

# **Inaugural Speech by VZ Mntambo, Chancellor of the Vaal University of Technology**

## **Representative Department of Higher Education, Science & Innovation**

Mr Ivan Mendoza-Benitez, Embassy of Colombian

Prof Mandla Radebe, VUT Chairperson of Council and Members of Council

## **Representative from USAF**

Prof Khehla Ndlovu, Vice-Chancellor & Principal of the Vaal University of Technology,

Vice-Chancellors & Principals of other institutions present

VUT Deputy Vice-Chancellors and Executive Deans of faculties

Deputy Vice-Chancellors and Senior Management from other institutions present

Executive Mayors: Cllr Sipho Radebe, Emfuleni Municipality

Cllr Peter Texeira, Midvaal Municipality

VUT Interim Registrar & Deputy Registrars present

Industry and Business partners

Members of the VUT Staff and Alumni

Students of the Vaal University of Technology

Members of my Family

Choristers and the Music Ensemble

Invited Guests

Ladies and Gentlemen,

I stand before you today with a profound sense of humility as I take on the mantle of Chancellor of this esteemed institution. The Vaal University of

Technology has its roots in the Vaal Technical School which was established in 1966. It has been, over these many years, a crucible where young minds have been shaped. INSPIRING THOUGHT. SHAPING TALENT as your motto proudly proclaims!

It is a place that has given birth to ideas, where the futures still are to be forged. Vice Chancellor, members of Council and Senate, I accept the responsibilities of this investiture because of my deep belief in the transformative power of education. Today, as we look towards that horizon of endless possibilities, I invite us **to free our minds** and explore the liberation that knowledge, creativity, and boundless innovation can bring.

The freedom I invite you to consider is not a type of unbridled irresponsibility. It is the type that is in line with the reality of our optimal performance as human beings. However uncomfortable the reality, we see that the human spirit thrives on challenge. It is through the refining discomfort of constraint, that the strength, the resilience, and the brilliance of the human mind are forged.

Consider what I have just said in these terms:

Far beneath the earth's surface, under conditions of immense pressure and heat, carbon atoms are forced into a crystalline structure, transforming into precious and raw diamonds. This process is a powerful metaphor for our lives and our academic journey. The pressure, the heat, the constraints, are not merely obstacles - they are catalysts for transformation, driving us towards endless horizons of brilliance and fortitude.

Standing as we are in a university of technology it is perhaps appropriate to relate this concept in technical rather than geological terms. Technology is often associated with computers, algorithms and the like. Some grand computing machines which have become ubiquitous in our lives today are the first thing which comes to mind when we hear the word technology. We take for granted and often forget, that all of us carry the most powerful super-computers man never made! It sits just above our necks...

It remains to this hour, the most puzzling thing we humans carry around. There is the chance that the species known as mankind may possibly not discover and fully explain the deep secrets and complex algorithms that this somewhat under-utilised organ called the brain is capable of.

Yet today, we make song and dance over something we call AI - Artificial Intelligence. What I do find interesting is that half the world is frenetically trying to study, understand, deploy, and gets regularly terrified of AI, which as we say is definitely artificial...but we then go on to IGNORE the most complex supercomputer man never made - the brains and minds we lift up from the pillow every single morning! That's what we do. Us, humans....!

In the early days of AI, the pursuit of artificial intelligence seemed boundless. Researchers envisioned machines with the unfettered cognitive capacity of the human brain, capable of solving almost any intellectual problem. However, this approach led to a conceptual dead end. Without a framework, without focus, these early AI systems floundered because Intelligence does not exist in a vacuum.

For AI to truly learn and interact with the world, it needs a body, a set of constraints, a way to experience and act within its environment. Think of it like this: a newborn baby's mind is a vast, uncharted territory. But it's through interacting with the physical world – touching, grasping, seeing - that the child learns to differentiate, create categories, and understand cause and effect. The novel developments and breakthroughs we see in AI today, are simply trying to create what already exists in us - outside of our physical and mental selves. What AI is doing is to simply express most of its rather limited capabilities - to do the things that we mostly have and could perfectly do ourselves - if we decided to use half of our brain power.

Now, AI enjoys increasing freedom to empower us in numerous ways:

- Self-driving cars that sense the environment and make real-time decisions enhance personal mobility and transform transportation.

- AI-powered medical diagnostics accelerate disease detection, saving lives.
- Robots working alongside humans in factories increase efficiency and allow us to focus on more creative, higher-value tasks.

The story of embodied AI teaches us a profound lesson: Sometimes, true freedom emerges not from boundless possibility, but from thoughtfully chosen constraints. One of the boundless possibilities we need to attend to is how we use our brains and how we free our minds.....

Our academic pursuits aim to confront or embrace this challenge. The discipline, the rigorous study, and structured learning, may seem like constraints. Yet, it is these very elements that hone our minds, that prepare us for the moment when we leave the comforts of an academy such as VUT to venture into the real world into the University of Life. Many a young graduate or diplomate do not realise that true education starts when the you get gowned and capped. Those symbolic acts are not merely a recognition of academic achievement - they are but a marker, a rite of passage into a world where real education will happen because education does not stop on the graduation stage.

Our presence here in Vanderbijlpark, is significant in its symbolism. The individual after whom this town is named navigated the path from constraint to freedom. There is significant inspiration to be found in the story of **Dr. Hendrik van der Bijl**, an illustrious figure whose legacy illuminates not only Vanderbijlpark but also the annals of South African history. His academic pursuit in Physics, Mathematics and his groundbreaking research in electrical engineering, were underpinned by a disciplined approach to learning and exploration.

Dr. Van der Bijl's acceptance of a national advisory role, transitioning from an engineer to a visionary architect of South Africa's industrial foundation, underscores the profound impact of a mind freed by purposeful education. His leadership in establishing Eskom and Iscor laid the groundwork for the nation's industrial growth, showcasing how a free, enlightened mind can

envision and execute projects of monumental significance beyond the scope and mere fixation of the movement of electrons.

FREEDOM and constraint are not opposing forces but complementary facets of growth. Our academic and ethical frameworks provide the structure within which true innovation and freedom of thought can flourish.

Dr van der Bijl was not just a man of steel mills and power lines, he ignited the belief that electrons knew no prejudice, that progress flowed through veins of all colours. He could for all intents and purposes, be regarded as the founder of Eskom, Iscor and the IDC. He was the principal architect and first chairman of all three of these solid institutions which endure to this very day. So, when you next switch on a light bulb, think of what legacy VUT can bequeath the many generations still to come. His legacy is that of a man who was instrumental in wiring a nation, not with dogma, but with volts of possibility when the mind is free.

Despite the dogma of the time, we now stand in a South Africa that embraces his belief in technology and innovation as forces of unbiased good. It's a call to each one of us to contribute to a legacy of enlightenment, to shine a light in the dark places of ignorance and to harness our collective intellect for the betterment of society.

The lasting legacy of light, the flow of currency through the veins of South Africa's industry, regulating the heartbeat of our economy and the steely backbone of much of our politics and physical infrastructure, was built through what appeared to be insurmountable constraints of the time. Legacies such as those of Archbishop Desmond Tutu and Dr. Hendricks van der Bijl become possible **when the mind is free**.

As I assume the role of your Chancellor, I extend an invitation to you all—students, faculty, and the wider university community—to join in the many noble pursuits of a university such as ours, **with free and open minds**.

Let us answer for ourselves the question posed earlier: Could it be that there is a new kind of a much needed freedom? What is that freedom? Where could we find it? What could we do with it?

I Thank You.

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POEM by Rabindranath Tagore: Where The Mind Is Without Fear

Where the mind is without fear and the head is held high  
Where knowledge is free  
Where the world has not been broken into fragments  
By narrow domestic walls

Where words come out from the depth of truth  
Where tireless striving stretches its arms towards perfection  
Where the clear stream of reason has not lost its way  
Into the dreary desert sand of dead habit

Where the mind is led forward by thee  
Into ever-widening thought and action  
Into that heaven of freedom, my Father, let my country awake