellor and Rector at that institution.

Professor Pieter du Plessis becomes Rector at the end of 1991

Despite increasing reservations from several top management and Council members, Professor du Plessis was to remain Rector until 1995, when after a period of suspension, he was dismissed. Unable to bring any real credibility to the efforts that were being made on the campus to contain and manage the transformation that had been set in motion, Professor du Plessis was the last of the representatives of the old order and its world-view to lead the institution. His leadership was to coincide with a period that was to turn out to be one of great drama, and even upheaval, and it was during his time as head of the Vaal Triangle Technikon that convulsions of sudden change wracked the institution.

A NEW LOOK FOR A NEW DAWN

With the pervading sensibility that things both in the wider country and within the narrower confines of the Technikon were going to change irrevocably, a new crest was unveiled in 1993. More elaborate than the older coat of arms, and designed and registered by the Heraldic Bureau, the Technikon's new symbol reflected the advance from the old Technical College to the new status of Technikon. It was with the retention of the Latin motto Scientia et Arte that the institution's still nascent but eventual transmutation into a University of Technology was already encapsulated.

The old coat of arms of the Technikon

The Technikon's new crest is designed and registered by the Heraldic Bureau

TEACHING AND LEARNING FOR THE FUTURE

There were other advances during those early years of the decade. The institution's capacity was significantly broadened by the construction of the R8 million Sasol Building for Computer Technology, which was officially opened in 1993. Housing 16 computer laboratories, two auditoria, nine lecture rooms, as well as office space, the building provided state-of-the-art facilities to both lecturers and students.

Sasol Computer Building

At the end of that year, the School of Management authorised the introduction of two new courses to begin in 1994 – both National Diplomas – one in Travel and Tourism, and the second in Administration and Marketing. Both three-year courses, these programmes were designed to include two-and-a-half years of theoretical study with a six-month component of in-service training.

Ms Lynn Hartzenberg, Head Librarian retires after 17 years' service

In 1992, the library had lost the pioneering services of Ms Lynn Hartzenberg, Head Librarian. She had begun her career at the facility as an assistant in 1976, and had overseen its impressive growth over the intervening years. Now, two years after her departure, a new electronic information service for the building industry was introduced. Called Quantarc, the system was further proof of the institution's ongoing determination to provide cutting-edge technology to its staff and students.

In 1997, the Technikon hosted the Tried for Treason Exhibition at the Culture Centre in the Gold Fields Library, which was officially opened by ANC stalwart Walter Sisulu.

Perhaps the biggest advances on the campus, however, were made in the sphere of recognising and planning for a future that was clearly going to be one that embraced very different ideas, practices and perceptions from those that had ruled in the past.

A major international conference was held at the Technikon in April of 1994. With more than 40 local and international speakers scheduled to participate, the three-day programme was structured to analyse and develop strategies for facilitating the successful transition of South Africa's tertiary bodies into fully multi-cultural educational institutions. This new-found readiness to consider and accommodate broader South African and even world cultures, found expression not only in discursive events, but in practical initiatives such as the Campus Bookshop's donation of R30,000 worth of books to the Technikon's Bureau of Community Services for the benefit of disadvantaged communities across the Vaal Triangle, and at the site of delivery campuses.

4 March - 18 March 1994

Now the Technikon offers students free health care

The Vaal Triangle Technikon has established an on-campus medical centre which provides all its students with a basic health care service free of charge. The new service was introduced in January.

Sister Nandie van Heerden has been appointed as campus sister and is responsible for the day to day running of the new centre.

The centre, which is located adjacent to a new security centre, is open from 08:00 until 16:30 on weekdays. It makes provision for the treatment of minor ailments and first aid. Seriously ill patients are referred to doctors.

Sister van Heerden provides a family planning service and counsels students on a wide range of health related topics.

Her role is also an educational one. She has already made three sex education presentations to student groups.

During a tour of the new medical centre by the Technikon Rectorate, the Dean of Students, CP de Jager, said that it was the Technikon's responsibility to provide its students with basic health care service.

"We have 1750 hostel students many of whom don't have their own transport. There is no public transport to Vanderbijlpark making it difficult for them to get to a doctor. We also have many students who do not enjoy the benefits of a medical aid scheme. With the new medical centre we can provide all our students with a basic health care service."

Research conducted by the Technikon in 1992 indicates that 87 per cent of the students surveyed feel it is essential to have an on-campus medical centre.

Sister van Heerden has 11 years' experience working previously as an occupational health nurse at Fedmis and then Safripol. She did her training at the HF Verwoerd Hospital in Pretoria.

Technikon staff who make use of the facility are charged a nominal fee. The construction of the medical centre was sponsored by SA Breweries.

Sister Nandie van Heerden busy treating André Smit at the new medical centre at the Vaal Triangle Technikon. Mr CP de Jager, Dean of Student Affairs is on the right.

News cutting on the establishment of an on-campus medical centre

Secunda Library

Students in the computer centre in Secunda

Delivery at a distance

After the first site of delivery, then known as a satellite campus, was opened at Secunda in 1986, it moved, from its original premises in a local high school to two converted warehouses in the town's industrial area. By the turn of the millennium, it had moved again, this time to permanent premises that also housed students from other tertiary institutions, and which were conveniently close to public transport and study amenities.

Then, in 1993, a second site of delivery was established in Klerksdorp, and the first students took up their studies there at the start of the 1994 academic year. With a focus on the mining and agricultural manufacturing industries, the employment and economic needs of the local community were the determining factors in deciding on the appropriate curricula. Although the site functioned well for an extended period, and despite an ambitious five-year multimillion rand development plan, by the second decade of the new millennium a decision was taken to close it, as it had become unsustainable as a result of dwindling student numbers.

In 1994 the Upington site of delivery was opened with a focus on promoting and facilitating viticulture in the Orange River basin. In addition, disciplines like Management Sciences and Tourism Management were offered, although over time, with competition from the National Institute for Higher Education (NIHE) in the Northern Cape, and the much later opening of Sol Plaatje University, the student numbers remained relatively low. The campus operates in a missionary church building and like the other sites of delivery, is not in a position to offer any real extra-curricular activities to its students. Discussions are ongoing about the future of this site.

The site of delivery that has developed the most, and which has attracted most students, is the one

Staff outside the Upington site, the premises of which are housed in the local church building

in Ekurhuleni. This was the last of the external campuses to be opened, and it was launched in Rhodesfield, alongside Kempton Park, in 1995. It moved from its original small premises in that suburb to a larger six-storey building in Spartan, a nearby industrial area, where it operated for almost eight years. The location was not ideal, however, and was also disadvantaged by the fact that it could offer no sport or recreational facilities to its students. In around 2013, the institution obtained permission to take over Vista Campus, bought by the University of Johannesburg (UJ), which had used it as a faculty of education. In 2016 a memorandum of understanding was signed between what had by then become the Vaal University of Technology to operate it as a shared space with Unisa. The sharing of the facilities between the Vaal University of Technology and the University of South Africa was approved by the Department of Higher Education and Training in a letter signed by the then Minister of Higher Education and Training, Dr Blade Nzimande. The joint utilisation of facilities by the two institutions was seen as an opportunity for promoting the philosophy envisaged in post-school education.

The original premises of the Ekurhuleni campus in a six-storey building in Spartan

Students at the Vista Campus of Ekurhuleni

Ekurhuleni Students at the Vista Campus with the library in the background

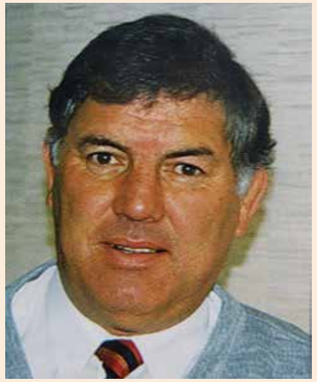
Auditing, Accounting, Marketing, HR and Tourism are among the disciplines taught and studied there – all of them diploma courses. The flagship courses are however those offered as degree courses in IT.

Although the move to the more amenable Daveyton premises was a positive one, student numbers nevertheless declined somewhat. This was mainly because for students from areas further afield such as Tembisa, the lack of accommodation meant that the daily journey to attend was too expensive and untenable. The Daveyton campus is however able to offer a limited choice of sport in rugby and football, and there are ongoing efforts to find private accommodation in the township for clusters of students.

There is a long-term plan at the Ekurhuleni local authority to develop what it calls an Aerotropolis – an industrial, economic and residential complex to serve the aviation industry. As the only entity in the area that can offer technical education, the Ekurhuleni campus is ideally placed to participate in this ambitious plan for the future.

With this and other factors in mind, at Vanderbijlpark there is a strategic imperative to continue to develop and strengthen the sites of delivery. With all the available space on the main campus in its fiftieth year of operation now filled, and against the background of national economic and educational plans, these external arms of the institution are clearly seen to be the only way to realise real potential for growth.

Currently Ekurhuleni campus is able to offer soccer, netball and volleyball facilities



Mr Piet Brand, Director of Sport and the founder member of South African Technikon Sport (SAT), wins the highest award presented by SAT Council in recognition of his outstanding contribution to Technikon sport in 1993

In August 1994, an exhibition of Chinese and South East Asian Art was mounted by the Bureau for Culture in the Gold Fields Gallery, with works and artefacts dating from 400 CE right through the beginning of the 20th Century. It was through initiatives like this, and other, more locally-focused art shows, that efforts were being made to widen the experience and exploration of culture beyond the narrow confines of what had prevailed in the conservative and fast-disappearing days of white privilege and dominance.

In the early 1990s Teaching strategies were also being closely examined, with the motivation of understanding just how the rapidly changing composition of student bodies was to be accommodated. The Technikon's Bureau for Teaching Development and Continuing Education drew up a report which identified a number of problem areas, such as communications, perceptions, attitudes and cultural differences. It was recognised that all of these would need to be addressed if a successful transition was to be achieved. Despite the defining of the common desire for knowledge that underlay every student's wish to study, the extent of the effort that would be required, and the depth of the upheaval that would have to be endured, would only become apparent as the substantive changes began to take place.

ALUMNI ACHIEVERS

Chris Harmse

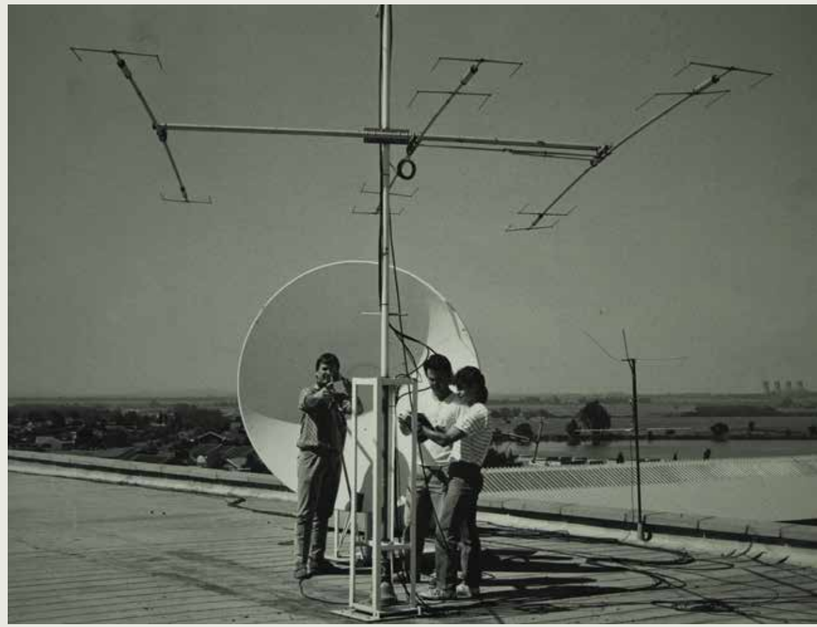
Mr Chris Harmse was a champion hammer-thrower during his student days, and went on to become the future Champion of South Africa and the Commonwealth. He was coached by Mr Basie Koen, a champion hammer-thrower himself in 1994.

CHANGE, VOLATILITY AND RESPONSE

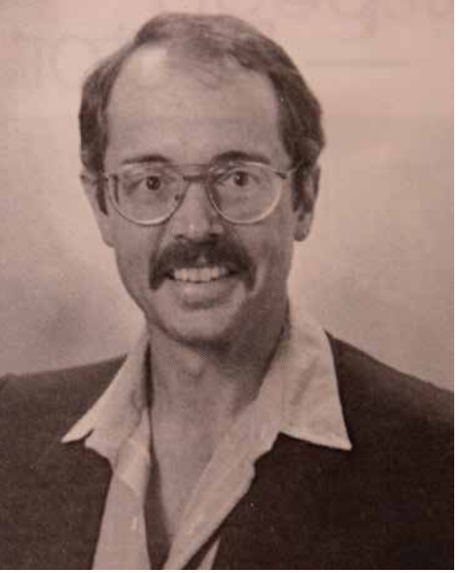
Once Mr Nelson Mandela had been released from prison on 11 February 1990 and the wheels of unfettered political campaigning and negotiation were set in motion nationally, a resistant wave of factional unrest gathered strength across the country, and among almost every grouping. Political and social demands were being made on a daily basis, and the rearguard action being put up by the retreating apartheid government and its arms of control led to tension, reaction and a great deal of uncertainty.

The Vaal Triangle Technikon was not exempt from this volatility, and as the institution began to admit more and more black students, there was a concomitant rise in resistance and unwillingness on the part of many of the white students. Much of it was based on the fears and conservatism of their parents, and the cultural milieu from which most of them sprang. Their unwillingness to give up privilege, position and power was very evident. For their part, the black students were just as clear that they were no longer going to accept the second-class status that had been defined for them by what they correctly saw now as a dying regime.

Mr Nelson Rolihlahla Mandela, first president of the new democratic South Africa



1992 Satellite Research by third year electrical engineering students on the roof of the Electrical Engineering building



Prof JM (Kotie) Grové, a well known cricket personality, is appointed Vice-Rector: Planning and Marketing. He is recruited to manage and facilitate the transition of change

Hand in hand with the changing attitudes, imperatives and agendas on the campus, went the desire to demonstrate a determination to accommodate the new realities that by 1993 were visibly impinging on the old way of seeing and doing things.

In that year Professor JM (Kotie) Grové was recruited as Vice-Rector at the Technikon. A well-known cricket commentator, Professor Grové had been Dean of Students at the University of Port Elizabeth. His duties in his new post were to manage and facilitate the all-important transition from the parochial Afrikaans-dominated culture that had pervaded the institution from its inception to one of inclusive and multi-cultural aspirations that would reflect the new social, political and demographic realties of South Africa. At the same time Mr Simon Mokoena became the first black lecturer to be appointed in the Faculty of Engineering and Technology.

Professor Grové began work on the Vanderbijlpark campus on 1 October 1993, when extreme disruptions, violence and disorder had already become endemic. He was under no illusions as to the size and nature of the challenges ahead of him. His first act was to recruit, in January 1994, an assistant, Ms Kediemetse Mokotsi, the first black secretary to be employed at the Vaal Triangle Technikon. Fluent in Afrikaans, she would with his encouragement go on to take a position in the Student Recruitment Department in 1995, a job that necessitated travel to schools and career exhibitions countrywide.

After a short period of doing this work, Ms Mokotsi obtained her National Diploma: Marketing in Sales Management, and National Higher Diploma: Marketing. These qualifications were awarded by VTT and Unisa respectively. In 1998 she was awarded her M-Tech: Marketing Management at VUT. She went on, once again with Prof. Grové's encouragement, to teach Marketing 1 and Consumer Behaviour, and was later appointed Head of Department: Marketing and Retail Business Management, Faculty of

ALUMNI ACHIEVERS

Mrs Grace Mokone

Born in Sophiatown, Mrs Grace Mokone, wanting a recognised qualification to enable her to progress in her career and move away from inconvenient night-shifts, enrolled at the Vaal Triangle Technikon for a Diploma in Community Nursing. At the time the institution was still predominantly white, and Mrs Mokone struggled with the Afrikaans that was the medium of instruction in her courses at the time. She initially chose the Vaal Triangle Technikon because of its relative proximity to her home, but soon discovered that the institution fulfilled all her academic expectations. Even though she was a newly-wed mother, she funded all her own studies, and in time she was able to work day shifts only, working as a Nursing Assistant at the then Johannesburg General Hospital, Vereeniging Kopanong City Council and the Meadowlands Clinic. Furthering her studies with a BA in Nursing Science, she also completed a Postgraduate Diploma in Advanced Nursing Science at Unisa, and became a part-time lecturer at the then Potchefstroom University. As an alumnus she has always been willing to volunteer her services and work for the benefit of VUT, an institution still very close to her heart.

Management Sciences. A huge success story of transformation and personal rapprochement that had been initiated and promoted by an Afrikaner, and reciprocated by a black person who had for a time to fight her own lone battle for acceptance and respect. The department she headed in 1999 comprised Student Recruitment, Alumni, Corporate Communications, Public Relations and Fundraising

Ms Kediemetse Mokatsi, the first black secretary employed by the Technikon becomes Director: Marketing and Public Relations: Corporate Affairs in the institutions 50th year

ALUMNI ACHIEVERS

Mrs Annie Moletsane

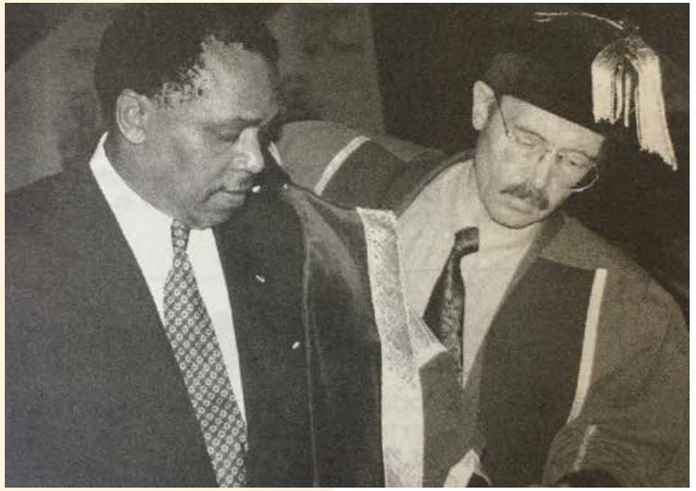
Mrs Annie Moletsane started her career at the Vaal Triangle Technikon in 1994 as Receptionist and Secretary in the Public Relations Department, moving in 1997 to the Industrial Liaison Department as Information Coordinator and Secretary. Driven to achieve the heights of which she always knew she was capable, Mrs Moletsane enrolled for study at VUT, where she was awarded her National Diploma: Marketing Management, and B-Tech degree: Marketing Management, later going on to earn her Master of Commerce: Business Management at NWU, and a Post Graduate Diploma in Higher Education at VUT.

From 2000 to 2012 she became Faculty Officer: Co-operative Education. In 2012 she was Acting Director: Co-operative Education until her appointment as Director: Co-operative Education in 2013.

The holder of a Teaching Advancement at University Scholarship, she embarked on her PhD in Public Management and Governance at NWU. Having presented papers as well as academic posters in the US, Canada, Sweden, Japan, Turkey and Thailand, she has held many leadership positions on public and community bodies, serving on, among her many other appointments, the South African Technology Network (SATN), the Work Integrated Learning (WIL) Task Team, and the Secretariat of the South African Society for Co-operative Education (SASCE).

Appointed by the Minister of Higher Education to serve on the Council of the Sedibeng Technical Vocational Education and Training (TVET) College, she has also been a member of the World Association for Cooperative Education (WACE) becoming a Board member on the WACE Committee in 2015. In 2016 she was voted as a WARD Committee member (Ward 45), holding the portfolio of Finance and Revenue.

In 2017 she received an Acknowledgement Certificate from VUT as "A Star Amongst Us" in recognition of her spectacular rise, through dedicated hard work, from receptionist to Director: Cooperative Education at VUT.

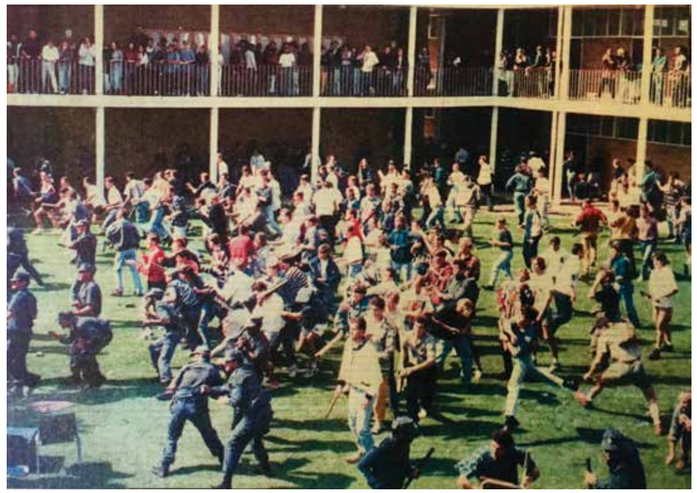


Professor Grové robing Mr Tokyo Sexwale as the first Chancellor of the Technikon

The transformation that had to be accomplished back in 1994 was not without its opponents, however, and Professor Grové was actively obstructed by many of the staff. Even the Rector, when reporting to Council, would avoid the subject, and leave all updates and reports to the man accused by the majority of his colleagues as selling out the Afrikaner cause.

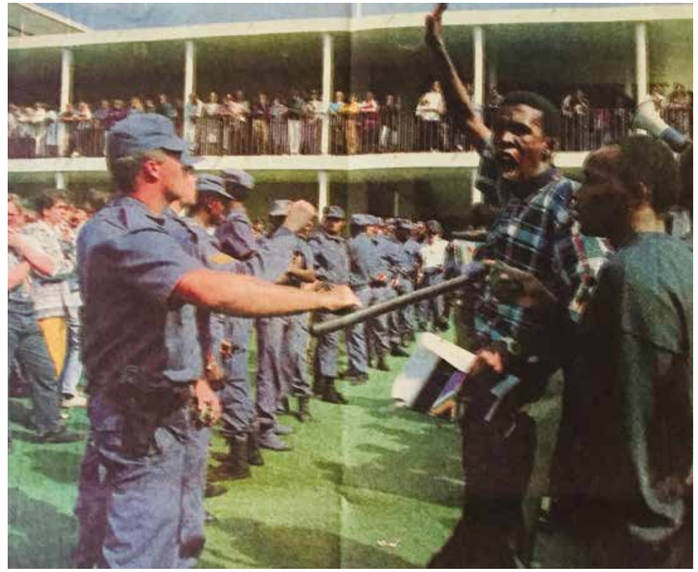
VOLATILITY AND UNCERTAINTY

There were many volatile and dangerous moments during those early days of change, with the black student leaders initially extremely suspicious of the white Afrikaner who had come to interpose his ideas and goals for transformation. The white students were equally dismissive, and openly hostile, resorting to vicious verbal attacks and the ever-present threat of real physical violence. The integrating of the hostels was a key issue, with the whites aggressively opposed to any intrusion by black students on what they regarded as their space by right and tradition. Running battles were fought with baseball bats and other weapons freely used on both sides to inflict harm.



A bloody battle erupts between black and white students. Police intervene. News article published in Beeld. May 1995.

In their confrontations, white students would sing Die Stem, and the black students would reply with Nkosi Sikelel' i-Afrika. The opposing political and social positions were resolutely propounded and defended, and often aggressively imposed. On one occasion, the Chancellor, Mr Tokyo Sexwale, a powerful symbol himself of the depth of the change that was taking place, was brought in to address the students. On that occasion, the students were gathered in the hall, with a rope having a little earlier been stretched down the centre of the courtyard outside to separate them. The Chancellor's intervention proved effective. From then on the emotive and powerful words of reconciliation spoken by a man of unchallenged political credibility among blacks, and whose public position on the need for mutual accommodation was well-known to whites, had their effect. Over time the violence and extremism softened with the will to find a solution.



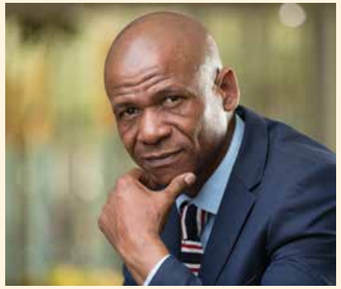
Police form a thin blue line between black and white students during the unrest on campus. News article published in The Star May 1995 on the unrest

Mr Kingsley Bonang – one of the students at the leadership during the time of turmoil.

In our words

"I joined the Technikon as a student in 1993, when the student population was mostly still white Afrikaans and blacks were in a minority. I even knew all the other black students by name. Coming from Sharpeville I had a strong background in pan-Africanism. At that time there was a management quota imposed that allowed only one black student on the SRC. Apart from me, there were two other main black student leaders – one from a Black Consciousness background and the other from the ANC. We complained about the situation, and had to approach the Dean of Students, Mr CP de Jager. IMSA – Immediate Mediators of South Africa – were called in to try to get everyone to accept each other. The process culminated in a series of uprisings to close classes, which we would plan during the night. In the end we were elected to the SRC in 1994, before the country's general election, although I was expelled twice. Tokyo Sexwale who was Chancellor and Premier of Gauteng at that time came to talk to us, although as a PAC person I refused to talk to him."

Mr Kingsley Boloang – Lecturer: Logistics, Faculty of Management Sciences

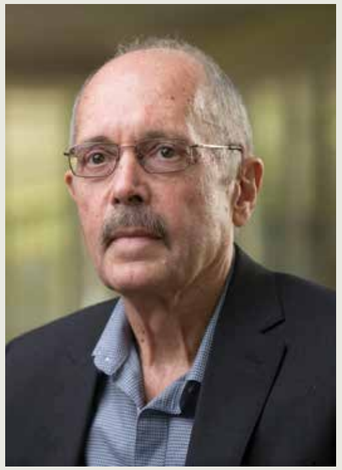


Mr Lawrence Kok – Student actvist, Pan Africanist and first black member on the SRC

In our words

"I was a student activist, from the first year I arrived here – in 1991. At that time it was hostile and foreign for black students, and it was frightening to bring up issues that were bothering us. Tensions were high. Wednesdays were khaki days, with the AWB Youth League wearing their regalia. On the other side there was a strong Pan Africanist dominance, emanating from the proximity of Sharpeville. The first thing I felt we needed to do was to ensure that we had an open institution that did not discriminate in the recruitment of students. The quota system still in use kept our numbers low, and there were no black students on the SRC. I was the first black male student representative, and I started the African Student Committee in 1992. We had to integrate our culture into what was at that time a very Eurocentric one. My advice was that black students needed first to try to fit in – especially in the Regatta festivities – when floats were built and artists were invited to entertain the white students – and then try and change things from the inside. After Dr Steyl left, I found that Dr Buitendacht, who didn't stay long as Rector, was a good listener, and that I could talk to him. I was able to talk to him and tell him my opinions about the situation. His view was that I needed to sit on an advisory committee that would advise the Rector about developments."

Mr Lawrence Kok – Lecturer: HR Management, Faculty of Management Sciences



Professor Kotie Grové – Vice-Rector, Planning and Marketing 1993-1997

In our words

"I saw that I had to find a way to bring the conservative Vanderbijlpark ethos into an understanding and acceptance of the Sharpeville environment. In the end the black students started to believe in me. The Rector and other senior staff realised that transformation was happening and there was no way that they could push the black students aside. I ensured that there were situations in which they had to listen to the black people. Prior to that, of course, there were many explosive moments.

There wasn't one black person in any of the top structures at the Technikon, and I saw that this had to be changed. There was strong resistance, but I always saw it as an ethical issue, as part of the change that had to happen everywhere. I organised many workshops at top levels, in which we discussed the issues of how we were to introduce and incorporate black people, but the hatred I encountered was very negative, and mostly I was not listened to. On the other side, I went into Sharpeville, and had discussions with parents there, and little by little attitudes began to change. I eventually left on 30 September 1997, when things had stabilised, and the Technikon was once again running smoothly, and I felt I had achieved my goal. My favourite memory, however, is when I met with the three top black student activists, and they agreed that they had no desire to destroy the university."

Professor Kotie Grové – Vice-Rector Planning and Marketing 1993-1997

The Amphitheatre

A new political dispensation was made a reality for the country as a whole by the watershed democratic elections of 1994. Against that epochal change, by 1995 the stage was set for the Vaal Triangle Technikon to take its place as a centre of learning. It was determined to become an institution that could serve not only the large industrial, engineering and mining corporations of the region, but the general economic good of South Africa, and all the people of the region, regardless of colour, language, culture and background.

Sportswoman and Sportsman of the Year Awards with Minister of Sport Steve Tshwete, Rector Prof du Plessis, Vice-Rector Prof Grové. Ms Letty Disenyeng was awarded Sportswoman and Mr Pieter Basson Sportsman of the year in 1997

Fashion students at work

4 *Changing*

CHANGING OF THE GUARD

1995 - 1997

In 1995, in a unanimous decision, the five members of the Council of the Vaal Triangle Technikon, including its chairman, resigned. They had all been appointed by the last apartheid government, and understood that with a new democratic dispensation now in place, they no longer had a role to play. Among the members of the new Council, whose composition now conformed with the 1995 amended Technikon Act, was an ANC member, Professor AT Mokadi, who was elected Chairman. Little more than a year later he was appointed as the ***first black Vice-Chancellor and Rector of the Vaal Triangle Technikon****.*

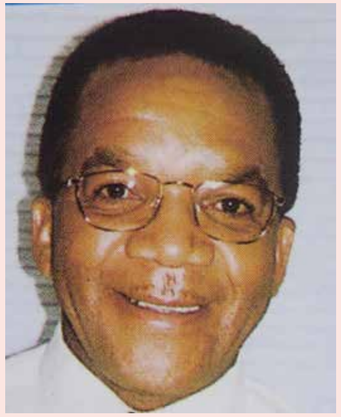
There had been a relatively short period after Professor du Plessis' departure during which Professor Piet Swanepoel was installed as Acting Rector to ensure the smooth running of the Technikon. Then, in July 1996, when Professor Mokadi became Vice-Chancellor and Rector, there were many, including several senior white members of staff, who supported his appointment.

Chairman and members of The Council of the Vaal Triangle Technikon resign

Some had even worked to help secure it, out of a welcoming hope for the promise of a new dispensation. Among them was Professor Kotie Grové, who had borne the brunt of his white colleagues' backlash against the movement for change that he had been engaged to facilitate.

In time, however, almost all who had put their weight behind the appointment of the new Vice-Chancellor and Rector were to come to regret their support. It became apparent that his autocratic and highly politicised and factionalised approach led to deep and lasting divisions among staff and students alike. After it ended, his reign would eventually come to be thought of as a period in the administration of the institution that was almost universally deprecated.

Professor AT Mokadi is elected Chairman of the new council. Less than a year later he becomes the **first black Vice-Chancellor and Rector of the Technikon**



Professor Johannes Phala is appointed Vice-Rector: Institutonal Research & Development. He is the first black academic to become a member of the Rectorate.

Investigations and prescriptions

Already in 1994 a commission of inquiry was established with the mandate of investigating allegations of racism and the violation of the rules of the institution. The Willis Commission, as it was known, produced its findings and recommendations, and submitted them to the Rector for presentation to the Council in October of that year. One of the outcomes of the report was postponement of the 1994 SRC elections by the Rectorate until the following year. The intention was to rectify the exclusion of students in decision-making, and to correct the unreflective racial imbalance in student accommodation and other student bodies. At that point black students were resolutely still not admitted to the hostels. On the staff side, some change was evident, with the appointment in November 1994, of Professor Johannes Phala as Vice-Rector: Institutional Research and Development. He was the first black academic to become a member of the Rectorate, and, at 40, the youngest Vice-Rector in the institution's history.

The Willis Commission was not the only body set up to look at practices and propose solutions at the Vaal Triangle Technikon, however. Great store was set by a ministerial commission of inquiry. It was hoped that this initiative would by its findings produce justice and equality for all staff and students at the institution, regardless of background, and previous positions of either privilege or disadvantage.

The 1995 Annual Report contains remarks by Professor Mokadi, at that time still Chairman of Council, that encapsulate the pressing concerns of the day. "The new dispensation rests on two basic principles: Firstly, the democratisation of the education system, allowing stakeholders to play a role. Secondly, transparency. Both these principles dictate accountability. Stakeholders are demanding to be privy to information and to be part of the decision-making process."

These sentiments were echoed by Professor Piet Swanepoel, when he wrote in the Rector's Review of that year "The process of transformation and change will involve some difficulties and many opportunities. By utilising these opportunities effectively, the Technikon can play a crucial role in the development of human resources, both in this region and the country."

With all the upheavals that had taken place during the tumultuous first years of transformation, the academic force of the Vaal Triangle Technikon was never neglected or forsaken. A continuing pursuit of excellence was maintained. Ongoing research, and productive technical, artistic and management achievement remained as the goals of the teaching and learning that took place on the Vanderbijlpark campus, and across the broad footprint of its sites of delivery.

INTRODUCING DEGREES

Already in 1995, the Vaal Triangle Technikon set its sights on elevating its academic profile to meet the standards envisaged for the coming fundamental structural changes in tertiary technical education, and the educational ambit of the institutions charged with delivering it.

It was in 1995 that the work of the National Commission of Higher Education was initiated, with the aim of repositioning of higher education systems. This process of redefinition took place against a backdrop of imperatives that were driven both internally and externally. Internally, the institutions themselves analysed the environment within which they operated. The external driver was the strategy aimed at creating comprehensive institutions which could provide a productive research and technical base. The overall purpose was to raise skills, capacity and relevance to meet the demands of a forward-looking system in which high-level skills are required for an information-based economy. The process set in motion by this change of thinking would ultimately come to fruition in October 2003, with the announcement

The democratically elected Council whose composition conforms with the 1995 amended Technikon Act, with Chairperson Professor Mokadi and Deputy Chairperson Mrs Tsepetsi seated in the centre

by the Minister of Education of the re-designation of some technikons as "universities of technology", and the merging of others with existing traditional universities, to form comprehensive universities.

It was in 1996, however, with the idea of a university-like framework in mind, that the long-established academic structure of Schools led by Directors was replaced by a new framework of four Faculties headed by Deans:

- The Faculty of Applied Sciences under Dr Hendrik du Plessis
- The Faculty of Engineering under Mr Jan Duvenage
- The Faculty of Business Studies under Mr Hennie Alberts
- The Faculty of Humanities under Mr Basie Koen

Deans of the four faculties established under the new framework

Professor Piet Swanepoel – Deputy Vice-Chancellor, Academic

Mr Simon Mokoena, first Black lecturer

Mr Rick Reato, Managing Director, Engineering, Iscor, opens the new electrical engineering complex. Mr Jan Duveage, Dean of the Faculty of Engineering, looks on

in 1995 Mr Louis Pienaar is awarded the first BTech degree

In 1996 the institutation confers its first Master's degree – the first by any Technikon – cum laude, on Mr Johan Swan.

While the Committee of Technikon Principals (CTP) had begun to deal with defining the concept of a university of technology in 1997, degree programmes had already been officially introduced to the offering at the Vaal Triangle Technikon, with the first Btech degree being awarded to Mr Louis Pienaar in 1995. And it was in the following year that the institution conferred its first Master's degree– the first by any Technikon – cum laude, on Mr Johan Swan,whose research was conducted in the field of Electrical Engineering. Research was fast becoming a major focus of the academic objectives and ambitions of the institution.

RESEARCHING FOR THE FUTURE

The Vaal Triangle Technikon was resolute in viewing both applied and developmental research as central to the essence of what it stood for, both as a burgeoning academic institution, and as a producer of knowledge, skills and practical applications for industrial and technological purposes. Even before there were any signs of a possible change to university-like pursuits and programmes, research had formed a fundamental part of what the Vanderbijlpark campus was about. Over time, many projects in various disciplines had been undertaken and completed, some of which turned out to have real value for commerce and industry, both locally and across the country as a whole.

The Department of Education had not long before launched a special initiative to encourage and promote the development of scientific, engineering and technological research within the South African technikon system. Research was officially beginning to be included as a requirement within the ambit of tertiary responsibilities.

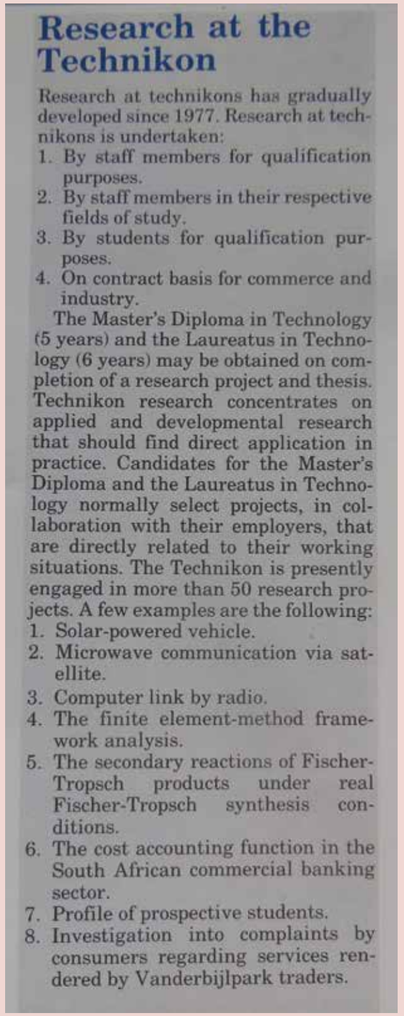
Faculty of Human Sciences

Accordingly, a Research Directorate at the Vaal Triangle Technikon was established under Dr Jenny Pretorius with a mandate to stimulate the development of a culture of research at the institution among both staff and students. In 1998 the directorate signed a memorandum of understanding with the Foundation for Research Development.

Dr Jenny Pretorius, head of the Research, Directorate

Three levels of research were envisaged for this mandate. Included in the first level, there was research undertaken for qualification purposes and submitted in dissertation form for post-graduate degrees in technology. At the second level, there was technology development, and contractual research commissioned by commerce and industry in areas and fields in which the Technikon had known expertise. The third level comprised staff-driven technology development that was conducted in order to provide means of applying technology to enrich and stimulate the student experience. The overriding goal was to have a thriving research environment with facilities matched to provide researchers with access to existing endeavours, be they academic, educational or industrial.

With a support staff of two for its director, the Research Directorate set its sights on having fifty percent of the staff involved in research by 2002. The vision of the Research Directorate was to support the creation of a multi-disciplinary research institution, one that would partner contractually with industry while at the same time providing superior services through the recruitment of outstanding post-graduate students. In short, what they had in mind was that in accomplishing this, the name of the Vaal Triangle Technikon would become identified with research excellence.



Research at the Technikon

Research at technikons has gradually developed since 1977. Research at technikons is undertaken:

1. By staff members for qualification purposes.
2. By staff members in their respective fields of study.
3. By students for qualification purposes.
4. On contract basis for commerce and industry.

The Master's Diploma in Technology (5 years) and the Laureatus in Technology (6 years) may be obtained on completion of a research project and thesis. Technikon research concentrates on applied and developmental research that should find direct application in practice. Candidates for the Master's Diploma and the Laureatus in Technology normally select projects, in collaboration with their employers, that are directly related to their working situations. The Technikon is presently engaged in more than 50 research projects. A few examples are the following:

1. Solar-powered vehicle.
2. Microwave communication via satellite.
3. Computer link by radio.
4. The finite element-method framework analysis.
5. The secondary reactions of Fischer-Tropsch products under real Fischer-Tropsch synthesis conditions.
6. The cost accounting function in the South African commercial banking sector.
7. Profile of prospective students.
8. Investigation into complaints by consumers regarding services rendered by Vanderbijlpark traders.

A pamphlet on research at the Technikon

"Sunny-Baby" a solar powered car was pioneered in 1986

There was already a long history of innovative and practical exploration of cutting-edge technology at the institution. Back in 1986 the "Sunny Baby", a solar-powered car, was already looking ahead to ideas for alternative energy sources for transport, and was a notable achievement on the path towards finding practical state-of-the-art solutions to perennial problems. This was a tradition that would find brilliant expression many years later in the digital age, in VUT's Southern Gauteng Science and Technology Park and its commercial and research activities.

The High Voltage Laboratory sponsored by a consortium of donors that includes African Cables, Eskom, Spoornet and Transwerk

Just ten years after that quiet solar highlight, far more weighty work was being done in the Faculty of Electrical Engineering at its prestigious multi-million-rand High Voltage Laboratory. Unique in the country at the time, it enabled investigations in heavy current that had application not only in industry, but in the maintenance and maximisation of the actual supply of power. Sponsored by a consortium of donors that included African Cables, Eskom, Spoornet and Transwerk, the 300KV transformer that lay at the centre of the facility helped turn the Vaal Triangle Technikon into a leading exponent in the field of high-voltage electricity.

Alongside this more formal expression of the institution's academic purpose, however, were other, less formal, but no less important, structures, activities and initiatives, embodied in the various bureaux that were set up on the campus over a period of time.

STUDENTS WORKING FOR CHANGE

The Bureau of Community Services opened an adult night school in 1994 to provide employees of the Technikon with the opportunity of obtaining a matric. The courses were founded on a system called A Secondary Education Curriculum for Adults, or ASECA, which was regulated by the Independent Examinations Board.

Among the initiatives of the bureau was an adult literacy drive in 1996, and the Step Ahead programme that was started in 1997 to assist high school learners, in particular matric candidates, with their studies, in subjects like Mathematics, Physics and Biology – all taught by Technikon students. Extra tuition was offered on Saturday mornings during school holidays, and the success of the programme enabled it to be expanded beyond the townships of Sharpeville and Thokoza, where it had its beginnings.

In other projects, the self-employment Boikaho Women's Group in Boipatong and the Anker School Skills Training Project taught community members how to find ways of becoming economically independent, while the PROTEC programme provided schoolchildren with technology education, and teachers with technology training.

Students attending the adult night school that opened in 1994

The Bureau of Community Services was only one of several such bureaux active on the campus of the Vaal Triangle Technikon. Others were the Teaching Development and Continuing Education Bureau, the Student Counselling Bureau, the Culture Bureau and the Sports Bureau.

Ms Maria Motsepe was one of the first two beneficiaries of the Bureau of Community Services Adult Night School, started to provide employees with an opportunity to gain an adult Matric through a Secondary Education Curriculum for Adults (ASECA). She currently works in Postal Services.

In our words

"In 1994 I left the Art School and worked in the Bureau of Community Service. Our activities were much more than just an outreach programme, and involved a whole range of initiatives, including literacy and voter education – which took place with semi-literate or even illiterate communities – and thousands of people were brought onto campus. After those first democratic elections, though, we discontinued the voter education. In doing our work, we engaged with other organisations within the communities, like schools and churches. I became so involved with this work that I approached Council and asked for my job to be made into a permanent position, and this was done at the end of 1994. On average we used to do about 25 projects a year, some of which were once-off initiatives, while others were annual undertakings.

We would coordinate with all the directors on the campus, and where there were overlaps with school and university holidays, we would bring a few hundred schoolchildren at a time to the campus. We would rotate the groups to expose them to disciplines like biology or civil engineering. We also got donations of instant cameras from Kodak, and each child would be given one, and would be taught to take pictures. Children made model aeroplanes, and we established a club for that, and let them fly their models around. This was all under Professor Swanepoel, who was acting Rector at the time, although it all stopped when he left.

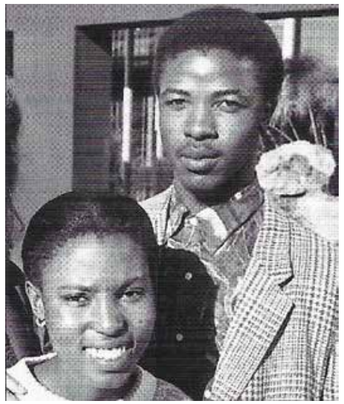
Other projects included a special school for children with learning difficulties who were identified as such by a headmaster in the township. They were taught employable skills at the school in the mornings, after which the teachers would give lessons to adults from the community, with the aim of equipping them to be able to establish small entrepreneurial businesses. We would raise funds with local companies who would donate from their social responsibility budgets.

When Iscor was unbundling and was selling off its properties, we identified a house that could accommodate 20 or so children. Child Welfare offered the services of a social worker, and FNB provided the funds to buy the property. It was called the Ikageng Shelter, and today it maintains two such houses."

Mr Brent Record – Director Food and Clothing Art and Design 1977-1999

ROUNDING OUR EDUCATION THROUGH CULTURE

An Inter-Cultural Festival conceived as an opportunity for people of different backgrounds to get to know each other was mounted by the Culture Bureau in the spring of 1995. The Teaching Development and Continuing Education Bureau extended this idea into its aims of fostering excellence in teaching, and was responsible for running the International Exchange Programme, managed by the International Relations Office, and which saw its first two students, Mr Caleb Maqebula and Ms Sibongile Mbangeni, sent to Australia.

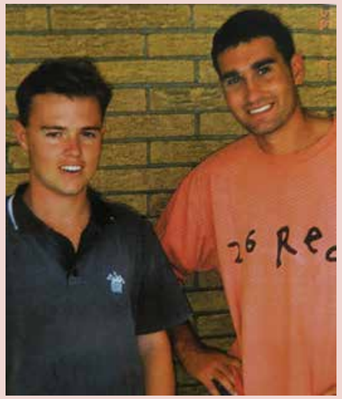


Mr Caleb Maqebula and Ms Sibongile Mbangeni go to Australia through the auspices of International Exchange Programme

Expansion, exposure and expertise

Established in 1995, the primary aim of the Student and Staff Exchange Programme was to enhance the education process in the participating institutions. The international exposure which it offered students, such as its first beneficiary Caleb Maqubela, and former SRC President Sasabona Manganye, was an invaluable adjunct not only to their own progress and knowledge, but to their institution, which was able to expand its global connections. With this programme, the Technikon could not only export its expertise, but was able to learn from the experience of others in various fields.

With connections as far afield as Australia and New Zealand, The Netherlands, and Ghana coming to fruition in 1996 and 1997, the Vaal Triangle Technikon was able to enhance its credibility, expand its reach, and benefit from its exposure to people, places and institutions far beyond the confines of its immediate environment. The promotion of study exchange programmes was an initiative that was to take root and grow over the years. It became a fundamental part of the offering that the Vaal Triangle Technikon has been able to make available to its students and staff.



Environmental Science students Mr Brennan and Mr Dominic Skehan come from Australia to complete studies at the VTT School of Applied Sciences

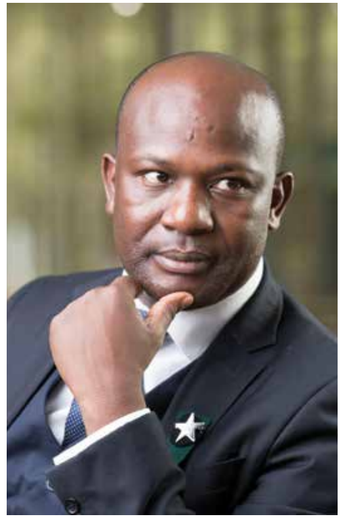
Dr Mokoena, the second black lecturer appointed in Financial Accounting in 1994 became the first senior lecturer a year later in 1995 in the same school of Accounting.

After holding positions of Manager: Lifelong Learning and Director: Community Service and Lifelong Learning, he takes up the position of Registrar of the VUT in 2006.

Reflections outside the International Relations Office

Over time, the Culture Bureau designed its initiatives to reflect the changing needs and interests of the student body. From drama to exhibitions and presentations, through to dance and music, all tastes and preferences were catered for, with the added successes of Technikon groups and ensembles at various national arts and culture festivals. To bring global culture to the campus, the bureau also developed relationships with foreign embassies. Including local communities in its activities, it strengthened ties and outreach to the surrounding areas of Boipatong, Sharpeville and Sebokeng.

The Bureau of Student Counselling devised and implemented a training programme for house committees. In addition to facilitating the resolution of problems for affected students, effective relations between students and their leaders were promoted by this programme, which also provided means of inculcating trust and confidentiality between leadership and those seeking assistance.



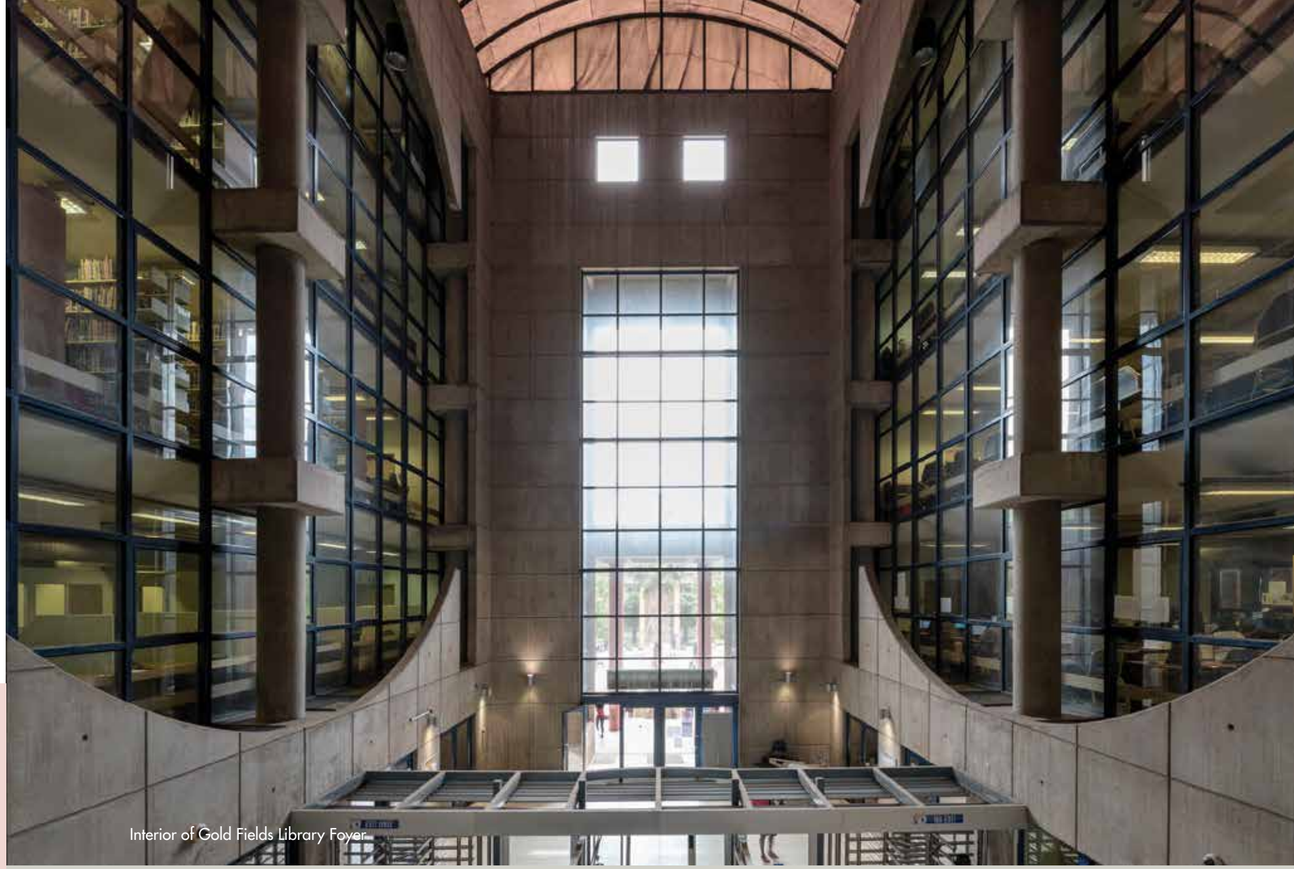
Mr Sasabona Manganye

With his N-Dip: IT and B-Tech: IT and M-Tech, Mr Sasabona Manganye went on from his studies to become IT Process Engineer at Nedbank Group Technology in his professional life, and Head of Political Education for the ANC Youth League Greater Johannesburg Region. He originally chose VUT as it offered the field of study he wished to pursue. As a VUT student he also had the opportunity of completing his N-Dip project in Germany, and is grateful for the institution having broadened his experience through its IT base, and exposure to cultural diversity. Having been a student activist and SRC President, he has continued his involvement with VUT, serving not only as an ambassador for the institution at every opportunity, but also officially, as President of Convocation.

Mr Peter Masombuka – Head of Department-Alumni Relations

With 15 years' experience in the Higher Education environment, and skills and qualifications that include communication, critical analysis conflict and change management, data integrity and database management as well as fundraising, strategising, report-writing and surveys, Mr Peter Masombuka provides strategic leadership, planning and implementation of programmes and projects. These are aimed at strategically engaging alumni in strengthening programmes and activities that provide tangible benefits to them and current students in line with VUT's strategic goals, vision and mission.

With an eye on its future as a university-like tertiary education institution, an Alumni Office was established in 1995, and Convocation was constituted a year later, with Mr Sasabona Manganye as President, and Mr Louis Spencer, former Electrical Engineering student as Chairman and Council representative. With Convocation focused on furthering the objectives and status of the Technikon as well as on fund-raising activities, the Alumni Office instituted a bursary scheme in 1997 to maintain and improve the standard of bursaries awarded to alumni and to staff dependents, and to assist parents of alumni in bearing the growing costs of tertiary education. Eventually the office would expand, launching its Lesotho Alumni Chapter on 12 May 2012, its North West Alumni Chapter in September of the same year, and its Botswana Alumni Chapter on 14 June 2015.



Interior of Gold Fields Library Foyer

The essential facility

No research or indeed academic pursuits can be conducted without a library that can match the demands with quality service. In an evaluation of the Technikon's Gold Fields Library undertaken by the Certification Council for Technikon Education (SERTEC), the facility was declared to be operating at the required standard. However, it was decided in 1996 to modernise the main library – an intervention necessitated by the sudden increase in student numbers as true transformation began to make itself felt. With the help of significant donations from the Gold Fields Foundation, the library's frustrating and outmoded manual procedures were replaced with a fully-computerised system designed to increase productivity and ease of use.

Students enjoying the new amenities in the Gold Fields Library

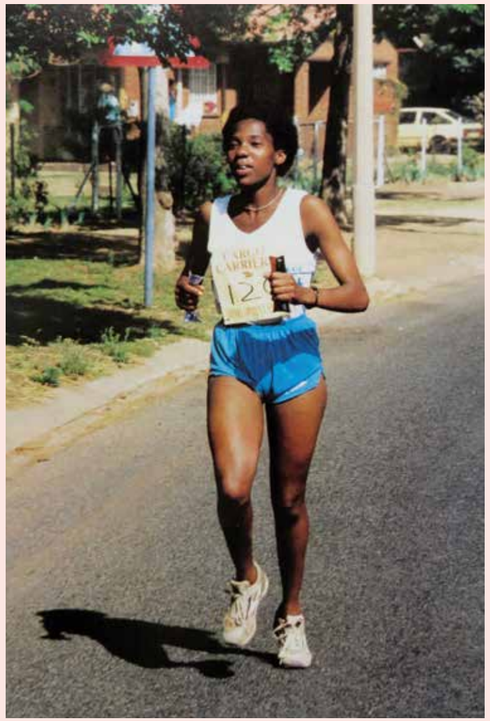
EXCELLENCE THROUGH COMPETITION

Since its establishment in 1982, the Sports Bureau had overseen the flowering of sport at the Vaal Triangle Technikon. With Rugby having been the main focus at the start of its operations in the early eighties, the bureau grew quickly and the 17 sport codes for both men and women which it offered all had committed, knowledgeable and effective coaching and managerial staff. Their goals were always centred on the success and fulfilment of the various outstanding sportsmen and women who developed their prowess in representing their institution.

Rugby match during Craven Week

Technikon Football Club

Ms Maria Mokoena is selected to compete in the SA Trials for the World Cross Country Champtionships in March 1994. The recipient of the award for Best Woman's Performance at the 1992 South African Cross Country Championships, she benefitted from the training of the Technikon's Senior Sports Officer Mr Ian Harries



South African Student Sport Union Cross Country hosted at the Isak Steyl Stadium

Technikon cricketers share their expertise

The Technikon's advanced Sports Development programme relies heavily on the dedication of those who have the skills passing them on to others who have been disadvantaged.

Fortunately, the Technikon has no shortage of talented sportsmen, who view involvement with development as a vital part of their sports careers.
In conjunction with the Gauteng Cricket Board, Vaal Triangle Technikon cricketers have made their expertise available to youngsters in Sharpeville, where they conduct daily coaching clinics.
At Kopanong Primary School in Sharpeville, young enthusiasts turn out in droves to benefit from the skills of members of the first eleven.

Technikon Sports Officer Ross Veenstra, who not only represents the first eleven, but also the Gauteng A side, says it is sessions like these, and not just first class hundreds that make his cricketing career rewarding. "There is no denying that the future of South African sports lies in the success of our development programmes. Just look at how beneficial they have been in terms of developing youngsters such as Geoffrey Toyana, Lulama Mazikazama and Makhaya Ntini, all who have played cricket at provincial level."

Cricket Training Workshop for Township schools

With a number of outstanding performers earning national colours in various codes, the Technikon was able to make its presence felt not only within the frameworks of local and tertiary competition, but internationally as well. Away from the glory of these achievements, concern for sport development, and the role sport could play in helping disadvantaged realise the dreams and their potential, was not neglected. Outreach initiatives like the junior rugby and cricket clinics that were run in local communities were effective in bringing both fun and skill to youngsters in local schools.

It was the Bureau of Student Affairs, however, that was most directly involved in giving students a role in identifying and implementing the necessary measures that would see the ideals of true transformation realised on campus. From the mid-nineties, this bureau oversaw seven departments, all of which provided essential services, advice and guidance on sports, culture, student counselling, financial aid, student recruitment, campus services and international relations.
The aim was to provide students with every opportunity, not only to have their voices heard, but to have their concerns addressed. Its ultimate goal was to foster contentment, confidence and full participation in the student body.

Students making their way to Auditorium 200 for a lecture

The **first black student** to register at the institution was Mrs Grace Mokale, having enrolled in the 1980s to study for the Community Nursing Science Diploma. Since then, although black representation had increased, in 1992 it was still the case that a full seventy-five percent of the 8,000 students enrolled at Vaal Triangle Technikon were white. Rapid progress was however made in redressing this imbalance, so that by 1995 the proportion of black students had risen to forty-eight percent. This dramatic change naturally led to a complete restructuring of the SRC, and the postponed elections for that body resulted in 1995 in the establishment of a Student Transformation Forum, comprising four white and four black students.

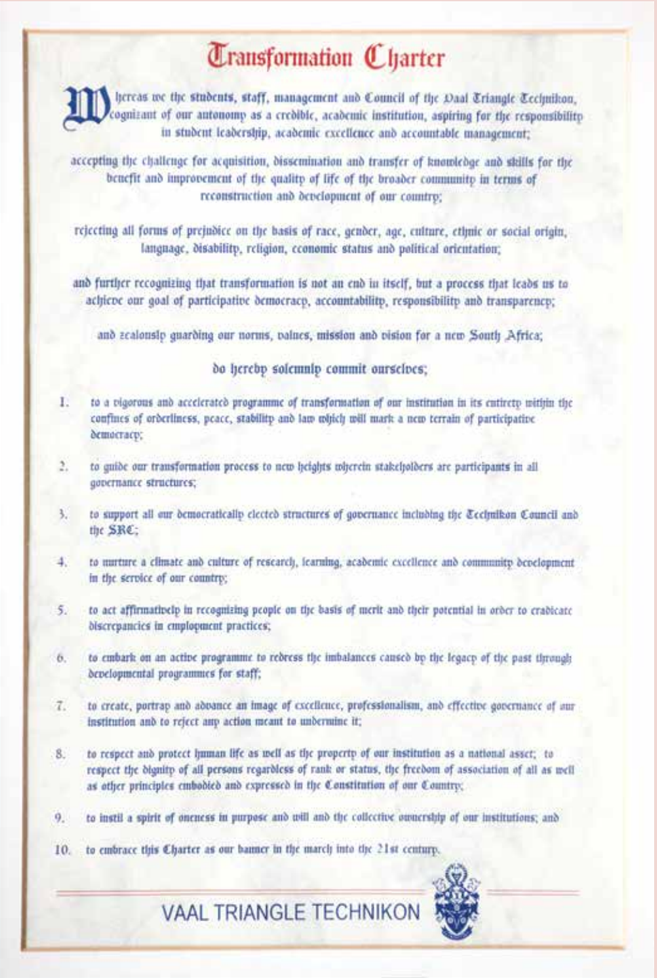
The newly elected Students Representatives Council, **all 12 of whom are black**, is elected in 1995

A new SRC constitution, developed after a series of workshops, was adopted, and regulated both the election and the activities of a new council, the 12 members of which were all black. This radically different representative group was elected by a 34% poll, one of the highest of any tertiary institution in the country.

The determination of this new SRC to transcend cultural differences and unite the student body proved itself in the visible reduction of confrontation and resentment, and there was a dramatic improvement in relations between white and black students.

The aims of students and staff in the fraught and volatile arena of transformation were expressed in the end in a transformation charter that was introduced in 1997, at a ceremony which was attended by the then Deputy Minister of Education, Rev. S Mkhatshwa. This document outlined the commitments, goals and aspirations of staff, management and student body within the framework of a democratic, inclusive and transparent code founded on equality, mutual respect, and the striving for academic excellence.

It was this charter, together with a culture audit that had been conducted in 1996, the degree programmes that had been introduced in 1995, and the Language Policy drafted in 1998 after a stakeholder workshop, that helped set the stage for the adoption of the Language Policy in 1999. This policy established English as the official language of the institution, and the ultimate goal of becoming a fully-fledged University of Technology was articulated.



Transformation Charter

Whereas we the students, staff, management and Council of the Vaal Triangle Technikon, cognizant of our autonomy as a credible, academic institution, aspiring for the responsibility in student leadership, academic excellence and accountable management;

accepting the challenge for acquisition, dissemination and transfer of knowledge and skills for the benefit and improvement of the quality of life of the broader community in terms of reconstruction and development of our country;

rejecting all forms of prejudice on the basis of race, gender, age, culture, ethnic or social origin, language, disability, religion, economic status and political orientation;

and further recognizing that transformation is not an end in itself, but a process that leads us to achieve our goal of participative democracy, accountability, responsibility and transparency;

and zealously guarding our norms, values, mission and vision for a new South Africa;

do hereby solemnly commit ourselves;

1. to a vigorous and accelerated programme of transformation of our institution in its entirety within the confines of orderliness, peace, stability and law which will mark a new terrain of participative democracy;
2. to guide our transformation process to new heights wherein stakeholders are participants in all governance structures;
3. to support all our democratically elected structures of governance including the Technikon Council and the SRC;
4. to nurture a climate and culture of research, learning, academic excellence and community development in the service of our country;
5. to act affirmatively in recognizing people on the basis of merit and their potential in order to eradicate discrepancies in employment practices;
6. to embark on an active programme to redress the imbalances caused by the legacy of the past through developmental programmes for staff;
7. to create, portray and advance an image of excellence, professionalism, and effective governance of our institution and to reject any action meant to undermine it;
8. to respect and protect human life as well as the property of our institution as a national asset; to respect the dignity of all persons regardless of rank or status, the freedom of association of all as well as other principles embodied and expressed in the Constitution of our Country;
9. to instil a spirit of oneness in purpose and will and the collective ownership of our institutions; and
10. to embrace this Charter as our banner in the march into the 21st century.

VAAL TRIANGLE TECHNIKON

The Transformation Charter

Sr Maria Phondo is appointed the first Primary Health Care Sister who introduces comprehensive health care services for students and staff. Staff, with the Clinic only offering Family Planning at the time. Today the Campus Clinic offers voluntary counselling and testing for HIV/AIDS

CELEBRATING THE MILLENNIUM, REAFFIRMING EXCELLENCE

Previous disagreements between Council and Professor Mokadi that had arisen in 1997 came to a head in a protracted court case between the Technikon and its Vice-Chancellor and Rector. The distraction of this unseemly struggle was to some extent overcome by the appointment by the Minister of Education of Professor Theo Shippey as Interim Vice-Chancellor and Rector in 1999. This, together with the award in that year of the institution's first doctorates in the Faculty of Applied and Computer Sciences and the Faculty of Management Sciences went some way to reaffirming the Vaal Triangle Technikon's commitment to academic excellence.

Professor Mokadi, legally vindicated, returned to the helm of the institution in the millennium year. That was the year in which enrolment reached 10,500, with a full 63.4 percent of the students being black. In that year the institution's 13 residences provided accommodation for 1,535 students, almost equally divided between men and women. The following year, the Technikon arranged for a further 400 students to be accommodated at what had formerly been the Iscor Youth Hostel, with substantially the same amenities as those provided at the residences on the main campus.

It was also in 2000 that the Vaal Triangle Technikon hosted the CTP Conference, which was attended by the Principals of 15 technikons from across the country. Taking as its theme Rivers of Knowledge, the conference discussed a number of critical issues facing the sector. These included the role of the CTP in higher education, international linkages, entrepreneurship, the future of teacher training colleges, and the increasing tendency of South African students to choose skill-based education over more theoretical academic courses of study.

Professor Theo Shippey is appointed Interim Vice-Chancellor and Rector. He is seen here with Clr Yunus Chamda Executive Mayor: Emfuleni Local Municipality during National Technikon Week

Mr Vaughn Taylor, first Station Manager of Radio Tritech with DJ – Mr Gordon Mkhize

A popular voice – birth of the first radio station

The student radio station Radio Tritech proved a popular adjunct to relaxation time on the campus and its environs, with Electronic Engineering student Mr Vaughn Taylor as its first Station Manager. Unfortunately, due to licensing complications, it enjoyed only intermittent periods on air. That did not mean that students were without a voice, however, as their publication Tricom News was devised, written, edited and compiled by a student editorial panel for the enjoyment and edification of their peers.

Since the paper's inception it has conducted an annual seminar for the purposes of refining the journalistic skills of its team, and providing insights into the South African printing and publishing industry. The publication was on several occasions adjudged best tertiary institutional student publication in the South African Technikon Students Union's annual competition – an accolade that further enhanced its valued contribution to student life and opinions.

STUDENTS AT THE CENTRE OF THINGS

The year of the 35th anniversary of the Vaal Triangle Technikon, 2001, was designated the Year of the Student. Amidst the week-long celebrations that included the institution of an African Refugee Scholarship, a commemorative stone engraved with the names of the student leaders who had selflessly made their mark during the transformative decade was unveiled. Tribute was also paid to Lerata Shongwa, the student who lost his life at the height of the violence that had wracked the campus in 1994.

Commemorative Stone

ALUMNI ACHIEVERS

Mr David Tlale

Alumnus Mr David Tlale, who later also lectured at VUT, first came to fashion industry notice when he was selected as a semi-finalist in the Elle New Talent Show at the South African Fashion Week. With his home-grown influential design house with studios in Cape Town and Johannesburg, his work embodies a design grace that challenges the clichéd and predictable. As a designer, he has pursued couture that embodies beauty without pretence, and which shuns harshness for poise, producing a look that is young, bold, and elegant.

Since his early South African successes, he has gone on to achieve international renown as an innovative designer who has shown his work at both the New York Fashion Week and the Paris Fashion Week. Host of his own reality TV show, he has also designed collections for major retailers.

During an empowering motivational talk he gave on one occasion at VUT, the designer mentioned that as an alumnus, he'd like to see more VUT students make a success of themselves in the fashion industry. In his belief that VUT fashion students are game-changers, he urged them to show their passion in their work, not simply in order to be better, but to be excellent at what they do.

Fashion students at work

Prof Mabuza, Executive Dean of the Faculty of Applied and Computer Sciences

Promoting distinction, providing experience, rewarding research

The early years of the new millennium were marked by a number of initiatives, achievements and milestones that had at their heart the pursuit of academic excellence. In the year 2000 the Student Computer Centre was opened in the Faculty of Applied and Computer Sciences. The Executive Dean of the faculty, Prof Mabuza, noted that the institution had been waiting for the day when it could afford its students the opportunity of using a state-of-the-art facility that could cater to their needs. Offering free internet access for research, the centre also provided the students with the capacity to prepare their assignments professionally.

The Student Computer Centre in the Faculty of Applied and Computer Sciences, was officially opened in August 2000 by the Prof Aubrey Mokadi, Vice-Chancellor and Rector.

The walkway between Engineering and Human Sciences

In the same year the Technikon established an International Office to facilitate partnerships and associations with a number of overseas tertiary institutions – relationships that provided both staff and students with the opportunity of studying and working abroad. The office was managed by Caleb Maqubela, who had been the first beneficiary of the Student and Staff Exchange Programme. Its scope of work included exposure to the Australian Technical and Further Education (TAFE) model for lifelong learning and vocational education, as well as ties with Charles Stuart University, also in Australia, and the Kumasi Polytechnic in Ghana.

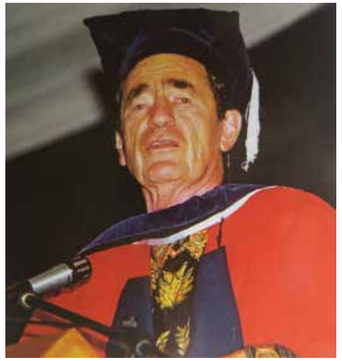
The year of 2001 saw the Faculty of Engineering signing an agreement with the Polytechnic of Namibia's Faculty of Engineering and Information Technology, to assist it in meeting employment needs in that country. In other extensions of the Technikon's reach, two post-doctoral research fellows from the People's Republic of China were hosted at the Vanderbijlpark campus, while Mr Jerry Walker of the Faculty of Engineering was invited to present courses in High Voltage engineering and Power Systems in several centres across Australia and New Zealand.

There were awards and appointments in 2001 too, with two Technikon students among the winners of the Electronics and IT Awards through the Obicom Mandela Bursaries. The Dean of the Faculty of Management Sciences, Dr Prakash Naidoo, was promoted to the position of Vice-Rector: Administration. Another influential appointment was that of Professor Roy du Pré who replaced Professor Piet Swanepoel as Vice-Rector: Academic, after the latter's retirement.

And in a development that would have an ongoing impact on the status and capacity of advanced training at the Vaal Triangle Technikon, the Telkom Centre of Excellence was established with the aim of providing post-graduate students in engineering and related fields with cutting edge expertise in the field of telecommunications. Financed by Telkom SA Limited, Malesela Taihan Electrical Cable (Pty) Ltd and Telecommunications Facilities Management Company, the centre had as its first Head, Dr Christo Pienaar.

The Vaal Triangle Technikon confers its first ever honarary doctorate on Archbishop Desmond Tutu.

On the 6th September of 2002, in affirmation of its commitment to positive, proactive and transparent change, and the value it placed on the people who had helped lead the country with vision and uncompromising resolve, the Vaal Triangle Technikon conferred its first ever honorary doctorate on Archbishop Desmond Tutu. In recognition of the esteem in which he was held, he was further honoured by the renaming of the Great Hall after him.

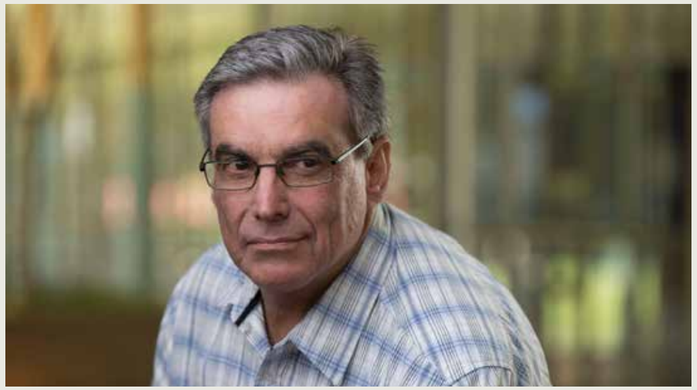


Justice Albie Sachs of the Constittional Court gives the inaugural address of a lecture series bearing Archbishop Tutu's name

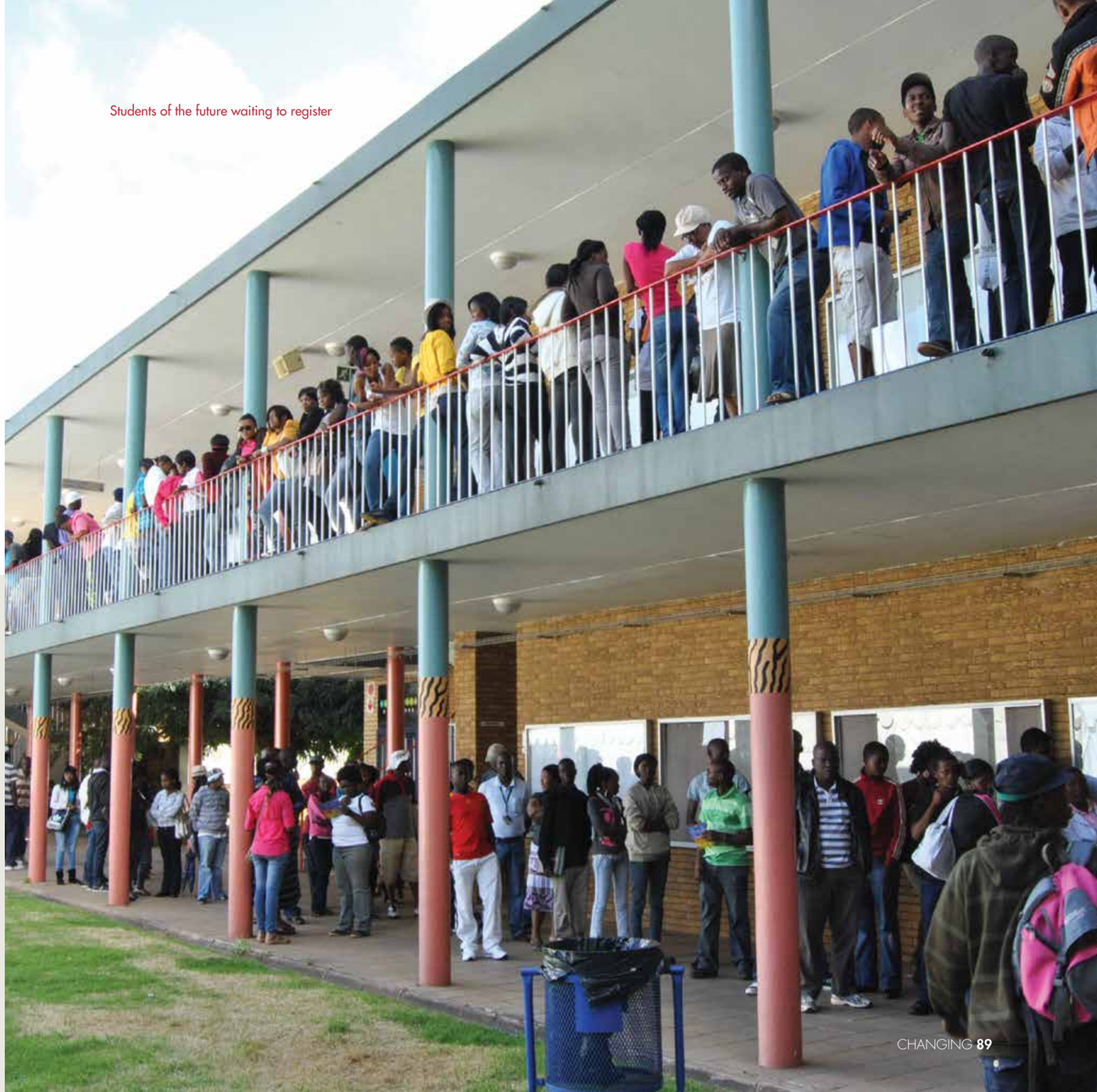
A lecture series bearing Archbishop Tutu's name was instituted, with the inaugural address given by another stalwart of the long struggle to bring justice and equality to South Africa, the distinguished Justice Albie Sachs of the Constitutional Court.

FUNDAMENTAL CHANGES

With the end of the first half of the first decade of the new millennium in sight, the stage at the Vaal Triangle Technikon was well set for the advent of a new dispensation in South African tertiary education. This was the long-mooted move from the structure, nomenclature and curricula of the technikon concept, to the newly-conceived framework of University of Technology. Hand in hand with this radical change, however, came another – the disruption caused in the administration and leadership structure by the dismissal in 2004 of the Vice-Chancellor and Rector, Professor Aubrey Mokadi.



Some of the world-class research undertaken at the Vaal Triangle Technikon has been by Dr Peter Mendonidis, a geologist and lecturer in the Engineering Faculty, Department of Metallurgy, he is also an authority on plate tectonics.



Students of the future waiting to register

Student walking across Freedom Square

5 Building

A NEW ERA

2002 - 2016

With the departure of the previous Rector, the leadership of the institution was subjected to an interim arrangement which saw Professor Roy du Pré installed as the Acting Vice-Chancellor and Principal. This arrangement was to persist for three years, from 2004 to 2007.

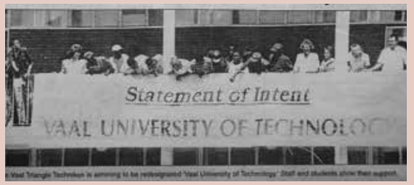
This drastic change at the Vanderbijlpark campus was accompanied by a much larger, more general change, however. South African tertiary education was to undergo a significant revision in 2004. A comprehensive reconfiguration took place in that year with the renaming of the technikons as "Universities of Technology". This process saw 21 traditional universities and 15 technikons pared down to just 23 in a process of mergers and redesignations. This major reshaping of the tertiary education landscape resulted in the creation of 11 traditional universities, six comprehensive universities – in which traditional universities were merged with technikons – and six universities of technology that were created from both merged and unmerged technikons. It was in this process that the Vaal Triangle Technikon underwent the third change of name in its history. Not merged with any other institution, it was henceforth to be known as the Vaal University of Technology, or, VUT.

The importance of this change was captured in general terms by the Acting Vice-Chancellor and Principal in a publication called Universities of Technology – Deepening the Debate, published by the Council on Higher Education in 2010.

"By being redesignated universities of technology, the former technikons would be able to place themselves firmly in the minds of government, industry, parents and students as logical first-choice institutions of higher education. This would once and for all settle the problem of identity, profile and recognition which technikons had experienced with international, professional educational associations, organisations, agencies and students."

Prof Roy du Pré: Universities of Technology in the context of the South African higher education landscape, Kagisano No 7, Feb 2010

Professor Roy du Pré – Acting Vice-Chancellor and Principal 2004-2007



News cutting – staff and students show support for being re-designated as a University

Celebrating the new status of Vaal University of Technology


THE SOUTH AFRICAN INSTITUTE OF ARCHITECTS

AWARD OF MERIT

is conferred on buildings which in its judgement are held to be outstanding examples of architecture

This certificate is testimony that this award has been conferred on

THE CHAPEL OF LIGHT

AT VANDERBIJL PARK FOR

THE VAAL UNIVERSITY OF TECHNOLOGY

ARCHITECTS

COMRIE + WILKINSON ARCHITECTS AND URBAN DESIGNERS

IN ASSOCIATION WITH

MORNÉ PIENAAR ARCHITECT

01 JANUARY 2005 TO 31 DECEMBER 2006

01 SEPTEMBER 2006

The Chapel of Light – a brand-new building for an age-old sensibility

As if a beacon were needed to illuminate the new direction, the year 2004 saw the construction of a unique building on the campus of the new Vaal University of Technology. It was conceived to provide a quiet and introspective space for private and liturgical contemplation and service. The Chapel of Light, as it was called, was conceived and built according to a brief from the institution for a low-budget, multi-denominational chapel, to be constructed by a historically-disadvantaged contractor. Morné Pienaar, in association with Comrie + Wilkinson were the architects.

Built on a remote corner of the campus, close to the residences, the building was designed to create its own context, by defining external spaces with freestanding walls. The designers sought to achieve the physical qualities found universally in religious buildings. It features an approach and progression through space, a hierarchy and ordering of spaces, quality of light, lightness and structure, vertical elements, and water. Light also washes in through narrow slots in the ceiling and walls, providing the effect that gives the chapel its name.

The building is highly sculptural in form, constantly eliciting a feeling of surprise as the visitor views it in the round. Its warmth and humanity is distinctly South African, and it provides a contemplative and reassuring environment for all who feel the need to enter it.

The project was exhibited at the Sao Paolo Biennale in 2006. The Chapel of Light has been featured in a series of international journals, as well as in the Phaedon Atlas of 21st Century World Architecture 2009. The building received the Gauteng Institute of Architecture Award of Merit in 2005, and the 2006 Award of Merit from the South African Institute of Architects – an award which is conferred on buildings which, in the judgement of the body, are examples of outstanding architecture.


The award-winning Chapel of Light

IN PURSUIT OF EXCELLENCE

In that same year of 2004, VUT's relationship with industry and the concept of the productive relationship with the commercial and industrial environment, was further strengthened with the establishment of the institution's first research postgraduate centre – the Food and Nutrition Research Centre (FNRC) at the Department of Hospitality and Tourism in the Faculty of Human Sciences.

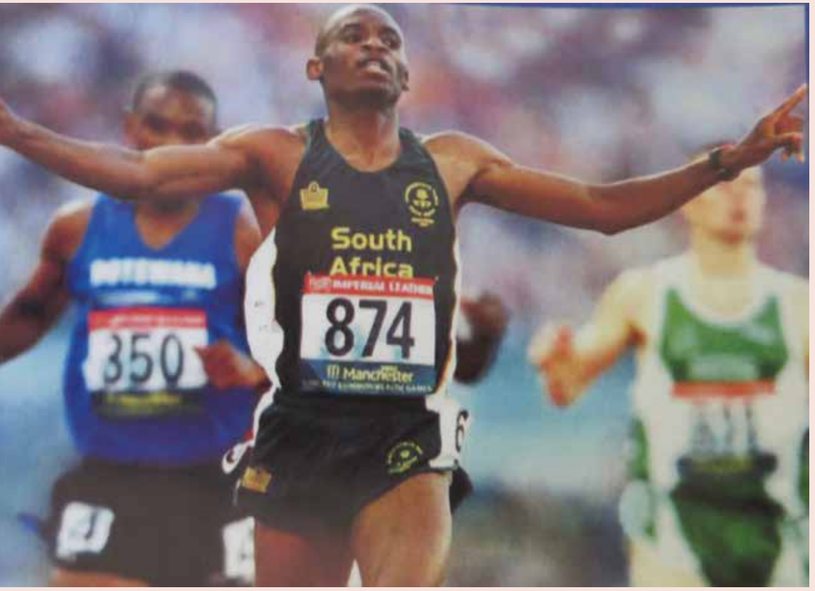
The following year saw the establishment of the Institute for Sustainable Livelihoods. Focusing on its scientific work on a variety of Food Multi Mix products, the institute was engaged in developing these FMMs, biochemically analysing their nutrient content, microbiologically testing them to determine their shelf-life, and then utilising them in recipes that were approved through sensory testing. Within just four years, in 2011 the institute was declared a Centre of Excellence.

In pursuit of its ongoing determination to recognise and reward achievement and to acknowledge extraordinary contribution to society, in 2006 VUT awarded honorary doctorates to three deserving recipients – an Extraordinary Professorship was bestowed on Professor M Hinoul, Business Development Manager: KU Leuven Research & Development; in Legal Studies to Advocate Dr PDF Tlakula, CEO: Electoral Commission of South Africa, and in Sport Management to Dr M Oliphant of the South African Football Association.

Boiketlong – 120 residences

Dikgalala – 120 residences

Residence Walkway



ALUMNI ACHIEVERS

Mr Mbulaeni Tongai Mulaudzi

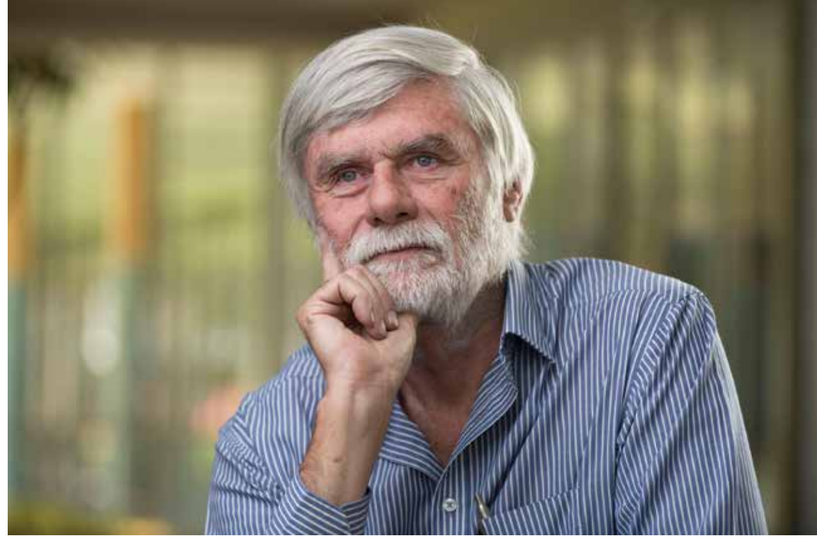
Alumnus Mr Mbulaeni Mulaudzi first made his international mark in athletics when he won a silver medal in the men's 800 metres at the 2000 African Championships, and in the same year was chosen to represent South Africa at the the summer Olympics in Sydney, Australia. After a victory at the 2002 Commonwealth Games, he won a bronze at the 2003 World Championships, and a gold medal at the 2004 IAAF Indoor Championships. With several other world-class placings to his credit, he was honoured by being chosen to carry the South African flag at the opening ceremony of the 2004 Summer Olympics, where he went on to take the silver medal for the men's 800 metres. In both the 2006 and 2007 seasons, he became the first black South African to be ranked first in the world on time. One of the most decorated South African track athletes ever, he tragically died in 2014, with the President acknowledging his achievements as one of the nation's most talented athletes.

ALUMNI ACHIEVERS

Mrs Olga Evangelou

Of Greek background, born in Brazil and raised in South Africa, Mrs Olga Evangelou enrolled at the Vaal Technikon in 1979 to study Cost and Management. After her studies, during which she also played netball for the institution and won her national colours, she continued at the Technikon, rising to become Head of the Department of Cost and Management Accounting, and later Associate Director for Curriculum Development. A firm believer in past students maintaining their association with their alma mater, she is a proud alumnus, and is committed to representing the institution whenever, and wherever the opportunity arises.

In our words



"We were initially approached by Telkom in about 2000. They had 15 or 16 universities that they were sponsoring with Centres of Excellence – centres for master's and doctoral students to pursue their research. The proposal was to work together with what was then still the University of North-West, and although that did not come to fruition, some two years later Telkom again approached us, to say we could work here on our own at our own Centre of Excellence. They requested us to establish one on our campus, and I was appointed its first head, a position I still occupy. The initial funding came from Total Facilities Management Company (TFMC) and their funds were matched by Telkom. Later when TFMC became Bidvest, they fell away as funders, although today we also get support from Eskom's Tertiary Education Support Programme (TESP). We still have to remotivate and apply for the funds annually, however, as we do with Telkom.

From the start, we were given the freedom to choose our own field of research, and we began working with the concept of alternative energy – specifically, fuel cells. We had a meeting with Professor Sunny Iyuke of Wits University, who was working on the metallurgical, or chemical, side of this question. Our interest at VUT was on the electrical side. We undertook to work together on developing a new type of membrane that is required for the technology. Altogether five people, including Prof Iyuke, me, and three of his students succeeded in this, and together with Wits, VUT took out a worldwide patent for our design and concept. VUT sponsored the research that went into this, and in our fiftieth year we are still involved in working on it with our doctoral students.

We are also part of PEESA – the Programme on Energy Efficiency in Southern Africa, together with Cape Peninsula University of Technology and Tshwane University of Technology, the Namibian University of Technology and three German universities.

We have a significant output of publications – books and articles – and since the Telkom Centre of Excellence began operating on the campus in 2002, 40 students have graduated through the programme with master's and doctoral degrees. Our Centres of Excellence have become a big drawcard for postgraduate and international students."

Professor Christo Pienaar – HoD Electrical Engineering

Back row from left

Mr Hardus Joubert (Student), Mr Keith Swanepoel (Student), Dr Christo Pienaar (VUT Head Telkom Centre of Excellence), Mr Jaco Loubser (VUT Lecturer and Student)

Front row from left

Mr Cornelius van der Merwe (TFMC), Mr Gys Booysen (Telkom), Prof Roy du Pre' (VUT DVC Academic), Mr George Hughes (MTEC)

Professor Irene Moutlana is appointed Vice-Chancellor and Principal – **the first female to hold such a position** – not only within the institution, but within the entire framework of tertiary education in South Africa

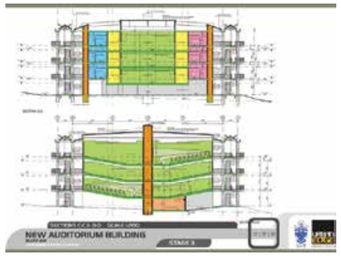
PROGRESS AND PROGRESSIVENESS

It was in 2007 that VUT took a major step forward. In accordance with its commitment to equality and to progressive thinking, the university appointed its ***first female Vice-Chancellor and Principal****. This was a first not only at the institution, but within the entire framework of Tertiary Education in South Africa.*

Professor Irene Moutlana had come with wide experience in tertiary education, having been Deputy Vice-Chancellor Academic at what was then known as Port Elizabeth Technikon. Then after the merger between the Port Elizabeth Technikon and the University of Port Elizabeth that formed Nelson Mandela Metropolitan University (NMMU), now known as Nelson Mandela University (NMU), she became Interim Deputy Vice-Chancellor Innovation and Research. In addition to serving on a number of committees, she had also been a member of the CTM – the Committee for Tutorial Matters. In that capacity she had played a role in determining curricula across the universities.

Later in 2007, the year of Professor Moutlana's installation as Vice-Chancellor and Principal, an ambitious five-year infrastructure plan was drawn up. The plan included:

- The development of a new Faculty of Engineering building
- New lecture theatres to accommodate 3,000 students
- A teaching and learning centre and laboratories for both Engineering and the Faculty of Applied Computer Sciences
- A Disability unit and African Languages Centre
- The expansion of residential accommodation with the provision of an additional 400- bed residence at the Vanderbijlpark campus, and one of 300 beds at the Sebokeng Campus
- The development of a new Faculty of Education in Sebokeng



Architectral drawing of side view of GW Block

Rendering for new Faculty of Education in Sebokeng

New residential accommodation phase 1

New residential accommodation phase 2

The new Faculty of Engineering Building

The new building for the African Languages Centre and Disabilty Unit

The Matric Rewrite Programme

In 2009 the first Matric Rewrite Programme was instituted to provide local learners with a second opportunity to write Matric exams and be accepted for university study. The initiative of Dr.Teboho Pitso, who was assisted by Dr Malefane Lebusa, the programme was based at VUT's Centre for Innovation and Entrepreneurship. With sponsorship of more than R1 million from African Bank, the programme was launched by the then Minister of Education, Mrs Naledi Pandor. Since then, twelve students have received their diplomas and degrees from VUT and University of the North West as a result of the initiative.

The institution was still growing at the end of the first decade of the new millennium. By 2010 the university had a total of 1,641 people in its employ, of whom 68% were black. In that same year, after extensive consultation and debate, a new vision and mission had been developed, articulated and installed as the framework within which the transformation of the old Vaal Triangle Technikon into the new Vaal University of Technology could be completely fulfilled.

VUT had come into being without merging with any other institution as was the case with so many of the new universities of technology. In Professor Moutlana's view, this had resulted in a certain stultification of attitude and approach to the administration, teaching, learning and research at the university.

The principles on which the universities of technology were founded were well-defined. They were designed to ensure:

- The application of technical knowledge
- The training of technicians and technologists
- A focus on applied research
- A direct interaction with employment providers
- Multi-disciplinary course packages
- Cost-effective and quality career-orientated education
- Outcomes-based and demand-driven curricula
- An emphasis on the immediate and productive employability of graduates and the relationship of the institution with industry

Given these principles, Professor Moutlana later embarked on a long journey of redefining the strategy at VUT, so that old attitudes, practices and assumptions would all be examined in the light of a new imperative. This resulted in a fully fleshed-out strategy document that also gave rise to a newly-defined vision and mission.

Vision

"Our vision is to be a university that leads in innovative knowledge and quality technology education."

Mission

"Our mission is to produce employable graduates who can make an impact in society by:

- *Adopting cutting edge technology and teaching methods*
- *Producing a scholarly environment conducive to learning and innovation*
- *Developing a Programme and Qualifications Mix that meets the needs of Africa and beyond"*

And to encapsulate it all, the promise of what VUT now saw itself standing for was captured in its new strapline: Your world to a better future.

Professor Gordon Zide, Deputy Vice-Chancellor: Governance and Operations, initiates the Integrated Transformation Plan

It was also in 2010 that Professor Gordon Zide, Deputy Vice-Chancellor: Governance and Operations, who was destined eventually to take on the supreme leadership role at VUT, initiated a new transformation plan. This Integrated Transformation Plan, as it was known, was designed to encompass the years 2009 to 2015, and it led to the establishment of the Social Justice and Transformation Unit. The plan was approved by Council on 16 September 2010. VUT was the first university of the 23 universities to submit its Integrated Transformation Plan (ITP) to the Department of Higher Education and Training.

Refining and re-imagining research

The end of the first decade of the 21st Century fittingly saw a number of areas of research and innovation identified as relevant and productive fields to which VUT could make a meaningful contribution towards a better future.

These areas of research reflected both the academic and practical goals of VUT. It was felt that work done in these defined areas could yield modern solutions to pressing questions in a changing society and a world more and more conscious of both environmental and economic issues. In some cases, the institution had been engaged on pertinent work for some time. Others were newer disciplines. Together they represented a road-map for investigations and collaborations that would reflect the capacity and intent of a staff and student body highly motivated to play a meaningful role in its community, region and country. The areas earmarked for research represented both technological and societal concerns:

- Alternative energy, with a focus on fuel cell technology
- Renewable energy and water treatment
- Sustainable livelihoods
- Material and minerals technology
- Innovation in product development and advanced manufacturing technology
- High-voltage studies
- Plant molecular genetics and biotechnology

Professor du Pré's words, written in 2006, capture both the pride and intent of VUT concerning the aims of its commitment to research: "VUT is steadily moving into the areas of technology transfer, innovation, start-ups and commercialisation of research. Thus we do not only teach and create new knowledge, we believe that this knowledge should be transferred so that it can benefit others."

All these initiatives, and indeed many of the research projects at VUT, function in terms of the "Hub and Spokes" model followed by the institution. This is essentially a structured mentorship development programme whose aim is to bring leaders in strategic research areas at VUT into mentoring relationships with post-graduate students. The aim is to support the growth of next-generation practitioners at VUT, and to leapfrog the development and innovation of research areas. In this model, the "hub" is the research area and the mentors associated with it, while the "spokes" are the students who work under their guidance.

Metal cylinders used in the Non-Destructive Testing (NDT) laboratory at the Faculty of Applied and Computer Sciences

The university also has a Research and Development Grant (RDG) which is being put to use in support of various research activities. In these pursuits, the academics can be involved in individual and collaborative research which generates subsidies, and be represented in publications that have an impact on disciplines and policies across a number of sectors.

This emphasis on research was summed up by Professor Moutlana, who in her introduction to VUT's Research Report of 2012, spoke of the mission of the institution's Research Department. She noted in her remarks that "Research that matters is about opportunities for our academics, our new generation of academics and post-doctoral students to create new knowledge, products and services that can be gainfully applied for the betterment of society."

These goals and sentiments were echoed in that publication by the Deputy Vice-Chancellor: Academic and Research, Professor Alwyn Louw, appointed on 1 February 2008, the Executive Director Research, Dr B Johnson, appointed on 1 July 2008, and the Executive Director Technology and Transfer and Innovation, Professor DJ de Beer, appointed on 1 October 2008. There was a clear determination, by 2012, that VUT's research mission had become central to its ethos.

VUT became the first university of technology to offer, in partnership with SANTRUST, a Doctoral Development Programme. The aim of the programme is to produce reflective academics with a broad insight into the theories, ideas, methods and practices of research.

First to view the 2010 FIFA World Cup Trophy, Prof Irene Moutlana, VUT Vice-Chancellor & Principal. Staff, students and the public where invited to come and view the trophy

2010 FIFA Soccer World Cup: Launch of the partnership for hosting Switzerland at the VUT Isak Steyl Sport Stadium in Vanderbijlpark

Prof Irene Moutlana (VUT Vice-Chancellor & Principal); Cllr. Simon Mofokeng (Executive Mayor Sedibeng District Municipality); Cllr Assistance Mshudulu (Executive Mayor Emfuleni Local Municipality); Mr Senzo Mazingiza (Deputy Tournament Director, 2010 FIFA Soccer World Cup)

VUT FM's new studios are unveiled by Professor Moutlana on 17 November 2010

GROWING APACE

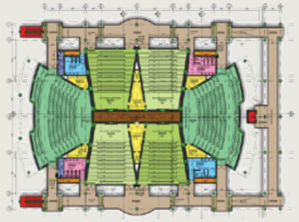
Meanwhile, as the second decade of the millennium began, growth and change continued apace at VUT. In 2010 the University was proud to inaugurate its **first female Chancellor**, Advocate PDF Tlakula, the distinguished Chairperson of the Independent Electoral Commission of South Africa.

Former Chief Electoral Officer of the Independent Electoral Committee (IEC) – Advocate Pansy DF Tlakula – is inaugurated as the first female Chancellor on 31 July 2010

Also in 2010, VUT, in collaboration with the University of the Free State, introduced its Advocate Diploma in Higher Education, developed by Prof Kholeka Moloi and Dr Jan Smit. In another development, studio equipment worth R2.4 million was donated to VUT FM by the National Department of Communications. With this equipment enhancing its services, the radio station's activities were further bolstered when its new FM studios were unveiled by Professor Moutlana on 17 November.

International relationships were also augmented when in 2011, VUT signed a memorandum of understanding with the Footwear Development Institute of India. This came after the institution had become the first university of technology to host the National Footwear and Leather Cluster.

On 22 July 2011 capacity on the Vanderbijlpark campus was further increased with the official opening by Prof Hlengiwe Mkhize, Deputy Minister of the Department of Higher education and Training (DHET), of the GW Block with its 22 auditoriums able to accommodate a total of 3,500 people.



STATISTICS

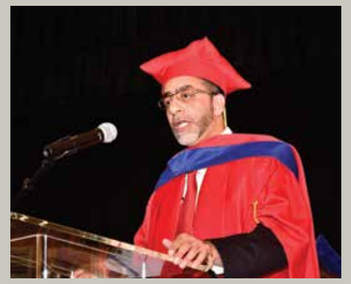
120 SEATS	2	4	4	4	1680
200 SEATS	2	2	2	0	1200
300 SEATS	0	0	0	2	600
TOTAL	640	880	880	1080	3480

The GW Block is officially opened on 22 July 2011

It was in 2011 too that VUT awarded a further two honorary doctorates – in the Faculty of Human Sciences to South African music icon Dr Hugh Masekela, in the Faculty of Applied and Computer Sciences to Dr M Johannes, the President of the South African Institute of Non-Destructive Testing and a long-term friend of the University.

An honorary doctorate in the Faculty of Human Sciences is awarded to music icon Dr Hugh Masekela

VUT Vice-Chancellor and Principal Prof Irene Moutlana and Minister of Environmental Affairs , Dr Edna Molewa



Dr Imtiaz Ismail Sooliman, founder, Director and Chairman of Gift of the Givers receives an honorary doctorate in Humanities.

Mr Jaywant B Irkhede is awarded an honorary doctorate in the field of Arts and Design

VUT Vice-Chancellor and Principal, Prof Irene Moutlana and Dr Tim Tebeila

VUT Vice-Chancellor and Principal, Prof Irene Moutlana and Archbishop Billy Ramokoka accepting an award on behalf of the late Mme Christina Mokotudi Nku for her noteworthy contribution in the field of Education

In 2016 by which time the student enrolment at VUT had reached 19,280, in the September graduation ceremonies, the Minister of Environmental Affairs, Bomo Edith Edna Molewa, received an honorary doctorate for her contribution in the fields of Applied Sciences and Humanities.

On that occasion, there were an additional four of these distinguished awards, with Dr Tim Tebeila, business mogul and CEO of Sekoko Resource, receiving his honorary doctorate from the Faculty of Management Sciences for his involvement in the fields of business and entrepreneurship.

Dr Imtiaz Ismail Sooliman, founder, Director and Chairman of Gift of the Givers, received an Honorary Doctorate in Humanities from the faculty of Human Sciences.

Mr Jaywant B Irkhede was awarded an honorary doctorate in the field of Arts and Design from the Faculty of Human Sciences, while Archbishop BP Ramokoka from the St John's Apostolic Church of Prophecy, received a Special Award from the Faculty of Human Sciences on behalf of Her Eminence the late Mme Christina Mokotudi Nku. Mme Nku was given this posthumous award in recognition of the outstanding and sustained contributions she made both locally, and beyond the borders of South Africa, in community education.

Mrs Naledi Pandor, Minister of Science & Technology, at the launch of the VUT Southern Gauteng Science and Technology Park on 1 June 2012

A happy group of school children after a tour of the Science and Technology Park

VUT hosted the first ever Entrepreneurial Education Conference in South Africa under the banner of the South African Technology Network (SATN) – A warm welcome for delegates for at the Science and Technology Park

A DEDICATED SPACE FOR DEVELOPING SKILLS IN SCIENCE AND TECHNOLOGY

*In **2012** the scope and reach of VUT's determination to play a leading role in pursuing cutting-edge projects that could be of immediate value regionally, was significantly increased. The university launched the VUT Southern Gauteng Science and Technology Park (SGSTP) on land acquired in Sebokeng at the old Vista University's campus.*

The VUT SGSTP was one of just three in the country that attained membership in the International Science Park Association, and by 2014 it had evolved into a new business world for the university. A number of flagship programmes were instituted there with initiatives as widely diverse as shoe design and manufacturing, traditional medicine, and soya dairy alternatives being developed within its ambit. With funding coming from both industry and the Department of Trade and Industry (the dti), the VUT SGSTP is not only providing a growing third income stream for the university, but is also a source of skills and technology training for the economic benefit of the local community.

The VUT houses the Southern Gauteng Innovation Forum, the Advanced Manufacturing Precinct, Centres of Excellence and training centres for skills and development. It operates on economic and business models that support local, regional and international competitiveness.

In pursuing these initiatives, VUT, since revising its Science and Technology Park strategy in 2014,

is also fulfilling the government's objectives of the National Development Plan (NDP) by equipping itself as a university of technology, to address issues of job-creation and skills acquisition. In doing so, it is developing entrepreneurial partnership models based on proven international case studies, by providing the experience and training with which disadvantaged people are able to increase their employability and economic opportunities.

COLLABORATION & PARTNERSHIP

In a related project, in 2012 VUT launched a unique educational facility in collaboration with the French Ministry of Education and Schneider Electric South Africa. Called the French South African Schneider Electric Education Centre (F'SASEC) this was the first such centre in the country established in partnership with both government and industry. The aim was to create an interactive centre which would provide training and skills in electrical engineering, automation and maintenance to all sectors of society.

A collaboration between Schneider Electric and The French Ministry of Education, Higher Education and Research is piloted through the Vaal University of Technology by Professor Alexandre Sebastiani, from the French Ministry of Education, Higher Education and Research.

Students learning about electric connections

Understanding current

Technology Transfer and Innovation

The institution's Directorate for Technology Transfer and Innovation (TTI), situated within the VUT SGSTP, is engaged in providing both academic and commercial services in additive manufacturing, or 3D printing. The very first 3D printer in South Africa was in fact installed at this facility. This 3D printing capability, established with great vision by Professor Deon de Beer, has been developed over a number of years, from when the technology was still in its infancy, and has been expanded over time to provide an impressive array of capabilities.

TTI makes use of lost wax, laser sintering and sand-printing methods to manufacture products that augment more traditional techniques. As such it promotes local industrial use of this new technology, while at the same time exploring the endless possibility of future engineering and design.

With state-of-the-art German equipment, TTI is able to manufacture a wide variety of complex structure, ranging from high-tech aeroplane parts to the actualisation of artistic designs, metal foundry moulds and even flexible footwear. The fact that international industrial giants like Airbus can commission parts that are made in Sebokeng for worldwide aeronautics use is remarkable testimony to the vision of VUT.

Having begun with a complement of just 15 people in 2010, in VUT's fifty-first year the unit employs over 80 technicians and administrative staff. With its eye fixed firmly on the future, TTI's cutting-edge contribution to local skills provides a vivid example of the mandate, capacity and positive contribution of the university not only to its local community, but to its region and to the wider economy.

Professor Deon de Beer is a respected and experienced researcher and senior manager, both locally and internationally, His passion for research, innovation, entrepreneurship and knowledge transfer is matched by his belief in empowering others, and is borne out in his mentorship of students, his commitment to personal excellence and to leadership by example.

Giant Shoe-Sundial in the gardens at the Southern Gauteng Science and Technology Park

Mrs Naledi Pandor, Minister of Science and Technology, was guest of honour at the official launch of the cutting-edge Casting Simulation Network (CSN) centre at VUT's SGSTP on 2nd July 2015. She is seen here with then Vice-Chancellor and Principal, Professor Irene Moutlana, who unveiled the plaque that will remain at the premises as a commemoration of this historic event. The minister noted that the launch of the CSN was a fitting celebration of a number of strategically-planned activities devised to advance South Africa's foundry sector

Mr David Moyo working in the Southern Gauteng Science and Technology Park's tool room department on the Turfent Milling machine. The tool room was completed at the end of 2012

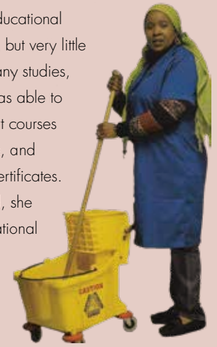
Examples of 3D moulds made by a 3D Printer

Preparing a 3D Printer

Preparing a 3D Printer

State-of-the-art German technology 3D printer at VUT SGSTP

"Armed with a matric certificate, Ms Maria Ngakane started work as a cleaner at the Technikon in 1997.



With a world of educational opportunity before, but very little money to support any studies, she nevertheless was able to enrol for some short courses in computer studies, and obtained several certificates. With these in hand, she registered for a National Diploma in Human Resource Management, graduating in 2010 with the qualification that enabled her to be appointed Faculty Administrative Officer in the Faculty of Management Sciences – a senior position in the registration department. With a job that entails liaising with academics as well as involvement in the registration planning process, the overseeing of registration and the management of student and audit queries. Not complacent in her already significant achievements, however, and eager to study further, she enrolled for a BTech in Human Resources Management. Considering herself a VUT ambassador, Ms Ngakane feels proud to be part of an institution that creates such an enabling environment for self-development – one that has helped her fulfil all her educational expectations, inculcating values and attributes such as teamwork, hard work, and decisiveness."

THINKING ABOUT CULTURE

The Vaal University of Technology Choir

The Vaal University of Technology Choir participated in the South African Tertiary Institutions Choir Association (SATICA) competition from 27th June 2015 to 4th July 2015 at the Tshwane University of Technology's Soshanguve Campus.

Aimed at fostering unity amongst choral music choirs in institutions of higher learning in order for them to exchange musical expertise, the event saw 20 institutions across South Africa taking part in different programmes each day.

With a programme that included solos, small ensembles, gender-based choirs, outreach, and own-choice, vernacular and western pieces, the VUT Choir brought home first place in the solo, duet, sextet, and Western Pieces categories, and with a second in Female Voices and a third in Vernacular, the choir ended the competition in second place overall.

THINKING ABOUT THE ENVIRONMENT

VUT has demonstrated its determination to contribute towards awareness of the environmental responsibilities of modern society. With its Centre for Renewable Energy Water (CREW), launched in November 2013, the university is able to focus on water and wastewater treatment, water supply, wastewater beneficiation, the application of low-cost energy technologies and methods of dealing with challenges recalcitrant hydrocarbons and acid mine drainage.

The establishment of the centre was made possible by the Water Research Commission, the Finnish government, the National Research Foundation and an international consortium comprising the countries of Finland, Kenya, the UK, Uganda, South Africa and China. Other consulting partners are Sweden, Australia, Tshwane University of Technology and the University of Cape Town.

In combining both research and social responsibility, a strategy has been adopted which aims to develop technologies that create more with less. Central to this approach is the use of low-cost materials, solar energy and site-specific methodologies that exploit regional competitive advantages.

THINKING ABOUT COMMUNITIES

Sustainability is not just an imperative which relates to the physical environment. In a developing country such as South Africa, social sustainability is just as important. Upliftment, particularly with regard to the communities which the university serves, has become a central pillar of the institution's commitment to fulfilling its role as a provider of skills and opportunity.

A number of projects are supported, from school-learner mentoring, e-literacy, and alternative nutrition through to traditional healing, disabled care and assistance, welding, and power plant development for rural communities. These are overseen and run by various faculties, including the Faculties of Humanities, Applied and Computer Science, Management Sciences and Engineering and Technology.

Anglo American, since 2012, has been contributing R1 million annually to the Centre for Innovation and Entrepreneurship. This centre provides training to technicians in both township and VUT start-ups, as well as entrepreneurship skills to existing businesses.

A partnership memorandum was signed in 2012 with De Beers, and this collaboration supports the Khula Weekend School to improve local learners' chances of obtaining a university pass in their matric exams, focusing on Mathematics, Physical Science, Life Sciences, English, Economics and Accounting.

The Unit for Community Engagement, in operation since 2015, provides liaison functions for projects undertaken in HIV and AIDS awareness, transformation, student structures, as well as in community dialogues, student poverty and a student feeding scheme.

Prof Abdulkadir Egal

The Centre for Sustainable Livelihoods (CSL), led by its Director Professor Abdulkadir Egal has focused on poverty, malnutrition and household food insecurity in the Vaal Region and Qwa Qwa. Research, clinical trials and food production innovations, as well as the first International Soya Seminar and Workshop in Africa and South Africa, all form part of the centre's initiatives.

The CSL, together with CREW, under the leadership of Associate Professor Ochieng Aoyi, and the Centre for Alternative Energy, are VUT's Centres of Excellence in Research and Innovation.

Prof Ochieng Aoyi

Prof Aoyi

South Africa's water resources problem is one that requires collaborative efforts from different sectors including local government, industries, individuals and academic institutions. In light of this, in 2014, the Local Government Sector Education and Training Authority (LGSETA) and VUT formed a partnership with a memorandum of understanding (MOU) for two years, with the aim of addressing skills development and water management by the local government sector in South Africa.

VUT's water management projects are coordinated by the Centre for Renewable Energy and Water (CREW), under Prof Ochieng Aoyi, head of the Department of Chemical Engineering. CREW, which plays a pivotal role in the implementation of water management projects in Gauteng, North West, Free State and Mpumalanga, was created in 2013, thanks to support from the Water Research Commission (WRC).

CREW's three-tier strategy is interspersed with knowledge dissemination conferences with the first tier involving WRC-supported fundamental research, the second LGSETA-sponsored community outreach with a focus is on local government and skill development, and the third comprises industrial projects supported by Chemical Industries SETA, Talbot & Talbot and Eskom.

It was the LGSETA-sponsored projects that were initiated through an international round table discussion (RTD) held at the Emperors Palace Convention Centre, Johannesburg, on the 25th February 2015 – the official launch of an initiative to respond to the national water problem.

At an information-sharing conference held by CREW some four months prior to this event, on 26th September 2014, Prof Aoyi described the background, team, structure, vision and mission, and strategy of the centre, whose research focus, he said, was to add value to life.

Sasol/VUT collaboration

Since the initiation of the Sasol VUT Entrepreneurship Programme in 2013, Sasol has touched the lives of more than 290 young people. The programme is a partnership between Sasol, VUT and Dr Michael Harrington from the University of Cape Town, with the aim of addressing youth unemployment in the Vaal Triangle.

The programme was formally launched on 21 February 2014 when VUT and Sasol signed a Memorandum of Agreement and secured the use of the EB building as the main facility allocated to the programme.

With 168 participants having graduated from the programme, many more are expected to graduate from it in the future. Of the students who graduated since 2014, 32 have furthered their studies, 31 have obtained employment and 48 have started businesses.

Sasol has invested R5,465,000 in the programme since its inception – a commitment that has made a meaningful contribution to the lives of over two hundred young people in the Vaal Triangle area.

Graduates of the Sasol VUT Entrepreneurship Programme started in 2013. With them are: In front from left Dr Esmé Young, Sasol's Sasolburg Operations Social Investment Manager, Mr Vusi Cwane, Vice-President Corporate Affairs, VUT Prof Irene Moutlana, Vice-Chancellor and Principal, Dr Mike Harrington, Executive Director of Global Entrepreneurship Monitor, Mr Paul Lempe, Specialist: Stakeholder Relations and Mr Sibusiso Luvuno, Specialist Social Investment.

In February 2014 the historic partnership with Sasol, which continues to support the Entrepreneurship programme at VUT SGSTP, was strengthened and reaffirmed with the signing of a memorandum of understanding to develop new research areas. This supports work in the fields of the epigenetics of cardio-vascular risk, indigenous knowledge systems with a specialised focus on traditional medicines, tissue engineering, various omics in biology, and foundry materials.

Ms Antoinette Lombard – Director of the E-Skills project

SKILLS FOR THE FUTURE

After a long planning journey, the implementation of E-Skills training at the Northern Cape centres at De Aar, Nababeep, Carnarvon, Karstens Farm in Pella and the VUT Technology Station in Upington, is fulfilling its promise of providing individuals in urban, peri-urban, rural and deep rural communities with the capacities they need to uplift their lives.

Sponsored by the National Electronic Media Institute of South Africa (NEMISA), the e-literacy initiative, part of the government e-skills project, is led by Ms Antoinette Lombard – Director: E-Skills. The project focuses on community development by providing training in internet, e-mail, basic computer and mobile skills, commonly referred to as e-literacy skills. The E-Skills-E-literacy programme is one of many offered by the VUT CoLab which falls under the Strategic Alliance Unit based at the VUT SGSTP and its satellite E-skills centre at the Technology Transfer and Innovation (TTI) in Upington.

With the award of VUT certificates for successful completion of the courses, the initiative is making a palpable difference in the lives of people of the communities it serves. Almost all the youth in which the programme is investing are unemployed, and the acquisition of the skills that are imparted empowers them not only with the requisite capacity to be economically productive and independent, but with a sense of self-reliance and confidence as well.

All the students are proud to be able to receive their certificates from VUT, as much as VUT is proud, through its expertise and commitment, to be able to bring hope for the future to young people who, in in building their own independent lives, will fully participate in building a future for their communities and the country.

Dr Pierre Joubert of the Department of Human Resource Management

Dr Pierre Joubert

A prestigious award – under the leadership of Dr Pierre Joubert, the Department of Human Resource Management received the award for the best university in HR Standards Alignment at the annual award ceremony of the SA Board for People Practice on 27 July 2016. The National HR Standards were introduced in 2014 with universities having to incorporate them in their syllabi and learning material. VUT is also the first university to offer qualifications in HRM that are fully aligned with the SABPP HR Competency Model and the National HR Standards, with the result that students graduate with a qualification that is recognised by industry as well as the professional body.

The Department of Human Resource Management receives the award for the best university in HR Standards Alignment

Professor Kholeka Moloi, Professor of Education, Faculty of Human Sciences, receives an award for the oustanding achievement in the category: Distinguished Women: Social Sciences, during the 2013 Women in Science Awards (WISA) hosted annually by the Department of Science and Technology (DST). The category recognised the women scientists and researchers who have made an outstanding contribution to advancing science and building the knowledge base in their respective disciplines.

SETTING SIGHTS HIGH

It was in 2014 that Professor Moutlana commissioned and presented the comprehensive strategy review that resulted in VUT's new vision and mission statements. The new strategy that arose from the review sought to take the university to a new level in its capacity to fully deliver on its mandate as a university of technology, and it projected how the institution would look and feel as the goals of the strategy were attained.

The VUT Strategic Direction document which also gave rise to a newly-defined vision and mission

Professor Moutlana presenting her document

Mr Karabo Moloi

With VUT's 50th Anniversary approaching, a competition was established to elicit designs for a logo to support the event. The competition, and its R20,000 prize, was won by third-year graphic design student Mr Karabo Moloi, and at a special handover function recognising his creativity on 3rd September 2015, he described how he had incorporated the colours of the four faculties to ensure representation, inclusivity and ownership so that both staff and students can be proud of the logo. Pledging to use the money for his future studies, the winner emphasised how proud he was to be the product of an institution like VUT which offers opportunities such as the competition he had won.

Mr Karabo Moloi holding the R20 000 prize cheque with Prof Irene Moutlana, Vice-Chancellor and Principal, for his award winning 50th Anniversary logo design

NEW QUALIFICATIONS, NEW NOMENCLATURES

In 2015, new qualifications were approved for VUT as part of enhancing the development of the university in addressing the issue of South Africa's needs in scarce and critical skills. The programmes include a variety of diplomas as well as BTech, Mtech, MEng and DEng degrees in the Faculty of Engineering and Technology, a PhD degree in Chemical Engineering, a BTech in the Faculty of Applied and Computer Sciences, diplomas, advanced and postgraduate diplomas, and MTech, DTech and PhD degrees in the Faculty of Management Sciences, as well as a diploma, and advanced and postgraduate diplomas and bachelor's degrees in education in the Faculty of Human Sciences.

This development was in keeping with the new determination that all universities of technology were to be afforded the right to use the same Bachelors, Masters and Doctorates of Philosophy nomenclatures as the traditional universities – a welcome decision, that gives VUT students international currency.

STUDENTS TAKING ACTION AGAINST ABUSE

Students with the '#VUTsek' bookmarks at the launch of the Refuse Abuse'VUTsek' campaign

Dance Group Airclipz Crew performing at the VUTsek campaign

On the 09th of July, 2015 the VUT students and Management take part in the Anti-Xenophobia march from the Vanderbijlpark campus to the Emfuleni Local Municipality offices to hand over a memorandum to the Mayor.

Launch of the first Refuse Abuse 'VUTsek' campaign – Educating and sensitising staff and students on all forms of physical and verbal abuse, the issue of 'blessers', substance abuse and suicide. Bookmarks were distributed featuring the national crisis help line and other emergency numbers to encourage victims to make that call.

Professor Henk de Jager

ALUMNI ACHIEVERS

Professor Henk de Jager

After receiving a bursary from Iscor, alumnus Professor Henk de Jager enrolled for his tertiary studies at the Vaal Triangle Technikon, where he was awarded his NDip, NHDip and MDipTech in Electrical Engineering. He also holds a BA (Industrial Psychology) a PGDip (Tertiary Education), and a DTech (Education Management). Appointed Executive Dean: Faculty of Engineering and Technology at VUT, Professor de Jager later went on to become Executive Dean of Engineering, Built Environment and Information Technology at Nelson Mandela Metropolitan University. He was subsequently inaugurated as Vice-Chancellor and Principal at the Central University of Technology, Free State on 30 June 2017.

With a background that includes membership of various professional bodies, he is also a registered Professional Engineering Technologist with the Engineering Council of South Africa. For over 15 years he has been involved in various quality assurance audits for the Certification Council of Technikons, the Engineering Council of South Africa, the Higher Education Quality Committee (HEQC) of South Africa and the Quality Assurance Authority for Education and Training of the Kingdom of Bahrain. He has been a supervisor at post-graduate level and has produced several publications in proceedings and scientific journals. His research interest is in quality assurance, engineering education and strategic management in higher education.

A MANIFESTO FOR PROGRESS

With a focus on improving the academic enterprise, the strategy envisioned a leadership that at all levels would have the skills and capacity to constantly capitalise on change. It saw management and staff working together to uplift the image of the university and live up to its ethics and moral beliefs. It saw its graduates as among the most sought-after in their fields among universities of technologies. It saw its academic environment as student-centric, with high-risk subjects identified, and mitigating programmes implemented, to make them more accessible to students. It saw its academic staff using insight gained from the institution's student management system to inform course design, classroom teaching, and the need for timely intervention for students at risk. It saw its department leaders leading by example through research production and supervision of master's and doctoral students. And it saw VUT maintaining a learning environment that promotes and sustains high student esteem, with both students and staff enjoying their diversity and sharing their understanding of social justice.

This new strategy was a bold vision that had at its heart the fulfilment of the promise of the new consolidated tertiary education system in South Africa. It was a committed vision of a possible future – one that took as its foundation the achievements, goals and accolades of the past. Yet it looked beyond those constraints to a new era, to building an environment of teaching and learning in which students and staff alike would feel that not only were they fulfilling their own potential, but making a meaningful contribution towards realising the potential, in an ever-widening circle, of their communities, their region, and their country.

Then, after two successful terms spanning ten years of committed leadership, Professor Irene Moutlana stepped down as the fifth Vice-Chancellor and Principal of VUT on Friday 2 June 2017. As the first female to hold this distinguished position, Professor Moutlana was hailed at her farewell function in the Desmond Tutu Hall for her contribution not only to VUT, but to tertiary education in general.

Epilogue

A NEW ERA DAWNS

In its fifty-first year, on 12 August 2017, VUT had the honour of inaugurating its sixth Vice-Chancellor and Principal, Professor Gordon Ndodomzi Zide. The new head of the institution was of course no stranger to its halls and walls. He had first joined VUT in 2007, when he had served as Deputy Vice-Chancellor Institutional Support. The name of this position was later changed to Deputy Vice-Chancellor; Operations and Resources, and subsequently changed again to Deputy Vice-Chancellor: Governance and Organisational Transformation. In this role he not only brought his wide experience of governance, gained since serving years before as Registrar at the University of Fort Hare and as Executive Adviser to the Vice-chancellor and Principal at NMMU, but his commitment to ethical, transparent and accountable leadership was expressly articulated in his engagement with the VUT community.

In his inaugural address, the new Vice-Chancellor and Principal outlined an agenda to achieve just this. It is an agenda founded on deeply-held beliefs and principles, and an absolute commitment to good governance that is true to only one interest – that of the good of the institution.

"Ethics," said Professor Zide in his address on 12 August 2017, "by and large is about standing for truth, justice and honesty in any business transaction as well as adhering to proper Corporate Governance principles and procedures governing and regulating the operations of a business enterprise. No enterprise can develop a long-term commitment based on dishonesty, greed, self-aggrandisement and manipulation. Ethics is characterised by responsibility, accountability, fairness and transparency and all of these principles are underpinned by adherence to the moral values of humaneness, and the soul of an institution which is about discerning between right and wrong, and between good and evil. Indeed, it is about standing upright in an upside down environment. VUT will be no exception if we are to promote ethical leadership accompanied by accountability and consequent management."

All Vice-Chancellors try to leave a legacy and Professor Zide will be acknowledged as having initiated the fundraising for, and construction of a gift shop. In addition he established a Unit for Social Justice and Transformation, a Health and Safety Unit, a Unit for Control Systems Management, and a Unit for Fundraising and Resource Mobilisation.

Professor Zide prides himself on having facilitated the signage on campus which provides a more enabling and inviting environment. The placing of flags around the fountain was also his initiative after he had visited Geneva in 2013, where he was influenced by the entrance avenue at the United Nations.

Professor Gordon Zide becomes the sixth Vice-Chancellor and Principal of VUT

Professor Zide with Professor Moutlana and donors of the Corporate Gift Shop

Newly-elected Chancellor Dr Xolani Mkhwanzi, and Vice-Chancellor Professor Gordon Zide

Professor Zide was not the only new leader to be inaugurated that day. A new Chancellor also took up his post for a five-year term. Dr Xolani Mkhwanazi, the university's third Chancellor, took up the challenge in the footsteps of his two distinguished predecessors Mr Tokyo Sexwale and Advocate Pansy Tlakula, whom he acknowledged in his acceptance address as "having laid the important building blocks of this young and thriving University of Technology". He too pledged to support the initiative to benchmark the university against the very best in the world using, among others, the matrices of corporate governance, ethics, sustainability, community development and productivity.

Flags around the fountain at the main entrance, flown during registration and other events in honour of international students, as well as countries with whom VUT has signed agreements.

LONG SERVICE RECOGNITION

The longest serving staff members of VUT – Each with over 30 years of service. Seated from L-R : Ms Alta Poolman, Ms Meisie Mkhumbeni, Ms Alinah Mofokeng, Prof Christo Pienaar, Ms Caroline Nkwale, Mr Stephen Gama and Standing from L-R Ms Sandra Hugo, Ms Emily Nana, Ms Hannetjie Lemmer, Mrs Olga Evangelou, Dr Abe Kempen, Ms Pauline Mokhoro, Mr Alfred Nhlapo, Ms Maria Motsepe, Ms Heleen Muldoon, Ms Sophie Tsolo, Ms Maria Mohanoe

The new Academic Administration Building

A PATH TO TOMORROW

In its fifty years of existence, the campus at Vanderbijlpark had developed into an institution that none present at its founding – students or staff – could have possibly imagined. It had negotiated radical changes to its makeup, to its physical environment, to its structures, its name and to its leadership, but it had never wavered from seeing its role as a pivotal and practical provider of skills, knowledge and capacity to its town and to its region.

At the beginning, of course, it saw itself as representing the interests of a very narrowly-defined, homogeneous and isolationist group.

As attitudes began to change, it took note, and reacted within its constrained ability. And then, as social and political realities transformed the very structure of South African society, it adapted its vision and will to serve accordingly.

Change did not come easily – it was hard-fought for, and hard-won, but the Vaal University of Technology never lost sight of the principles and values so evocatively expressed when it systematised its strategy for the future.

The institution has become a crucible and cradle of intellectual vibrancy and activity due to its historic political landscape. As a university which is within driving distance of the famous site of the Sharpeville shootings on 21st March 1960, the 1985 Boipatong massacre site, and the 1996 signing of the constitution of the country in Vereeniging by the first president of the democratic South Africa, Mr Rolihlahla Nelson Mandela, it sees itself as a magnet for young South Africans of conscience, curiosity and intellectual passion.

Values for distinction: Creativity, Mutual Respect, Collegiality, Honesty and Integrity, Tolerance and Diversity have been the watchwords by which the university, since becoming a true institution for all its communities, has striven to realise its vision.

As it enters its second fifty years, VUT is determined to perfect its role as a leading educational, research and community-based institution making and remaking itself into what its strapline so succinctly proclaims – Your world to a better future.

LINK TO DOCUMENTARY TO GO HERE

https://www.vut.ac.za/vut-50th-anniversary/

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There have been many people at VUT who have given a great deal of time, thought and effort to the production of this book.

Tisch Farrell, who has coordinated and organised the process at VUT from concept to production, has through her dedication, diligence and commitment, made an exceptional contribution to enable this book to become a reality.