



The State of the University Address: 2024

DUT's Theory of Change

Transformed Academia: some hindsight, insight and foresight.

29 April 2024

I. INTRODUCTION

Many of us should, by now, know the purpose of the State of the University Address (SOUA). It is meant to entrench our commitment to the DUT culture of *shared responsibility and accountability* and demonstrate that our *social compact* remains intact. SOUA is an annual compass predicated on our Extended Annual Performance Plan (EAPP_n) for the current year *n*, which would have been approved by Council at its last meeting of the previous year *n-1*. It provides *insight* and *foresight* on the current year's strategic focus. It also provides some *hindsight* on the previous year *n-1*, details on which are in a document we call the University Performance against the EAPP (UP-EAPP_{n-1}), presented to Council at its first meeting of the current year *n*.

This SOUA₂₀₂₄, originally scheduled for delivery on 1 March 2024, could not be delivered live mainly due to violent student protests during that period. Given how voluminous it is, it stands to reason that it could only be provided in this format rather than via a speech that would have taken hours to deliver. SOUA₂₀₂₄ is, thus, intentionally **Different** and somewhat **Upended**.

Recently, we identified a need to chronicle the transformation journey Council mandated and launched at its epoch-making workshop held on 18 November 2016. This was about six (6) weeks after my assumption of duty on 1 October 2016. The **Different** phase (2020-2023) of ENVISION2030 has seen major changes in several areas, not least in our staff composition across all levels. Without providing some *hindsight* on this transformation journey, a combination of opportunistic distortions and honest misunderstandings on what is happening currently may gain currency and pervert the course of our journey. To be direct, institutional reviews may give the wrong impression of a sadist and uncompassionate management team out on a frivolous exercise during a difficult period in our country's socio-economy. Far from the truth about DUT's transformation journey.

In essence, institutional reviews during the **Different** phase focused, deliberately so, on support services. For this reason, some of us may be impatient wondering, amongst others, when the transformation of our core business – academia – will start; when our atrociously high student-to-staff ratios will be improved; when our un-strategic and unviable programmes will be phased out and new innovative ones introduced; when fertile ground for implementing DUT's *Philosophy of Education* (DUT's *Phi-Ed*) will be laid; when radical changes DUT's *Phi-Ed* portends in terms of what and how we teach/learn will be ushered in, and so forth.

It is against this background that SOUA₂₀₂₄ focuses on a discussion-turned-position document I wrote in December 2023 and termed *Transformed Academia* - where we come from, where we are, and where we are headed to – for a few important reasons. Firstly, management acknowledges that we may not have been very clear and consistent in our messaging regarding the context for ongoing institutional reviews. This gap was exploited by some to distort and bastardise the process and its intentions. While the reviews may have started in the non-academic sector given the reasons stated just above rather indirectly, the very changes have always been geared towards supporting *Transformed Academia*, which had always been in the horizon.

Secondly, we needed to assert the centrality of the academic project in the life of the university so that everyone and all stakeholders could identify their roles in contributing towards its success. While academics are our frontline corps on the project, all of us are at the university for nothing else but teaching and learning, and research and innovation. In everything we do in our lectures, laboratories, corners and offices, our individual and collective duty is to support *Transformed Academia*.

Thirdly and lastly, this message is intended to awaken all of us to the reality of the urgency with which we need to move to align our departments and faculties to ENVISION2030 in, at the least, the manner *Transformed Academia* propounds as you will see in section 4 below. Our *Sustainability and Equity* as a university depends on this. *Transformed Academia* is about underscoring the need to move forward more coherently and determinedly to review systemically and systematically some of our programmes/offerings, should we harbour any iota of *contributing towards the lives and livelihoods of the broader society* we must serve diligently. Indeed, the overall message is about now **Upending** our academic sub-systems and processes.

In the pages that follow, and in *hindsight*, I cite key moments and milestones in our transformation journey and provide some *insight*, the latter creating a strong link between our *hindsight* and *foresight*. Ultimately, I underscore the unwavering commitment and consistency of our thinking on how we set out to catapult DUT to greatness through its people – the *right people*, in the *right seats*, performing their *right roles right*¹ - as the invaluable source for the realisation of this ambition.

As is now part of the *DUT Way*, below I use ENVISION2030's four (4) Perspectives as my macro framework. Later in section 4 below, I introduce a sub-framework to present salient aspects of *Transformed Academia*, more especially what I have termed *Equity in and of Learning*, which buttresses our *Distinctive Education*.

2. STEWARDSHIP

Stewardship comprises three interconnected Strategic Objectives (SOs), namely *Lived Values*, *Institutional Culture* and *Creativity*. It is essentially about people, 'the source'² of everything that happens in organisations, namely progress and advancement, but stagnation and regression, too. It is for this reason that at the heart of the *DUT Way* is our mantra: 'the right people, in the right seats, performing their right roles right'. Such are the people who make DUT progress and advance and not regress and degenerate.

A little bit of *hindsight* and some *insight* into it. On assumption of duty on 1 October 2016, I held several strategic engagements with the Chair of Council, Mr Wiseman Madinane, other stakeholders and executive managers. These engagements focused on systemic and operational 'pathologies', which continued to frustrate DUT's *raison d'être*, shaking its foundations as a university worth its name. Evidently, these 'pathologies' stood in the way of DUT soaring high to greatness, becoming a great university of technology. The outcome of these engagements is a document appropriately titled, *Deepened foundations, Soaring outcomes: Refining and nuancing DUT's Strategic Plan 2015-2019*, which served as a discussion document at Council's 18 November 2019 workshop. [**Accessible on our website**]. This document was preceded by at least two *Iminingo* issues of 5 and 31 October 2016. In so many ways, ENVISION2030 draws much of its inspiration and substantive elements from this document as you will see demonstrated below. Just to quote from my 5 October 2016 *Iminingo*:

"Yes, I may not be able to take care of each and every individual. But, through an open, transparent, fair, equitable, values- and principle-based system that I will foster, the management team, yourselves as members of this community and I shall do so. The system will be robust, deliberative, evidence-based, innovative and most importantly, future oriented. Its success requires total commitment, discipline and excellent performance in the process of pursuing our common future."

In the quotation above, there are references to 'values and principles', 'transparent', 'fair', 'commitment', 'innovative', 'excellent' and more; words that, by now, are part of the *DUT Way*. During a series of Town Hall meetings we held and surveys we ran in 2019, the current values and principles, which incorporate the ones I referred to in 2016, emerged independently. This is one of the first signs that our people equally wanted us to move collectively to fix our 'pathologies' and soar to greatness. In short, our *values and principles* were suggested by us, belong to all of us and must be lived by all of us.

It is now about 5 years since then. So much has been done in the area of *Stewardship*. Most importantly, our *Living Values Framework (LVF)*, which explains behaviours expected of all of us, was approved by Council on 17 September 2022. Our LVF's formal launch took place during the week, 18-21 July 2023. That week's activities included a broad-based approach where staff and students participated in a competition to design icons for our values and principles. Several initiatives are now in place, which align with our LVF. To mention

¹ This is a combination of Jim Collins' and Peter Drucker's theories and some minor additions thereto by me. Collins talks about the right people in the right seats. I added the bit about 'performing their roles right'. Drucker asserts that leadership is about *doing the right things* and management is *doing things right*. This motivated me to revise that last part of the statement to 'performing their right roles right', adding another 'right' before 'roles'

² Pascal Finette. *Rethinking People*. The Heretic. 2017.

just a few, namely the inclusion of aspects of our LVF in our recruitment and performance assessment processes (360-degree PerMS assessments), the introduction of DUT Bravos, and so many others.

So, before and during the *Different* phase, we did not just dream about living our *values and principles*. We designed a framework for embedding them, the LVF. We started to infuse the LVF in several policies and procedures. Most notably, through our 360-degrees PerMS assessments, we monitor and evaluate each employee's adherence to it. Through DUT Bravos, we incentivise those who demonstrate living them.

All of the above is just *hindsight*. We still have a long way to go, which requires some *insights* and *foresight*. As we usher in the *Upended* phase (2024-2026), we must focus steadfastly and unequivocally on *institutionalising*, *normalising* and eventually *demonstrating* our LVF in the critical life-cycles of our students and staff. In particular, we will:

- **Institutionalise** the LVF in terms of key practices in the student life cycle; leveraging the *people-centred and engaged* DNA strand.
- **Normalise** the LVF in terms of key practices in the student lifecycle, leveraging the institutional culture and a *distinctive education*.
- **Demonstrate** the LVF in all actions and decision making, leveraging the engaged university and the adaptive graduate.

3. SYSTEMS AND PROCESSES

Systems and Processes are what makes every organisation 'do things right'. While ENVISION2030 comprises three SOs, namely, *Innovative Curricular and Research*, *Digital Environment* and the *State-of-the-Art Infrastructure*, I will also reflect on other key related systems and processes we have introduced.

3.1 Institutional Reviews: towards Transformed Academia

Some deeper *hindsight* and *insight* into institutional reviews is appropriate, beyond what is provided in the introduction above. As noted, several people during my initial engagements in 2016 decried administrative, management and sub-cultural 'pathologies', which continued to fester unabated at DUT. A turnaround had to be found in this respect.

For this reason, the 2016 document referred to above, *Deepened Foundations, Soaring Outcomes*, has a section titled *Transformation, Social Cohesion and Institutional Culture*, which introduces several concepts on transformation. *Institutional Culture*, which *Stewardship* seeks to transform is, in this list. The concept of the 'twin challenge of equity and excellence' was also introduced; these two concepts being two sides of the same coin, with one side never allowed to compromise the other. We now have clear guidelines in our appointment processes regarding *equity and excellence*. While substantial progress in *equity and excellence* is yet to be recorded, we have to soon transcend into matters of quantity versus quality, especially in academia.

In this context, it must be evident that Phase I of our institutional review process was conceived just before and firmed up at the 18 November 2016 workshop. Those who wish to explain it as a sadist and frivolous exercise, as mentioned in the introduction, may have had memory loss over the last almost 8 years given many communiques and SOUAs I have written in this respect. Firstly, it must be remembered that the merger of more than 20 years ago was hardly more than just pooling together all the staff and units from the two constituent technikons. There is, invariably, duplication and confusion of roles and functions. Secondly, the logic of whatever was done then may not necessarily align with ENVISION2030. Thirdly, the introduction of a new Enterprise Resource Planning (ERP) system based on SAP, Oracle and PeopleSoft, which are leaders in these platforms, suggests business unusual, away from labour intensive

manual systems. When one considers these points, the need for institutional reviews which are ongoing, and now focusing on Phase 2, is a no-brainer. It is no wonder then that Phase 2 and this academic transformation exercise had to trail Phase 1.

As we usher in the *Upended* phase, our *hindsight*, *insight* and *foresight* should suggest that if we failed to identify resources from elsewhere within the university, which could be re-employed in academia, we would be betraying our academic *raison d'être*. We would be a university in name only if our primary focus were not academia. Everything we do at a university must contribute towards academic transformation, advancement and excellence. For example, to improve the quality of our academic provision and be ready for *DUT's Phi-Ed*, which does not work well with big lectures, we need to reduce our high student to staff ratios. There are many other ratios and targets in our *Enrolment Plan: 2020-2025* we committed to in 2019. The deadline for them is 2025. Simply, without re-allocating internal resources via the institutional review process in an environment where our salary bill must, according to DHET guidelines, not exceed 62% of our operating income, *Transformed Academia* would be a non-starter.

3.2 Innovative curricula and research: embedding DUT's Phi-Ed

In *hindsight*, the HEQSF implementation, whose deadline was December 2019, put a heavy burden on UoTs, which had to revise most of their programmes. As a result, pre-2019, there was much focus at DUT on what we called then *curriculum renewal*. The 2016 document, *Deepened Foundations, Soaring Outcomes*, notes that the *curriculum renewal* we referred to then was merely a compliance exercise. Much deeper and substantive concepts of curriculum transformation would have to be explored going forward. Below, let me provide you more *insight* on what now undergirds DUT's curriculum transformation journey, namely our *DUT Phi-Ed* and what it portends for our *innovative curricula and research*³.

A sub-section in this 2016 document introduces the concept of *A new philosophy and practice on innovation and entrepreneurship education*. From the very moment of my inaugural address as Vice-Chancellor & Principal in 2016, I planted the seed for DUT to move away, deliberately so, from the hackneyed and moribund approach or philosophy of education, which puts pride in 'universities of technology educating and training for the workplace' when workplaces are fast disappearing in South Africa. Even though our philosophy of education may only have been adopted by Senate at its 8 March 2023 meeting, the origins of what we now call *DUT's Phi-Ed* date back to 2016. The plan was that the crafting thereof would await the outcomes of ENVISION2030 so that it would be aligned to it appropriately. As early as 2020 after Council's approval of ENVISION2020 on 30 November 2019, the two then Deputy Vice-Chancellors for Teaching & Learning and for Research, Innovation & Engagement were given the task of producing a short statement, with its underlying conceptual, philosophical, and theoretical underpinnings. In fact, both the previous and the most recent directors for the Centre for Learning and Teaching (CELТ) produced discussion/position documents expressing their own professional take on what was to become *DUT's Phi-Ed*. Eventually, and in line with *shared responsibility and accountability*, an appropriate short statement was produced by the Implementation Support Practitioners³ (ISPs) team in 2022.

While not all our students have the mindset and attitude to become entrepreneurs, I implored DUT to produce entrepreneurs by design and not by default. In *Deepened Foundations, Soaring Outcomes*, I made the following statement, which I repeated in different words in the State of the University Address 2020:

"My little dream is that in a few years, if out of the 26 000 students we currently enrol, we could graduate only 0.05% (that is just 13 graduates) of them as tried and tested entrepreneurs, DUT would have made a sterling contribution to our city and our region."

³ **Implementation Support Practitioners** is a team of dedicated DUT people – academics and support staff – whose role is to support everyone at DUT, especially members of the executive team – to cascade ENVISION2030, the Strategic Plan 2030 and our EAPPs throughout the university.

After so many years of incremental development, there should be no confusion among our senior managers and academics about the origins and philosophical underpinnings of *DUT's Phi-Ed*. Some of us may be befuddled about 'constructivism' as a theory of learning. Some may not have read Piaget's⁴, Vygotsky's⁵, and I may also add Freire's⁶, theories of learning (as opposed to teaching), amongst many other works in this field.

Some of us may even present arguments to the effect that our students have a socio-educational background that does not accord with *DUT's Phi-Ed*. Some of us, equally and vehemently so, eschew what Freire calls 'the banking model'. To wit, our students are not 'clean slates' and are not mere 'receptacles for knowledge'. We refuse to keep them dawdling in rote-learning while the privileged ones among them continue to be creative, innovative and entrepreneurial and end up leading them in the broader society. Perhaps, because of the anti-constructivism I point to above about the capacity of our young people, those who harbour such hackneyed concepts may have failed to connect the dots over the last 4 to 5 years, if not the last 7 years. They must now wake up from their deep slumber and smell the coffee!

Are they not aware that in 2020, soon after ENVISION2030 had been approved, a report was produced on a survey conducted on learning approaches which align with several ENVISION2030 strategic objectives like 'creativity', 'innovative curricula and research', 'distinctive curricula' and 'adaptive graduates'? This was part of the initial work the then DVCs initiated as pointed out above. Did detractors and prophets of doom not become aware that as Covid-19 emerged in 2020, Professor Christoff Maurer from Munich University of Applied Sciences spent about a year at DUT providing train-the-trainer courses to some of our academics on Project Based Learning (PBL)? They may not have noticed that Universal Design Thinking (UDL) was also introduced around this period, courtesy of UCT's Design School. These are precursors and building blocks of *DUT's Phi-Ed*.

While ENVISION2030 is our institutional lodestar, *DUT's Phi-Ed* is the nucleus of our academic lodestar, *Transformed Academia*, which will see radical transformation of DUT's academia. As we usher in the *Upended* phase, our *insight* and *foresight* suggest we will do the following, amongst others:

- **Optimise** our curricula and their nexus with research, seeking out new tangential planes for inter-/multi-disciplinarity.
- **Consolidate** and **extend** strategies aligned to *DUT's Phi-Ed* within all theoretical modules and the teaching-research nexus, incorporating grand global challenges.
- **Embed** novel pedagogies in all spheres of teaching and learning, and review modules for inter-/multi-disciplinarity, and actively pursue innovation and research within these tangential planes.

3.3 Digital Environment

Digital Environment is about adopting integrated digital systems and processes that enable our people to deliver optimally.

A bit of *hindsight* in this case. In 2016, during my engagements with some senior managers, I was appalled to learn from a highly experienced one when I asked why our systems had been overwhelmingly manual, that DUT had perfected its manual systems! In the 21st century and during the 4th-5th Industrial

⁴ Piaget

⁵ Vygotsky

⁶ Freire

Revolution, they could only tell that to the birds! Clearly, this senior manager had not read my 5 October 2016 communique (see extract above on p.3). Sadly, the comments were inimical to building a robust, innovative, integrated and a future-oriented system at DUT. I knew then that several sub-systems had to be designed and implemented so we could have an integrated and efficient system.

Since 2016 several sub-system changes have taken place in various areas of operation. I do not have enough space to chronicle them. However, fast-forward to April 2022, as referred to generally in subsection 3.1 above, we implemented our new Enterprise Resource Planning (ERP) system, completing its Phase 1 in April 2023. Phase 2 started in May 2023 and went live on 5 January 2024. SAP Modules for Finance, Procurement and Human Capital Services (HCS) were an integral part of Phase 2. With the Student Information System (SIS) being complex and consisting of lots of data most of which also drive Finance and parts of HCS, it will follow through as part of Phase 3, which will then go live in December 2024. However, the student admissions element of SIS will be in place by the second quarter of 2024 in preparation for student admissions around this time in 2024, for the 2025 enrolment cohort.

Digitalisation has proceeded incrementally in several areas of operation. Examples are in our planning sub-system as demonstrated by our Strategy Tracker and PowerHEDA-based planning, which have been introduced. In academia, AutoScholar, traces the performance of students at risk of failing. In HCS, we now have e-PerMS, which has simplified our interaction with that sub-system. DUT's network and Wi-Fi system remain our bugbear after much investment and promises of improvement. Our new Deputy Vice-Chancellor responsible for these elements is seized with challenges in this field. There are many other sub-systems that beg our attention. For example, our Research and Post-graduate Studies (RPS) sub-system, which involves manual PG forms sent via emails, which sometimes get 'lost', and long periods for ethical clearance, must be digitalised.

As we usher in the *Upended phase*, our *insight* and *foresight* suggest we will do the following, amongst others:

- **Finalise the ERP implementation** and ensure it is managed robustly and maintained efficiently.
- **Introduce**, incrementally, several **other digitalised modules** (e.g. for RPS referred to above) beyond the first four we now have in place but ensuring they are part of a seamless and integrated system.
- Provide **adequate change management and training** to ensure that our integrated digital systems and processes are fully utilised and help our people and the university to deliver optimally.

3.4 State-of-the-art infrastructure

Construction projects, which are part of our implementation of the Long-Term Spatial Plan 2020-2040 continue across our campuses, with two major projects at Indumiso (extension to Engineering and additional lecture halls) and Steve Biko (a student centre and multi-purpose halls) are nearing completion by June 2024. We experienced inordinate delays in completing these projects due to various reasons, not least the mafia-infestation and general unscrupulousness in this industry. As 2023 ended, new projects at Ritson (Health Sciences and an Innovation Hub) and Steve Biko (an administration building) campuses commenced and are due for completion in 2025.

We should all be aware that student accommodation remains the soft underbelly of many universities, not least DUT, which has no more than 4000 (12.5%) university-owned beds for a student population of over 32 000. At its 26 November 2022 meeting, Council approved for submission to our Minister of Higher Education, Science and Innovation a uniquely DUT Student Housing Project based on the concept of Public Private Partnerships. This project, which had been scheduled to start during the first quarter of 2024, will see around 9 000 student beds being provided by 2025 in partnership with NSFAS and the

private sector, subject to ministerial approval. This number translates to just under 30% of our current student population, which is more than double what we currently have. Unfortunately, close to 18 months since then, we have not received the approval, which will affect the dates of completion, if at all we will be able to start. Management and Council will certainly work hard to find reasonable and affordable solutions that ensure DUT's student bed capacity improves.

As a measure to enhance security on our campuses and immediate precincts, Protection Services embarked on several projects such as the installation of new servers to store security data and the repositioning of CCTV cameras for better coverage. While the new buildings will have advanced security systems, the *Upended phase* will see more improvements in older buildings and in access control. With the anticipated completion of major construction by the end of 2025, the university will not only look and feel *Different*, but it will also provide an 'ergonomic, fit-for-purpose and safe living, working and learning environment' and thus taking us closer to our *Upended phase* in this field.

4. SUSTAINABILITY

The Brundtland⁷ definition of *Sustainable Development* defines it as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. To bring this definition closer to home, such sustainable development is, therefore, about ensuring that its elements as encapsulated in the triple-E of *Economy, Equity and Environment* are kept in sharp focus. It is for this reason that DUT's *Sustainability Perspective*, comprises three SOs, namely, *Distinctive Education* (representing *Equity*), *Financial Sustainability* (representing *Economy*) and *Green Ecosystems* (representing *Environment*).

4.1 Distinctive Education: Equity in and of Learning

Distinctive Education is about 'creating a compelling and future-oriented living and learning environment' at DUT. Given the concept of *Equity* introduced above, I will demonstrate how it interlards with *Distinctive Education*.

A little bit of *hindsight* and *insight* here. Firstly, ENVISION2030 was designed with interlocking and interdependent SOs; hence the intertwining arrows you see in the strategy-on-a-page you may have wondered all along what they mean. Secondly, due to this interlocking, SOs like *Digital Environment* and *State-of-the-art infrastructure*, amongst others, are as much about living as they are about learning. Thus, putting the 'living' element aside as covered by these other SOs, we are then left with the 'learning' element. *Transformed Academia* is fundamentally about learning in pursuit of knowledge through research and innovation. Further, given that ENVISION2030 interlards *Equity* with *Distinctive Education*, this subsection must, therefore, focus on what I term *Equity in and of Learning*. The following questions, therefore, become germane with regard to *Equity in and of Learning* at DUT:

Generally, how shall we future-proof our *Transformed Academia* so that future generations will also find DUT thriving and continuing to provide high quality education? Our future-proofing exercise must, in particular, explore the following:

- What **Plans** shall we devise to ensure that our *Transformed Academia* becomes a reality? What **operational structures** shall be deemed to be fit-for-purpose to produce the products referred to below?
- Which **People** - *the right ones, occupying the right seats and performing their right roles right* - shall be entrusted with delivering on this herculean task? What **pedigree** shall be expected of them?

⁷ Brundtland, 1987. World Commission on Environment and Development.

- What **Products** - intellectual, educational - must emerge from *DUT Phi-Ed* and how does the latter **irradiate** our *innovative curricula and research*?
- Where will the **Pennies** come from to do all this, within the constraints of *financial sustainability* and a degenerating fiscus we depend on?

Just before we deal with the questions above, please note that ENVISION2030's interwovenness also suggests that the two sections above on *institutional reviews* and on *innovative curricula and research* also constitute integral elements of a *distinctive education*. The overall message on *institutional reviews*, as intimated in sub-section 3.1 above already, is that the reason for them is to ensure that we can re-invest in what we now call *Transformed Academia*. The overall message is that *DUT's Phi-Ed* is the nucleus of our academic lodestar, *Transformed Academia*, whose cell is *innovative curricula and research*, which keep DUT's education robust, productive and sustainable.

The questions above suggest a self-evident framework for our *Transformed Academia*, comprising *Plans, People, Products and Pennies* to deal with what I termed above *Equity in and of Learning*, which, in turn, ensures *Distinctive Education*, as argued above. For some years before ENVISION2030 was approved, I used this framework I call the *4P's Framework*, which I developed more than 10 years ago for reporting and analysis.

4.1.1 PLANS at department/faculty levels to support our intellectual/educational pursuits

The academic department is the bedrock of academic pursuit and its *products* in teaching and learning, and in research, innovation, entrepreneurship, and engagement with the broader society. We have not realigned departments and faculties to ensure their fitness for purpose in line with ENVISION2030. Any modicum of success in pursuing *Transformed Academia* is a pipe dream without the attendant realignment.

a) Strategically aligning academic departments and faculties

It is in academic departments that academic programmes are conceived, designed and delivered. Our overall outputs, outcomes, impacts and reputation emanate from them. In fact, the faculty is more of a secondary coordinating structure, let alone the rest of our structures of governance and management. Without strategically aligned departments and faculties, the university would be a hollowed-out entity. ENVISION2030 and *DUT's Phi-Ed* would, indeed, remain just a mirage. Thus, henceforth, departments, through their operational plans, must operate with ENVISION2030's full strategic intent, which must cascade upwards into faculty operational plans. As a start, a capacity building initiative was launched in May 2022 to ensure that heads of department lead not only administratively, but, more importantly, strategically and in alignment with ENVISION2030. This initiative must be institutionalised through Deputy Vice-chancellors and Executive Deans personally leading these developments. Most of this cohort has been at DUT for several years and are now well capacitated on ENVISION2030 theoretically, philosophically and practically to deliver on this task. No external consultant should be more knowledgeable than they are given how ENVISION2030 and its tools were conceived internally with their contributions. In our Institutional Planning, Monitoring and Evaluation (IPME) unit and in our ENVISION2030 Implementation Support Practitioners (ISPs) we have substantial internal capacity to support these developments.

b) Provision of adequate and relevant support to HODs

A survey was conducted in 2021 on challenges HoDs face at DUT. In fact, before then, we had been told the reason why we are failing to recruit HoDs had been because our HoD allowance had been low. Yet, after increasing it by at least 100%, we still failed to recruit them. One of

the recommendations from the survey is that administrative support must be expanded. Employing the maxim that *structure follows function and function, in turn, follows strategy*, all we need to do is to ensure that the strategy and the function are well-understood, which is what the HoD capacity building project referred to just above is about. Whatever sources and resources – human and otherwise – we require at whatever level of operation at departmental and faculty levels will be determined first by the *strategy*, then *function* followed by appropriate *structures*. Preliminary ideas on these are provided just below.

c) The structure and reporting lines of faculties, departments, centres and institutes

To re-align these academic structures and units to ENVISION2030, we must review the logic used to decide on faculty clusters almost 20 years ago during the merger process. The information we have is that the university relied more on numbers and assumed financial viability, and less so on *academic viability* criteria and *cognate resonance*. For these structures and units ‘to play their right roles right’, *cognate resonance* and *academic viability* will, henceforth, constitute our primary criteria for re-aligning our faculties. Centres and institutes within the realm of *Research, Innovation and Engagement*, have had quite confusing reporting lines, sometimes to individual executives/senior managers. To maintain academic rigour, centres and institutes must remain ensconced within their cognate fields. Multi-, inter-, trans- and cross-disciplinarity will be achieved not by divorcing them from their cognate clusters and keeping them in silos. Rather, organic integrative matrices or *tangential planes* will be created for that purpose. As a start, the Executive Management Committee (EMC) has agreed to re-route reporting lines for these entities to faculties housing the relevant cognate disciplines. This had certainly caused some angst among some centres and institutes, which have been operating in different and unusual ways. More will be done to re-align work in these units to the broader departmental and faculty level operational regimes and plans.

4.1.2 PEOPLE (academic staff) and their pedigree

As is well known at DUT by now, I repeat: DUT always needs ‘*the right people, occupying the right seats and performing their right roles right*’. However, with ENVISION2030 and more particularly, our *DUT Phi-Ed* and its onerous obligations on every member of our community, our academic corps must, over time, meet this expectation. Below, I share some of the initiatives we have pursued and new ones we will pursue to meet these expectations.

a) Retrenchment of lecturers without master’s degrees

In August 2021, we retrenched at least 31 lecturers who failed to obtain Master’s degrees between 2008 and 2021 despite the university’s generous support. Contrary to what some may argue, this was not just a sadistic and frivolous pursuit, I repeat. Instead, this aimed at ensuring we have ‘*the right people, occupying the right seats and performing their right roles right*’. I hope, at least in *hindsight*, it will dawn on all of us how important this exercise was and how it relates to our next phase of (academic) *institutional review*, which *Transformed Academia* encapsulates.

b) Capacity-building for creativity, research, innovation, entrepreneurship and DUT’s Phi-Ed

We cannot sustain the advances we have made so far towards greatness based on only about 18.5% of academics with doctorates being demonstrably creative, innovative and productive. Sooner than later, DUT must consider what the minimum requirements will be for each category of academic and what expectations will be introduced across the hierarchy. We must also set firm rates of productivity at all levels.

Beyond master's and doctoral degree attainment and readying ourselves to implement the *DUT Phi-Ed* fully, we must remember that we are not just a university, but a university of technology. Our *adaptive graduates* must have the capacity to *do the right things right* out there in the world. Creativity, innovation and entrepreneurship are not just philosophical and theoretical, but must find practical expression. Knowing that several of our academics may not have had exposure to industry, and if they did, it may be many years ago, we must create a revolving door between DUT's academics and industry, and the broader society. As an example, we must bring on board '*academic entrepreneurs*'⁸ from industry and encourage our own '*entrepreneurial academics*'⁹ to go out there for reasonable periods of time.

c) Academics as efficient, effective and professional learning facilitators in the context of DUT's Phi-Ed

Is there refutable evidence that merely by virtue of knowing a subject, an academic anywhere in the world is innately an efficient, effective and professional learning facilitator or educator? Even limiting this question to current learning and teaching approaches we are more familiar with, my hypothesis, by a mere counterexample some who are dismal lecturers provide, is that there is no such evidence. How much more when we usher in the *DUT Phi-Ed*? UoTs are about producing professionals primarily and not, necessarily, pure theoreticians. But, how does a lecturer who is not a professional learning facilitator ever hope to produce *adaptive graduates* as competent professionals, launching them into spaces they (the lecturers) have hardly any current familiarity with? I am, by no means, suggesting we do not have such academics at our universities and at DUT, in particular. If we do, it would not be by design, but by default. A university space is not a space of doing things by default, but through carefully conceptualised, designed and delivered learning programmes and outcomes thereof. Equally, lecturers or learning facilitators must not facilitate learning by default but by design.

My next hypothesis is that there is hardly an academic programme in South Africa's university system geared towards professionalising learning facilitation by lecturers. After completing their own high level qualifications, such a programme must help to supplement the subject content knowledge academics have with Pedagogical Content Knowledge (PCK). Considering what *DUT's Phi-Ed* presupposes in terms of its philosophical underpinnings and practical implications, such a programme is long overdue. I am not talking about many Higher Education qualifications at certificate right up to doctoral levels which are currently being offered, but something completely different. Thus, a rigorous homegrown training programme must be established and institutionalised so that our academics will be well equipped with PCK and exposed to relevant theories and practices of learning that will find practical expression in the fields/modules/courses they teach. This must not be any regular certificate/diploma in higher education, but a carefully designed *Phi-Ed* aligned programme.

d) Academic staff provision at all levels

Another pressing challenge is whether all departments have academics with the right level of qualifications, experience and academic track record across the hierarchy, namely from junior lecturer, to lecturer, senior lecturer, associate professor and professor. A survey conducted at DUT around March 2022 shows that DUT's academic staff provision is sub-optimal and is not in line with some benchmarks provided in a report of around the same time, courtesy of Stellenbosch University's DSI-NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy (SciSTIP). DUT will not be great, neither in teaching and learning nor in research and innovation if some departments lack academic seniority. We often advertise academic positions as lecturer/senior lecturer/associate professor/professor, demonstrating we have no idea what level of seniority we wish to achieve. Anything goes for

⁸ An *academic entrepreneur* is a person in business or industry with deep affinity to and capacity for academia.

⁹ An *entrepreneurial academic* is an academic who bristles with ideas, creativity and innovation, which, in turn, hark back to entrepreneurship.

us even if we could have no single professor in a department. This is a recipe for becoming a university in name only.

e) The great myth about a lack of highly qualified black/African academics and Heads of Department (HODs)

A sad and racist narrative abounds in this country generally, and at DUT in particular, to the effect that black/African South African academics are lazy and are thus not able to advance academically. Accordingly, the apparent difficulty in recruiting HoDs and highly accomplished academics at DUT results from this. I need not mention that none other than Professor Fulufhelo Nemavhola debunked this myth within a year of his appointment as Executive Dean: Engineering & the Built Environment (EBE) in August 2022. This field should, by its nature, be one of the most difficult ones in which to find highly qualified people. Within that relatively short period, he facilitated the recruitment of about eight (8) highly accomplished young black/African South African professors and senior lecturers, six (6) of whom are HoDs now. This constitutes 60% of HoDs in the faculty up from NO black/African South African HoD in EBE when he took over. I have no doubt that using his example, we will soon have a full complement of highly accomplished HoDs and many other younger academics across DUT. With such energy, enthusiasm and unwavering resolve, there is no doubt DUT will be great.

Just in case there are xenophobic scaremongers, I must hasten to explain that no great university relies on only its citizens to remain great. University territory transcends provincial and national borders. It also transcends gender, race, ethnicity and religion. We need many other people from within our continent and from all other continents to make us great. In fact, in the same EBE, two foreign nationals from India and Zimbabwe have just recently been recruited as HoDs. We will continue to recruit foreign nationals, but not at the expense of South African talent we must nurture, in general.

4.1.3 PRODUCTS (what the DUT Phi-Ed propounds regarding curricula and research)

For DUT to produce *adaptive graduates* who have the ‘*acumen to initiate, influence and respond to changes in the world*’ through DUT’s *Phi-Ed*, we can no longer postpone the systemic and systematic review of our curricula. This task is more urgent.

a) DUT’s General Education (Gen-Ed)

A review of this foundational programme is required in the context of the *DUT Phi-Ed*. In the intervening period since its inception, several concepts like decolonisation, science and society, creativity, innovation, entrepreneurship, values and principles, and so forth, gained currency. To what extent have/are these been/being embedded and institutionalised? And, what will be jettisoned so that Gen-Ed does not become cluttered? How possible is it to embed some of these concepts, especially creativity, innovation and entrepreneurship, in the main curricula in the departments and faculties, perhaps, via PBL and UDL? What shall all of the considerations above make of Gen-Ed?

b) Foundation and Extended Curriculum Programmes

A review of the efficacy of, and productivity in, these programmes is required, including how they align with the *DUT Phi-Ed*. Several programmes, mainly in Science, Technology, Engineering and Mathematics (STEM) have persistently high dropout rates and low success and graduation rates. We also face the ignominy of our Science, Engineering and Technology (SET) proportion, as DHET’s targets put it, as a university of technology not meeting the national target. Meanwhile, some faculties have adjusted their entry requirements hoping, amongst others, to attract more students. Some have also introduced bachelors programmes which require higher

levels of attainment from the same pool of students we attract, who are mainly from lower school quintiles.

c) Mainstreaming Academic Programmes

A review of our programme offerings is required. We cannot continue to offer historical but dead-end, un-strategic and unviable programmes, some of which leave our graduates unemployed if not unemployable, with their adaptiveness in their gradueness having been sapped out by same. Several criteria like strategic importance, academic viability, cognate resonance, quality provision, availability of well-qualified academics, and societal demand, will be used to make decisions on programmes we will phase out and those we will phase in, aligned with the *DUT Phi-Ed*.

d) Research, Innovation and Entrepreneurship Programmes

There are several ways in which DUT could fulfil its promise to *Society*, the latter being an ENVISION2030 Perspective consisting of three SOs, namely *Engaged University*, *Innovation and Entrepreneurship* and *Adaptive Graduates*.

Using *research, innovation and entrepreneurship* to ‘transform society and its economy’ requires that we strengthen some of our existing centres/institutes and re-orientate them so that they ‘contribute towards improving the lives and livelihoods of the broader society’. Those contributions must be deliberate, unequivocal and mutually beneficial, and they must demonstrate that DUT people ‘participate productively in the development of our region, country and the world’, as our *Statement of Intent* demands. For the same reasons, and given our unique location, we must strengthen our *Research Focus Areas (RFAs)* and centres/institutes operating in key fields including the United Nation’s (UN) Sustainable Development Goals (SDGs). Further, we must identify areas/fields of local/regional comparative and competitive advantage around which we could establish unique new research centres/institutes. Beyond such, we could also establish new centres/institutes arising out of looking deeply at emerging fields and concerns in the world even beyond our borders and establishing new niche programmes at DUT.

For many years, I have been suggesting that DUT establish a niche in partnership with SMMEs that wish to grow and compete with multi-national companies. The latter have their Research & Development (R&D) laboratories all over the world, and if they are in this country, those laboratories are likely to be in the older and more traditional universities. Could DUT turn itself into an R&D centre of sorts for SMMEs with sights towards greatness – like we do have - and planning to compete successfully against multi-national companies as we are doing in our space?

4.1.4 PENNIES (Financial Sustainability)

DUT remains financially sustainable largely owing to the prudent approach in which we manage our funds. The *University Planning and Resources Forum (UPRF)* helps to institutionalise the nexus of planning, budgeting, resources and risks management. In turn, this helps to ensure alignment among ENVISION2030, the Strategic Plan 2030, our Annual Performance Plan (APP), our Extended Annual Performance Plan (EAPP), and our Annual Strategic Risk Register. To this end, we are fully aware that the need to review minimum qualifications and productivity rates for academics across the hierarchy concomitantly carries with it the responsibility to review Teaching and Learning, Research and Innovation and Engagement incentives to ensure that they are appropriate and not perverse.

As is part of the *DUT Way* now, people – *the right people, occupying the right seats and performing their right functions right* - are the ‘source’ of our progress and success. For example, in Finance, our CFO, Mrs Nthanyi Dhumazi, CA(SA), a woman at that, was appointed in 2020 after many years DUT’s Finance had been managed with hardly a chartered accountant. Since then, the Finance

domain has seen many improvements emanating from our institutional review process. We now have at least five (5) chartered accountants with capacity to provide strategic, not just operational/administrative, direction to ensure that DUT's financial sustainability improves over the years. This demonstrates the success of our institutional review process, which we must witness in many other fields in support services and academia.

While we are confident that we will continue to be financially sustainable into the future, this does not make DUT immune from many exogenous and deleterious effects of an underperforming South African economy, which has put serious strains on the fiscus. Towards the end of 2023, DHET communicated a reduction of our block grant funding by about R14 million. Further, in 2024, the higher education sector is likely to see a 5.1% cut in block grant funding the current Medium Term Expenditure Framework (MTEF) suggests we would receive.

As most of you should know by now, in support of our ENVISION2030, we have several EAPP-aligned *Big Rocks/Flagship* projects funded internally to the hilt, most of which focus on *Transformed Academia*. Our bugbear is our lacklustre performance in implementing these projects and spending the funds allocated. Exogenous and or other challenges notwithstanding, we have a highly supportive, futuristic Council. Leveraging Council's *foresight* and support, Management is considering several *Disruptive Projects*, which are our long-term projects not necessarily bound by our EAPPs. Most of these projects will buttress the journey to our *Transformed Academia* over the next 10 or more years. At the June 2024 Council meeting, we will present a long-term, multiyear budget to Council, which will be used to fund our *Disruptive Projects*, even way beyond 2030.

5. SOCIETY

Everything I have presented thus far is intended to position DUT as a university of technology that truly '*contributes towards improving the lives and livelihoods of our broader society*'. This is the impact we seek to make and sustain generally and through the three constituent SOs that make up the *Society Perspective*, namely, *Engaged University, Innovation and Entrepreneurship* and *Adaptive Graduates*. The details I have provided above, particularly under *Innovative Curricula and Research* and *Distinctive Education* provide the clearest theory of change on how we will reach our shared destiny in 2030 and beyond.

In *hindsight*, we must, by now, be aware of many *transient impacts* we have recorded even as ENVISION2030 had been in its infancy during the *Different* phase.

No university in South Africa and only a few internationally have values-based, impact-oriented and balanced scorecard-aligned strategy maps as their main strategies. In fact, on this score, our LVF, and a plethora of initiatives around it, arguably make DUT one of the best in the world in this field. This is how impact is made through painstaking and unstintingly focused work. There is no doubt that DUT is very *Different* from what it had been. There is no doubt it has emerged as a strong force to reckon with nationally and internationally.

Earlier I noted that several sub-systems, mechanisms and tools have been developed to support our Strategic Plan 2030, some of which are the Strategy Tracker for monitoring and evaluating our progress/performance and PowerHEDA-based tools for reporting, e-PerMS for assessing individual performance, and so forth. The *Upended phase* will witness the fruits of these sub-systems and tools and demonstrate that strategies and plans can, indeed, be implemented successfully, right here in South Africa where hardly much seems to get implemented. DUT will, in so many ways, blaze the trail for South African universities and organisations to follow. That will be impact.

How many universities in South Africa, and the world over, have recently adopted a new philosophy of education (like the *DUT Phi-Ed*), which revolutionises centuries of staid and hackneyed approaches to teaching and learning? Are there doubts that DUT has taken a lead in this country on innovation and entrepreneurship education, predicated on Project Based Learning and Universal Design Learning? As the *Upended phase*

emerges, there are bigger plans, in partnership with universities of applied sciences in Finland, Ireland Germany and other parts of the world, to fully integrate these learning approaches in our suite of curricula, not just as *ad hoc* modules, but fully-fledged programmes? This will blaze the trail in South Africa and make DUT impactful.

As promised way back in 2016/17, the look and face of DUT is undoubtedly *Different*, with Indumiso, Ritson and Steve Biko campuses undergoing more radical changes. When the Parliamentary Portfolio Committee on Higher Education Science and Innovation visited DUT in January 2022 and saw some of our residences, some of the members branded them as being at 5-star level compared to residences even some of the so-called top universities have. This is undoubtedly about impact. Admittedly, given the nature of the construction industry especially in KZN, with construction mafias and all other unscrupulous activities from internally and externally, as pointed out earlier, construction has not been smooth sailing, like in many other sectors in this dear country. Notwithstanding, the buildings stand and are almost complete as I write. Much to the chagrin of our detractors who had wished otherwise. New ones are now rising like a Phoenix from the rubble of Milena Court and other smaller buildings near Gate I on Steve Biko Road. Not only have we seen new developments, but older buildings that remain have been revamped. How does our S-Block look? How does Open House look? How do Mansfield Hall and the Cane Growers' Hall look? How do lecture halls and libraries at Indumiso and Riverside campuses look? We are not done because the *Upended phase* will see more coming through in this field from 2025 onwards.

Given the *hindsight* and *insight* provided just above, does anyone's *foresight* remain blurred about why DUT continues to feature in several rankings, making its impact reverberate nationally and internationally? Does anyone wonder why DUT has surpassed several traditional universities even in areas like research where we should be trailing them? Does anyone wonder why DUT has become the top university of technology in terms of its research and innovation outputs? No magic. Just pure determination, painstaking and unstintingly focused work, as noted just above!

6. CONCLUSION

It must be clear from all the sections and paragraphs above that DUT still has a long way to go before our *Transformed Academia* gets institutionalised and fully embedded, which will, undoubtedly, catapult us to greatness. Then, we will not just be *Different* and *Upended*, but *Transformed*. Given that we are left with just over six years to *Upend* and *Transform* the university fully and irrevocably, our unique *social compact* needs to deepen with increased speed without compromising the required quality and excellence of work we need to do.

There remain some people at DUT – *not the right ones, not occupying the right seats and not performing any right role right* – who pretend to be oblivious to a *Different* and now *Upending* DUT. Some are ready to collude with the most opportunistic, unscrupulous, corrupt and vile in society, disgruntled because they no longer have space to make DUT the trough for their avaricious appetites. When there are genuine challenges, they are quick to exploit them to justify a return to a past our values and principles and our country's constitution will never allow us to return to. Detractors, doomsayers, scavengers and rogue elements have no place at DUT as we surge along determinedly despite their vile intentions.

Ideas presented here are by no means exhaustive. Hopefully, they will spawn more deliberation. The university boasts several thinkers and innovators who should be able to contribute in some way towards *Transformed Academia*. Reminiscent of 2019 when ENVISION2030 was being developed, we will soon organise our Town Hall meetings and engage transparently and openly on our journey or rather now, our flight, to greatness.

Backward never! Forward ever! ... DUT - *Different, Upended and Transformed!* ... DUT - *Creative, Distinctive. Impactful!*

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