# A Draft Conceptual, Monitoring and Evaluation Framework for Transformation in and of Public Higher Education in South Africa

**Draft for Stakeholder Comment Only**

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I simply want to emphasise that higher education institutions are essential for both economic growth and social justice. If we forget that the need for social, gender and racial equality is equally as important as innovation and growth, then higher education will sharpen social fragmentation, ultimately disabling the institutional capacity to manage universities and countries at large.
– Manuel Castells, 2017

# SECTION 1: Introduction

## Background

With the apartheid system torn down, a new pathway for a democratic society was enshrined in South Africa's Constitution of 1996. The Preamble of the Constitution sets the tone, aspirations and expectations for public institutions in South Africa, including its universities. To 'Heal the divisions of the past and establish a society based on democratic values, social justice, and fundamental human rights' serves as a clear transformational goal articulated in the Constitution and directly relevant for the country's public universities. This expectation set out in the highest law of the land provides an anchor for the transformation discourse within South African higher education.

The Higher Education Act of 1997, along with its 2016 amendments, establishes specific goals and policy mechanisms for the transformation of South Africa's higher education system. The preamble of the 1997 Act states that it is desirable to restructure and transform both higher education programs and institutions so that they can better respond to the human resource, economic, and developmental needs of the country. The 2016 Amendment Act explicitly tasks the Minister of Education with determining the policy on higher education, which must specifically include transformation goals and oversight mechanisms for the public higher education system. The Minister is required to determine these policies after taking the Constitution into consideration and consulting with the Council on Higher Education (CHE).

At the level of policy, a specific transformation pathway for a post-apartheid higher education system was mapped by the National Commission on Higher Education in 1996; and the then national Department of Education set about steering the university system from a fragmented and highly unequal one to a single, coordinated, efficient and equitable system. This understanding of higher education transformation from an unequal and fragmented system to a single coordinated system was clearly set out by Minister Bhengu in the Foreword to the Department of Education's 1997 White Paper:

> [The consultation process that has culminated in this White Paper] has also laid the foundation, in line with my Ministry's commitment to cooperative governance, for all of us together, to jointly embark on the long and exciting journey towards the transformation of the higher education system. The transformation of the higher education system to reflect the changes that are taking place in our society and to strengthen the values and practices of our new democracy is, as I have stated on many previous occasions, not negotiable. The higher education system must be transformed to redress past inequalities, to serve a new social order, to meet pressing national needs and to respond to new realities and opportunities.
>
> The White Paper outlines the framework for change, that is, the higher education system must be planned, governed and funded as a single national co-ordinated system. This will enable us to overcome the fragmentation, inequality and inefficiency which are the legacy of the past, and create a learning society which releases the creative and intellectual energies of all our people towards meeting the goals of reconstruction and development.

The edited volume *Transformation in Higher Education: Global Pressures and Local Realities* (Cloete et al., 2006) summarises the post-1994 period "as having started with a huge, participatory policy effort within a context of optimism for both the expansion of the system and redress for past inequities. This was followed by an 'implementation vacuum' in relation to the new policies, a shift in emphasis after 1997 to efficiency, and finally a reassessment of priorities and a more interventionist approach by government in 2001" (Cloete et al., 2006, 64). The 2000s required new plans and frameworks from universities – tasks again undertaken by government but this time

without the same levels of interest and support from international scholars and policy-makers that characterised the 1990s policy process. The 2000s was also the period when efficiency and coordination were operationalised as the system was reshuffled by merging several higher education institutions. At the time, the outcomes of these major policy interventions and plans were far from certain.

South Africa's higher education sector has for the past three decades therefore experienced a profound transformation from its socially divisive past. While seldom articulated explicitly because stakeholders in the higher education system have become increasingly myopic and preoccupied with an apparent lack of transformation visible in the present, the end goal of transformation is surely a stable and vibrant system that is both *functional and sustainable.* In other words, it is far too common to become mired in the present and to lose sight of what it is that that we want the higher education system to resemble in the future.

Being caught in the present is perhaps not surprising. There is sufficient reason to be frustrated with the pace of transformation, and to point to the failures of the current system. To illustrate, some have sounded alarm that instead of advancing towards a functional and sustainable system, the current state of universities shows evidence of travel in the opposite direction, that is, universities are becoming dysfunctional organisations (Jansen, 2023).

The direction of travel is significant given that the country's universities play a crucial role in the nation's development, including tackling high levels of inequality, corruption, unemployment and poverty. To meet these challenges, while simultaneously adhering to their core function as the central knowledge institution in society, South African universities are having to navigate highly complex change processes. These impact several areas, including increasing access to university education, improving the quality of teaching and research, coping with external shocks and rapid technological developments, fostering innovation, and ensuring equity, diversity and inclusivity against a history of socially engineered inequality and division.

Recent developments do not augur well for the system. Following the seismic shock to the system precipitated by the student protests of 2015 and 2016 fuelled by high university tuition fees and demands to 'decolonise' the university, several commentators have turned their attention to one or another malaise besetting the national higher education system, indicating a renewed interest in and concern for the welfare of South Africa's public universities. This interest and concern is apparent in the titles of publications such as *As by Fire* by Jonathan Jansen (2017), *Rebels and Rage* by Adam Habib (2019), *The Fall of UCT* by David Benatar (2021), *The Responsive University and the Crisis in South Africa* edited by Chris Brink (2021), *Decolonising the Neoliberal University: Law, Psychoanalysis and the Politics of Student Protest* edited by Jaco Barnard-Naude (2021), *Understanding Higher Education: Alternative Perspectives* by Chrissie Boughey and Sioux McKenna (2021), and *Corrupted* by Jonathan Jansen (2023), to name but a few.

The transformation of the higher education system and its constituent 26 public universities has over the past three decades been driven by evolving societal needs, discordant economic demands, the politics of a fledging post-struggle democracy, and relatively rapid technological advancements. Past attempts to establish meaningful and measurable transformation frameworks have floundered in an environment of contested visions for South Africa's higher education system.

It is against this background that the Minister of Higher Education and Training requested the Council on Higher Education (CHE) to propose a transformation framework for the public university sector in South Africa.

The authors acknowledge two notable attempts to consolidate and give meaning to the transformation of South Africa's public universities: (1) University South Africa's (USAf) "A Transformation Barometer for South African Higher Education" (consisting of a draft discussion document and a "Proposed Transformation Framework (Barometer) Reporting Tool") published in 2015;[1] and (2) The HSRC's "The State of Transformation in South Africa's Public Universities: Research Report of the Ministerial Oversight Committee on Transformation in the South African Public Universities (TOC)", commissioned by the Department of Higher Education and Training and published in 2023.[2] Both documents followed the findings of the so-called "Soudien Report" of 2008 (Department of Education, 2008) which pointed to the gap between transformation policy and implementation, and the overall lack of sectoral direction in respect of transformation especially with regard to pervasive discrimination at universities on the grounds of race and gender.

To our minds, the major shortcomings of USAf's Transformation Barometer are three-fold. First, by its own admission (page 20), it did not develop a theory of transformation, but nevertheless proceeded to develop a transformation barometer. Here it is worth noting the words of Johnson et al. (2024) who write from their experience at Wits:

> To enable a comparative approach to transformation in this diverse sector, Keet and Swartz (2015) formulated a comprehensive transformation barometer … The barometer is intended to serve as a reference point for public universities when they report, discuss, and debate aspects of transformation. Its five empirical axes are governance, the experience of higher education, teaching and learning, research, and community engagement. Given the relevance of this tool, it also served to guide the work of the Transformation Oversight Committee, a committee established by the minister to establish the state of transformation in higher education in South Africa (2023). These are sufficiently inclusive for university managers, academics, students, and politicians to assess and compare transformational goals in higher education. The work of Keet and Swartz (2015) provides a useful tool, which the Transformation and Employment Equity Office … employed tacitly to some extent, but *our initiatives were not driven by any single theory or framework*. [emphasis added]

Second, neither the discussion document nor the framework were formally adopted by USAf's member universities; both documents remain drafts, possibly indicating a lack of consensus and buy-in from South Africa's 26 public universities. Third, the barometer is without measurable indicators or targets, leaving each university to interpret the barometer as they see fit; and while having different transformation targets suitable to varying institutional histories and contexts may make sense, the absence of some standardisation in terms of what is measured – that is, what counts as transformation – renders the concept of transformation porous and open to contestation.

The absence of standardised indicators and targets has two drawbacks. As noted in the HSRC report, universities are reporting on their transformation efforts in ways that are inconsistent, thus making comparisons and, more important, aggregation to assess transformation at the system level, impossible: the HSRC study found that "South Africa's 26 public universities had adopted quite disparate approaches to the challenge of conceptualising, implementing and measuring transformation" (page xii). This undermines one of the Barometer's objectives which is to assess transformation at the level of the system (para. 34, p. 19).

The second drawback is the myopic view of transformation; one that prevents all stakeholders in the higher education system from imagining what the system could and should look like if it is one that has transformed. To quote from the Barometer: "Furthermore, there can be no absolute state or

[1] https://usaf.ac.za/wp-content/uploads/2023/06/Transformation-Barometer-_A-Discussion-Paper.pdf
[2] https://repository.hsrc.ac.za/bitstream/handle/20.500.11910/21354/9812929.pdf?sequence=1&isAllowed=y

end point of transformation for the simple reason that societies are inescapably in states of transition and change is a permanent feature of life" (page 19). We agree fully that change takes place in an ever-evolving social, technological and economic context. But we disagree that this precludes us from imagining the university of the future and the system in which it is embedded. As the HSRC report states: "the challenge of assessing the extent and nature of comprehensive transformation at the institutional level was and continues to be complicated by the complexity and great number of indicators that is required and which is made more impenetrable by a lack of standard indicators and few agreed targets across the system" (page xi). Developing indicators and targets gives meaning to how we envision the future higher education system; and it does not prevent us from revisiting and revising indicators and targets as the world changes around us. In fact, we would argue that developing indicators and targets is fully in keeping with the Barometer's conceptualisation of transformation as "a set of social changes at various internal states of transition along a continuum. We must insist on asking 'what' exactly is being referred to when we characterize the 'state of transformation' in a particular setting, and how this relates to other elements in the same system" (page 19).

The HSRC's "The State of Transformation in South Africa's Public Universities" is a backward-looking document that limits its analysis to a reading of two years' of annual reports published by the country's 26 public universities in 2019 and 2020. Such an approach fails to appreciate the promotional nature of annual reports and, consequently, the inherent bias in how universities report retrospectively. The HSRC report does not provide an explanation for why it did not broaden its scope to include, for example, the annual transformation reports published by universities or an analysis of organisational structures and processes to support transformation, or a survey of university students and staff to surface deeply embedded cultures that may be hampering transformation.

Neither the USAf nor the HSRC publications have had the desired impact on South Africa's higher education system or on public universities in that system. If they had, it is hard to imagine why the Minister of Higher Education and Training (DHET) felt it necessary to request the Council on Higher Education (CHE) to commission a third attempt to develop a transformation framework for the higher education system.

The main take-away from these previous reports is that they concur that any subsequent attempt with same ambitions must not reduce transformation to a superficial or overly simplistic conceptualisation of transformation, even if doing so creates real challenges in terms of its measurement. As the USAf Barometer states: "We must reject reductionist, essentialist and one-dimensional conceptions of transformation" (page 19).

To ensure the effective transformation of universities in South Africa, it is therefore urgent to establish a robust framework for conceptualising transformation as well as for monitoring and evaluating the system's progression from a fractured and highly unequal system to one that is both sustainable and that is likely to meet the expectations placed on the country's public universities. In other words, our approach is much less concerned with providing a snapshot of transformation in whatever way it is conceived, and more focused on providing a monitoring and evaluation framework founded on the kind of higher education system that will best serve society in the future.

This report therefore outlines a comprehensive and forward-looking framework for the conceptualisation and development of a monitoring and evaluation for the transformation of South Africa's 26 public universities, tailored to the unique context of South African universities. This

framework aims to track progress, identify challenges, and inform decision-making throughout the transformation process.

## Problem statement

Transformation imperatives are often cited in government higher education policy, but no definitive policy or plans have been produced by government to guide the system towards the transformed higher education system it envisages. And despite past attempts by other actors in the system (e.g. USAf, DHET and CHE) to provide assistance to universities, there is no transformation framework that provides universities and other stakeholders with clear and measurable indicators of transformation.

The absence of a robust and measurable transformation framework risks the university system being mired in personal and/or party politics, confusion, self-interest and disingenuous gestures thereby undermining the contribution of the university to society, resulting in what has been described as 'transformation impossible' (Van Schalkwyk et al., 2021).

In sum, while there have been laudable attempts in the past decade to develop guidelines, policies and frameworks on transformation at both the organisational and system levels, these have not produced instruments and practices that collectively produce a clear and consensual position on the extent to which public universities have transformed, or the required change that remains to be effected in the system.

## Rationale

A well-structured and measurable transformation framework is more likely to ensure that the transformation of South African universities achieves its intended objectives. This framework will:

- Enhance accountability: It will hold university stakeholders accountable for their roles in the transformation process, whether they are government bodies, university administrators, faculty, or students.
- Guide decision-making: The data collected and analysed will provide insights for decision-makers, enabling them to adjust strategies and policies as needed to support transformation objectives.
- Inform resource allocation: Effective monitoring and evaluation according to a common framework with measurable outcomes will inform resource allocation at both national and institutional levels, ensuring that resources are directed toward initiatives with the most significant impact on transformation.

## Objectives

The primary objectives to be achieved following the development of a transformation framework are as follows:

1. To formulate a consensual, visionary, specific and attainable concept of transformation.
2. To assess transformation progress: For the first time, it will be possible to regularly assess the progress of universities in achieving their transformation goals against a common set of measurables and outcomes.

3. To identify challenges: Efforts that go beyond an overly simplistic counting of student or staff representation by race or gender will identify real, systemic, cultural and other barriers hindering transformation.
4. To provide a mechanism for constructive feedback and improvement: While transformation will not readily shake the vested interests of multiple stakeholders, the transformation framework can provide a mechanism for feedback around a common set of indicators and outcomes, as well as for continuous improvement of transformation strategies and initiatives.

## Methods

The transformation framework was developed by following four steps: (1) document review (desk research), (2) an ideation process, (3) a consultation process, and (4) iterative feedback from the CHE's reviewers and from a reference group.

Documents reviewed include national and institutional policy documents, the academic literature, and previously published transformation frameworks. National documents included those of DHET and the CHE; institutional documents included those of universities and other relevant training institutions (including training offices); professional documents included those of USAf, ASSAf and any related professional bodies.

The conceptual work relied in part on a review of the literature on transformation in higher education. However, the research process went beyond the literature by following the method of conceptual analysis as it is understood in philosophy. Paradigmatic conceptual analyses offer definitions of concepts that are to be tested against potential counterexamples that are identified via thought experiments. For proponents of traditional conceptual analysis, the analysis of a concept is successful to the extent that the proposed definition matches people's intuitions about particular cases, including hypothetical cases that figure in crucial thought experiments. This process of paradigmatic conceptualisation was undertaken by the four members of the project team that produced this report.

Based on a proposed conceptualisation of transformation – one that touches on multiple dimensions of universities and that rests on the notion of a functioning and sustainable system – the process of developing a monitoring and evaluation framework was undertaken by the authors (see Part III of this document). Combining a conceptual framework and an M&E framework will produce the first versions of a holistic and operationalizable transformation framework consisting of two constitutive parts.

The rationale for developing the first draft of the framework within a small and diverse expert group was to avoid replicating past attempts in which broad consultation resulted in weak frameworks. Nevertheless, the work of the project team was shared more broadly for input. Following two rounds of comments by the CHE on drafts of the transformation framework, the research team consulted stakeholders gathered at the CHE's 2025 higher education conference held in Johannesburg towards the end of February 2025. The CHE also established a nine-member reference group. The reference group held six meetings. The first two online meetings of the Reference Group discussed the conceptual framework, the additional two online meetings discussed the monitoring and evaluation framework, and the final two meetings enabled members of the Reference Group to provide oral and written feedback to the project team. The reference group provided feedback to the project team on two occasions: once online in November 2025 and again in-person in February

2026. Following the in-person discussions on the proposed transformation framework for higher education in South Africa, the reference group provided a written report to the project team in April 2026.

## Limitations

The transformation framework, its underlying concepts, logic and its indicators will be limited to the transformation of *public* universities in South Africa.

# SECTION 2: Conceptual Framework

# 1. A proposed conceptual framework for the transformation of the university system in South Africa

## Transformation in context: Understanding university systems

Any change (transformation) in the university system from a past to a future state should be toward one that is expected to result in positive outcomes for both the university *and* for society. Past notions of transformation have been highly contested, political, non-specific and difficult to operationalise (Van Schalkwyk et al., 2021). The approach of this document, and of the CHE, is to create for the first time a notion of transformation that is consensual, visionary, specific, operationalizable and attainable.

To operationalise this new notion of transformation, the concept of a functional and sustainable system must be articulated. We begin by defining the concept of a function and sustainable higher education system (and its constituent universities) in relation to the purpose and historical functions of the university. The multiple and competing historical functions of universities globally expose the complexity universities face in managing and integrating transformation into their operations and organisational cultures. We go on to suggest that an understanding of different values and concomitant pressures exerted on the university system provide important insights for understanding the transformation of South Africa's public universities. It is self-evident that the politically-determined contexts in which South African universities have had to operate (pre-, during and post-apartheid), provide additional insight, particularly in terms of the varied dependencies that different universities have been locked into.

### The purpose of higher education in the South African context

The 1997 White Paper (DoE, 1997, 7-8) clearly articulates the purpose of higher education. The purpose of higher education in South Africa is deeply intertwined with the nation's ongoing transition from apartheid to a democratic, inclusive society. According to the White Paper, higher education serves as a primary engine for reconstruction, development, and social transformation, aiming to redress past inequalities and establish a non-racial, non-sexist social order.

At an individual level, higher education exists to meet the learning needs and aspirations of citizens throughout their lives. It equips individuals to maximize their talents, making it a crucial allocator of life chances and a primary vehicle for achieving equity in opportunities. By broadening access for historically marginalized groups, universities should strive to overcome historical fragmentation and release the creative potential of all South Africans.

A core purpose of the higher education sector is to address the development needs of society and the labour market. In a knowledge-driven global economy, universities are tasked with providing the highly trained professionals, knowledge workers, and technical expertise required for national economic growth. This entails expanding access to correct historical imbalances and combat the shortage of high-level skills.

Furthermore, higher education is dedicated to the creation, sharing, and evaluation of knowledge through robust research and intellectual inquiry. Universities must undertake critical scientific scholarship that advances both basic and applied research, driving technological improvement and

innovation. Crucially, this knowledge production must be responsive to the diverse challenges and demands of local, national, and broader African contexts.

Beyond economic and academic goals, higher education in South Africa has a profound moral and political obligation to forge critical, democratic citizenship. It aims to socialize enlightened and responsible citizens who possess a reflective capacity and a commitment to the common good. By fostering an environment of free debate, cultural tolerance, and respect for human rights, universities are expected to help build a vibrant civil society. Additionally, institutions are called upon to demonstrate social responsibility by actively engaging with their surrounding communities to tackle urgent societal conditions such as poverty, disease, and inequality.

Ultimately, the multifaceted purpose of South African higher education is not only to generate globally competitive graduates and research but also to serve as a catalyst for a more equitable, socially cohesive, and prosperous nation.

## Functions of the university system

Transforming universities so that they contribute positively to a democratic society and to national development raises, amongst others, the issue of the historical roles and functions of universities because universities need to be able manage these often-contradictory functions in addition to transformation expectations.

Drawing on Kerr (1991), Castells (2017) argues that historically universities have fulfilled four major key roles in society: ideological apparatuses, that is, as producers of values and social legitimation; the selection of the dominant elites accompanied by a socialisation process that includes the formation of networks for their social cohesion, and the establishment of codes of distinction between them and the rest of society; the training of the labour force with an emphasis on ‘learning to learn’ or to become ‘self-programmable’ workers, which refers to the ability to change and adapt to many different occupations and new technologies all through one’s professional life; and the production of scientific knowledge.

Castells posits that universities are dynamic social systems where these four historically produced functions operate simultaneously. The critical challenge for transformation is the ability to manage and combine these seemingly contradictory functions, which ultimately also determines a country's capacity to participate in the new global knowledge economy, one of the purposes of the university articulated in the 1997 White Paper.

In the context of South African and broader African higher education, the relationship between Castells' historical functions and institutional transformation manifests in several ways.

The legacy of ideological and elite functions: Historically, universities in Africa were rooted in their colonial and apartheid pasts, predominantly functioning as ideological apparatuses and mechanisms for recruiting and training administrative elites. African universities have largely retained these ideological and elite socialisation roles. A major challenge in post-1994 South Africa has been shifting these institutions away from their historical focus on reproducing divided elites toward playing a broader developmental role.

The tension between equity (Access) and science (knowledge production): Castells highlights a fundamental contradiction between the social demand for mass higher education and the requirements of scientific research. In South Africa, early transformation frameworks, such as that of the National Commission on Higher Education (NCHE), focused heavily on equity, democratisation,

and increasing student participation to redress apartheid-era inequalities. However, Castells warns that when universities expand access without corresponding resources, heavy teaching loads can overwhelm the university and "suffocate" the generative scientific research function. Because the transformation discourse was initially disconnected from the globalising knowledge economy, the vital function of knowledge creation and innovation was largely ignored in early South African transformation policies.

The need to revitalise the knowledge production function: For South African universities to transform into true "engines of development," they must do more than train the labour force and produce an indigenous elite. Empirical research indicates that knowledge production at many African universities has historically not been strong enough to enable them to make a sustainable, comprehensive contribution to development (Cloete et al. 2018). To succeed in the global informational economy, South African higher education must bolster its scientific function by producing high-level, "self-programmable" graduates and integrating into global research networks, while simultaneously managing the pressures of social relevance, justice and community engagement.

Ultimately, Castells' framework reveals that true transformation in South African higher education cannot be achieved by focusing on a single function, such as demographic equity or massification alone. Instead, institutions must develop the structural and dynamic capacity to successfully mediate the tension between their political/ideological roles (including epistemic and social justice) and the academic demands of teaching and knowledge production.

Other scholars have also pointed to the functions of universities. Stevens et al. (2008) in their synthesis of the sociological theoretical and empirical scholarship identify the following functions of higher education: allocation (a sorting and stratifying “sieve”); socialization (an “incubator” for the development of competent social actors); legitimation (a “temple” for the certification of knowledge); and a hub (connecting multiple institutional domains: labour market and economy, professions and sciences, the family, philanthropy, and the nation-state).

Kerr (1991) argued that a society must have a pluralistic university system in a pluralistic society serving many functions including constant evaluation of society. Nor can there be a single model for the multi-purpose campus, since some functions combine better than others and there are a number of functions in totality to be performed by higher education. As Castells (2017, 42) puts it: “The ability to manage such contradictions while emphasizing the universities' role in generating knowledge and training labour in the context of the new requirements of the development process will to a large extent determine the capacity of countries and regions to become part of the new world economy.”

## Functional and sustainable

The notion of a functional and sustainable university system rests on universities in the system approaching, meeting or exceeding the expected purposes set out in the 1997 White Paper, and in managing effectively the multiple functions that universities are expected to play. It is suggested, however, that being functional is the minimum requirement and not necessarily sufficient to ensure the transformation of higher education in South Africa. Any such efforts must also be sustainable to ensure that change processes are institutionalised and, therefore, lasting.

In the South African higher education context, defining a "functional and sustainable" university requires balancing the delivery of high-quality, socio-economically relevant education (functionality)

with long-term financial, institutional, and social viability (sustainability). It is a system capable of meeting the country's immediate developmental needs without compromising its future capacity to operate.

A functional system works efficiently to execute its core mandates while remaining deeply tethered to the realities of the country. A functional system recognizes that not all institutions should have identical mandates. It requires a strategic mix of universities that collectively address all tiers of the National Qualifications Framework (NQF) and the Higher Education Qualifications Sub-Framework (HEQSF).

The system must actively reduce critical skills bottlenecks. A functional university produces graduates who are economically active and engages in research that addresses local, continental, and global challenges (such as energy transitions, health crises, or digital governance).

Effective governance and administration is a major structural benchmark. Functionality requires competent university councils, stable executive leadership, and robust academic administration. A system where institutions frequently collapse into dysfunction and require the DHET to appoint independent administrators is, by definition, not functional.

Sustainability in the South African sector is primarily an economic and social imperative, though it includes environmental resilience. Financial viability is the sector's most severe pressure point. A sustainable system requires a funding model that balances state subsidies, student fees, and third-stream income. Crucially, it requires a stable, long-term solution to student funding—one that resolves the chronic governance and disbursement crises within the National Student Financial Aid Scheme (NSFAS) and provides viable funding mechanisms for "missing middle" students.

The system must continuously adapt to reflect the demographic realities of the country. However, sustainability requires moving beyond simply granting access. If historically marginalized students are admitted but drop out at high rates due to a lack of academic or socio-economic support, the system is leaking resources and is socially unsustainable. High throughput (graduation) rates are vital.

A sustainable system must also recruit, fund, and retain a new, demographically diverse generation of academics and researchers. Without this pipeline, institutional knowledge and research output will eventually collapse.

A sustainable national system must bridge the historical resource divide between Historically Advantaged Institutions (HAIs) and Historically Disadvantaged Institutions (HDIs). A sector where rural universities chronically lack the basic physical and digital infrastructure of their urban counterparts cannot be sustained equitably.

In South Africa, there is often a profound tension between functionality and sustainability. For example, expanding student enrolment rapidly to meet social transformation goals (functionality) without a concurrent increase in state subsidies or infrastructure development severely threatens the financial and academic viability of the institution (sustainability). A functional and sustainable South African university is one that navigates this friction without failing its students or its mandate.

Explaining the origins, drivers and effects of university-system dynamics on society are not sufficiently accounted for by any single social theory (Marginson, 2016; Smolentseva, 2021). Similarly, development, both economic and social, and as one important outcome of a functional and sustainable national university system, is subject to a multitude of contextual conditions or variables, and the contribution of the university is but one potentiality in striving for more developed

societies. As Marginson (2016, 247) states: “the manifestation of higher education, stratified populations, economy and labour markets, state policy and regulation, and global relations, the variables are not independent of each other but constitute a combined system of causes”. According to Bourdieu and Passeron (1990, 87): “It is the system of factors, acting as a system, which exerts the indivisible action of a structural causality on behaviour and attitudes … so that it would be absurd to try to isolate the influence of any one factor, or, a fortiori, to credit it with a uniform, univocal influence at the different moments of the process or in the different structures of factors.”

At the root of the varied dynamics at play in the higher system are sets of values that shape expectations for university performance and for the university’s contribution to society (Martin, 2021).

## Values and pressures

Values are understood as being deeply ingrained beliefs and principles that guide individuals and societies in determining what is desirable, important and morally acceptable. They represent the idealized goals and standards a society or person strives to achieve. Values can vary significantly across cultures and individuals and include concepts like freedom, equality and justice. Values provide a framework for making judgements about what is right or wrong, influencing decision-making and behaviour.

Values operate at different levels (Vidovich, 2013). Four levels are proposed – global, national, organisational, and individual – with potential for overlap and differences between each the four levels. Different values at each level may not necessarily be in harmony, nor are they necessarily in concert at each level. This should not be surprising given the many actors both from without and from within the university who make demands on the university from their own value base. In the South African context, some of these actors are the government, the market, students and staff. Other actors may be less visible but are equally important in the South African university context, most notably donor agencies and labour unions (Mills, 2022; Jansen, 2023). This does not to exclude the simultaneous exertion of global pressures on the national system (Clark, 1983).

Values shape policy. “All interesting public policies are the results of trade-offs between values. … While values may in certain proportions reinforce one another, or at least not be contradictory, they will inevitably clash at some point when pursued in the extreme. The law of diminishing returns operates in public policy as well in the marketplace, only in more complex and less understood ways” (Premfors, 1982, 365).

Clark (1983) proposed four basic values in higher education policy: social justice, competence, liberty, and loyalty. Premfors (1982) renamed and expanded Clark’s list of values, suggesting the following value as relevant in the case of higher education: equality, excellence, autonomy, accountability and efficiency. At the risk of oversimplification, we suggest that the following values are dominant in the contemporary higher education policy landscape, many of which are referenced in the White Paper of 1997:

1. *Equity*: a commitment that acknowledges different starting points for university students and staff and to providing equal access to education. This value emphasises that education should be accessible to individuals from all socio-economic backgrounds, ethnicities, genders, and other demographics. Equity is explicitly listed as a fundamental principle guiding the transformation of the higher education system. The White Paper mandates "equity and redress" to ensure fair opportunities for all individuals to enter and succeed in

higher education programs. It calls for the critical identification and abolition of existing inequalities resulting from past policies and practices that were based on race, gender, disability, or other forms of disadvantage. To achieve this, the policy demands increased access for black, female, disabled, and mature students so that the composition of the student body progressively reflects the demographic realities of broader South African society.

2. *Diversity*: equal access should result in a culturally diverse student and staff body, and which includes those from communities marginalised by society. Policies may aim to reduce barriers such as tuition costs or discriminatory practices. Diversity is equally emphasised in the White Paper of 1997 as a core goal for institutions to embrace. The White Paper envisions a single, coordinated system that broadens its social base to cater to a considerably more diverse body of learners across race, class, gender, and age. It explicitly calls for the creation of an enabling institutional environment and culture that is sensitive to and affirms diversity, promotes reconciliation, and respects human life. Furthermore, it requires institutions to transform their cultures to actively support diversity and to foster a democratic ethos, cultural tolerance, and a steadfast commitment to a non-racist and non-sexist social order.
3. *Quality and excellence*: Policies focus on maintaining high academic standards, ensuring that degrees are valuable and that graduates are well-prepared for the workforce. Excellence in research and teaching is often expected (although difficult to define and quantify), drives evaluation, funding and accreditation decisions, and is closely linked to the reputation economy of universities and individual lecturers and researchers. The 1997 White Paper establishes quality as one of the fundamental principles guiding the transformation of South Africa's higher education system. The policy defines the pursuit of quality as the maintenance and application of academic and educational standards. According to the White Paper, this principle requires both complying with specific expectations and aiming for "ideals of excellence". The document explicitly acknowledges that these expectations and ideals of excellence are not rigid; they may differ from context to context depending on the specific purposes being pursued by an institution. Applying this principle involves evaluating educational services and products against set standards to drive continuous improvement, progress, and renewal. Green (n.d.) argues that quality and transformation are intrinsically linked. By intentionally embedding comprehensive transformation goals directly into national evaluation frameworks and standards, the higher education sector can utilize routine quality assurance processes to effectively advance its broader transformation imperatives
4. *Autonomy:* As stated in the 1997 White Paper, “institutional autonomy refers to a high degree of self-regulation and administrative independence [at the level of university] with respect to student admissions, curriculum, methods of teaching and assessment, research, establishment of academic regulations and the internal management of resources generated from private and public sources”. Such autonomy is a condition of effective self-governance.
5. *Academic freedom*: The principle of academic freedom values the independence of educational institutions and their academic staff to determine their curriculum, research topics, and methods. The Constitution of South Africa explicitly makes reference to academic freedom. Within the Bill of Rights, it is protected under the right to freedom of expression. Section 16 states that everyone has the right to freedom of expression, which specifically includes "academic freedom and freedom of scientific research". The 1997 Education White Paper 3 identifies academic freedom as one of the fundamental principles guiding the transformation of South Africa's higher education system. It defines academic freedom as the absence of outside interference, censure, or obstacles in the pursuit and practice of

academic work. According to the White Paper, this freedom is a vital precondition for critical, experimental, and creative thought, making it essential for the advancement of intellectual inquiry and knowledge. The Ministry of Education uses the White Paper to reaffirm its commitment to academic freedom, describing it—alongside institutional autonomy—as a fundamental tenet of higher education and a key condition for a vibrant system, provided it operates within the framework of public accountability.

6. *Globalisation and internationalisation:* In an increasingly interconnected world, policies often emphasize the value of global perspectives and connectedness. This includes encouraging international student exchanges, collaborations between institutions worldwide, and the globalization of curricula. The White Paper acknowledges that South Africa's national agenda for reconstruction is taking place amidst the powerful pressures of globalisation, which involves the integration of the world economy, the information revolution, and the growth of transnational scholarly and scientific networks. Because these global economic relations are interlocking, the policy challenges South Africa to "engage critically and creatively with the global imperatives" while setting its own national and regional priorities.
7. *Relevance (to the needs of society),*
    a. *through the production of new knowledge (research) and its application (innovation)*: Higher education policies often prioritise values related to scientific discovery, technological advancement, and innovation. Research also contributes disproportionately to global university ranking systems which, in turn, leads policy-makers and university leaders to attach greater value to innovation and research activities.
    b. *by providing employable graduates and fulfilling the required human capacity needed for development*: Policies may be influenced by the value of preparing students for the labour market. This includes curricular alignment with workforce needs and providing practical skills.

    In summary, the 1997 Education White Paper 3 places a heavy emphasis on making the higher education system responsive and relevant to the social, economic, and developmental needs of a democratizing South Africa. The policy points out that the historical system suffered from a "chronic mismatch" between higher education outputs and the needs of a modernizing economy. This resulted in severe shortages of highly trained graduates in crucial fields like science, engineering, technology, and commerce, alongside a general lack of attention to pressing local, regional, and broader African challenges.
8. *Cultural and social values*: Higher education can serve broader cultural and social values. For instance, it can promote democracy, citizenship, social cohesion, and cultural preservation. The 1997 Education White Paper 3 establishes that higher education has an "unmatched obligation" to lay the foundations of a critical civil society and to strengthen the country's democratic ethos. The policy outlines several specific ways the higher education system must drive democracy, citizenship, social cohesion, and culture: (1) A fundamental purpose of higher education is the socialisation of "enlightened, responsible and constructively critical citizens". The White Paper dictates that institutions must actively foster a sense of common citizenship and a commitment to the common good. To achieve this, universities and colleges are expected to support a culture of human rights by providing educational programs that encourage critical discourse, creative thinking, and a dedication to a non-racist and non-sexist social order. The system aims to produce graduates who possess the capacity to reflect on prevailing ideas and demonstrate a tolerance for different views and ideas. (2) The policy positions higher education as a vital mechanism for promoting

reconciliation and respect for difference. Institutions are required to transform their cultures to create safe, enabling environments that actively affirm diversity and reject all forms of discrimination or violent behaviour. (3) The White Paper frames cultural preservation and promotion largely through the lens of South Africa's rich, multilingual heritage.

9. *Efficiency*: Policy-makers may focus on ensuring that higher education institutions use resources efficiently, particularly in contexts where there competing demands on government to provide and improve on public service delivery, or where budget allocations for higher education are shrinking in real terms. The 1997 White Paper defines efficiency as a fundamental principle guiding the transformation of South Africa's higher education system. An efficient system is defined as one that functions well without unnecessary duplication or waste, operates within the bounds of affordability and sustainability, and makes the optimal use of available means.
10. *Accountability*: Value is often placed in higher education policy on fiscal responsibility and, given that many universities are funded either directly or indirectly via the public purse, universities are expected to be accountable for their expenditure as well as for the outcomes generated from such expenditure. The 1997 White Paper establishes public accountability as a fundamental principle of South African higher education, defining it as the obligation of institutions to be answerable for their actions and decisions not only to their own governing bodies but also to the broader society.
11. *Sustainability*: Sustainability includes both financial sustainability and environmentally responsible practices and curricula. The 1997 White Paper addresses sustainability primarily through the lenses of the financial viability of public universities.

The values listed above is not exhaustive; nevertheless, the list sufficiently illustrates that there are multiple value spheres at play in higher education.

Some values operate a global level, while others “emerge” (often following internal crises) at a national level. For example, in South Africa, certain values have become more explicit following contestation movements such the #FEESMUSTFALL movement of 2015. These values include those of human dignity, decolonisation, epistemic justice, solidarity and collective action, and reflexivity. To expound on two of these values: Epistemic justice is a recognition that multiple knowledge systems are valid and should be centred in how universities teach, research and undertake community engagement. This is against the backdrop of a university history of exclusion of knowledge from the South, including African knowledge systems. Critical reflexivity refers to ongoing self-examination of how universities replicate power and exclusion. Such a practice allows for constant deconstruction of privilege in how universities teach, do research and self-govern. These values may impact substantively on how transformation is understood by certain stakeholders in the higher education system. Social justice as an emergent value is also seen as critical given South Africa’s history. In their chapter on “The Transformative, Responsive University in South Africa”, Keet and Muthwa (2021) highlight the need for “re-imagining the university within a firmer orbit of social justice praxes” (p. 216) and remind us of the unfulfilled vision of the South African higher education sector in respect of “the transitional justice discourses of redress, rights, social justice and development” (p. 217).

It should be self-evident that in different national contexts, higher education systems will be subject to different pressures emanating from a set of values, each which may act on the system to varying degrees of influence and which are prone to change over time. In the case of South Africa, these pressures combine to create a unique demand and accountability regime within which the 26 public universities must function. At the same time, there are enabling and constraining conditions that temper organisational- and individual-level responses to exogenous pressures. These include the

availability of resources, prime among them financial resources, but also human resources which provide the capacity to design and implement change. Technology (Marshall, 2011; Tawafak et al., 2018), communication (Uslu, 2017; Van Schalkwyk and Cloete, 2023) and governance (Jansen 2023) are additional factors that may constrain or enhance the functioning of the university. (See below for further extrapolation of these enabling and constraining conditions in the system.)

From the conflicting values across and between levels arise multiple tensions – between equity and excellence, or between accountability and autonomy, for example. There is also an unresolved tension between efficiency and equal access. Government prioritised efficiency against a backdrop of a growing number of unemployed youths not receiving an education, relatively unregulated tuition fees, increasing financial pressure on both lower- and middle-income students to access universities, closure of alternative routes to employment (via colleges), and stagnant growth in university places (because while government did not determine the tuition fees charged by universities, the exerted financial leverage by linking government funding to annual enrolment numbers agreed to between each university and government). Government strategies, policies and plans to create and sustain university systems are formulated and implemented within a context of dominant and potentially competing values. Policies and their implementation are rarely able to satisfy the value-laden expectations of all actors nor is it likely that the tensions between values can always be resolved.

Nevertheless, there remain in the institution of the university a core set of shared values and norms, and there is increasing evidence that they are under serious threat in some South African universities, potentially representing process of deinstitutionalisation and dysfunctionality:

> Those who seek explanations for dysfunction through the lens of institutional integrity make a values argument. Strong, functional institutions are held together by a set of core values to which those who work and study there subscribe. For universities, the academic project lies at the centre of their commitment to values. Every governance action or management directive has in mind the core functions of teaching, learning, research and civic engagement. When critical decisions must be made, there is a foundational question that frames that moment: what is in the best interests of the university? When major disruptions to the university inevitably happen, it is this sense of shared values about the academic project that binds campus citizens together. Such an institution has integrity which is expressed in the everyday routines of university operations, and which becomes even more visible when the academic enterprise is under threat. Dysfunctional universities seem to lack this asset called institutional integrity. (Jansen 2023, 5-6)

## Dependencies

Path dependence theory connects the past and the future, and draws attention to the self-reinforcing processes and locked in outcomes that can be traced back to the historical trajectory or path of an organisation. This theory is particularly relevant in the South African case because of the separate and different historical trajectories of the country's universities under both the colonial and the apartheid higher education systems.

There is a danger in setting a common set of expectations for all 26 public universities in the South African system. Such an approach masks the current differences and the past trajectories of each university. In fact, whether South Africa has a unitary university system, or whether the constituent parts are too disparate to form a system is an open question.

Path dependencies in the South African university system manifest most acutely in the varying levels of inherent managerial and knowledge capacities available, with historically disadvantaged university having to carry the largest burden in this regard.

Resource dependence theory explains organisational behaviour, in this case universities, in terms of critical resources, their exchange, and the resulting power differentials. This theory assumes that organizations are dependent on external resources, and this results in the need for the strategic management of these dependencies.

In the case of South African universities, dependency on government resources in the form of financial resources remains high, varying from 40-90% of all financial income, depending on the university's ability to attract additional financial resources from sources other than the Department of Higher Education's budget allocation.

Financial resources from government are made available in two forms: block grants and earmarked (or discretionary) funding. Averaging 70% of government grants to universities, block grants comprise the largest share of funding allocation to universities. The block grant includes funds calculated on the basis of teaching inputs and research outputs. The block grant proportion of university funding has declined since the early 2000s. In 2004, the block grant allocation accounted for 87% of government grants to universities; by 2016 it had declined to 58.8%. As the proportion of the block grant has decreased, that of earmarked grants has increased from 8% in 2004 to 41.2% in 2016. In other words, an increasing proportion of government grants to universities is being controlled by the Minister of Higher Education, Science and Innovation suggesting stronger steering of the higher education system towards national imperatives, the erosion of institutional autonomy and, a decline in funding for university operations. The decline in the proportion of the block grant is also reflected in the grant's decline in real terms: the block grant declined by 1.35% per capita in real terms between 2005 and 2015 (Luruli et al., 2022).

Whilst government funding is a significant contributor towards university functioning, it is not the only dependency to consider for a sustainable transformation project. Other significant dependencies include foreign funding, donors, and partnerships with Western universities, which play a significant role in universities' funding models. These, in turn, shape what is considered significant in research and teaching, contributing to whether and how quickly epistemic change occurs.

A further set of dependencies are those that are technological and infrastructural. There is an established reliance on communication and other technologies for governance, instruction and research at universities, and a growing reliance on AI developments in the university sector. South Africa continues to depend on imported digital technologies, platforms and educational tools, which are mainly developed in the Global North. These embed Western assumptions and thus continue a form of epistemic dependency already driving the current university system. African-led technological innovation and open-source solutions to foster digital inclusion comes to the fore as possibilities for breaking these dependencies.

The growing dependence on global university rankings systems is yet another challenge. The challenge here is the continued prioritization of Western research norms and metrics as being indicative of quality and excellence. This contributes to the continued undermining of local relevance and incentivises research efforts that cater to global audiences. This is has led to growing calls to redefine excellence in terms of local relevance.

The relevance of path dependence for transformation is that while it may be possible to conceive at the aggregate level of a university system we want, it is also necessary to accept that not all universities may be able to perform equally in attaining transformation imperatives and goals. In other words, imperatives and goals for transforming the higher education system into one that is both functional and sustainable may be common and shared across the system, but the contribution of individual universities to a specific goal may be specific to the history and context of individual universities. This highlights the need for a common transformation framework underpinned by common values, but with differentiated targets or endpoints.

While the retrospective nature of path dependence theory can be criticised for offering little predictive insight, strategic management by universities of matters that intersect with the dependencies outlined above could focus on reconfiguring relationships to be more mutual, respectful, and grounded in African priorities. Such strategic management aligns more closely with forward-looking focus of transformation.

## Differentiation

As shown in the preceding sections, public universities in South Africa face the challenge of aligning with the purposes of higher education (as defined in the 1997 White Paper) while managing with the multiple functions and external demands within the bounds of each of their specific histories and contexts. At the same time, most government funding does not account for difference and, in fact, drives isomorphism. This has resulted in vertically differentiated system of universities; a system in which universities strive to be similar because of the funding incentives on offer while at the same time differing in their performance and status because of history and context. One path out of the complexity is to accept and support a differentiated higher education system.

If we accept the idea that systems (Luhmann), ecosystems (Capra), networks (Castells), institutions (Meyer et al., 2007) and assemblages (Delanda) have in common that they are all constituted of multiple parts, actors, objects, organisms, etc., and that each specialised part is expected to fulfil at least one function in relation to the logic, programme, objective, etc. of the collective, and according to a set of socially constructed performance criteria, then we propose that systems should exhibit the following properties:

1. a balance between different performance criteria,
2. performed by specialised actors in a diverse system, and
3. centred around a central function, logic or programme (e.g. the creation and transfer of knowledge).

Van Vught (2009) has argued that differentiation has the following positive effects for higher education systems: it improves access for students with different educational backgrounds and achievements; it enables social mobility by offering different modes of entry into higher education, multiple forms of transfer, and upward as well as ‘honourable downward’ mobility; it can meet the needs of the labour market by creating a growing variety of specialisations that are needed for economic and social development; it serves the needs of interest groups by allowing many to develop their own identity and political legitimisation; and it permits the crucial combination of elite and mass higher education: this combination is more diversified than elite systems on their own as they absorb a heterogeneous clientele and try to respond to a range of demands from the labour market (see also Scott, 2019).

Van Vught (2009) concludes that despite these advantages, in recent decades, tertiary systems around the world have been becoming less diverse and differentiated. He attributes this to a combination of uniform (one-size-fits-all) government policies which tend to drive towards homogenisation, and the ability of powerful academic communities to defend their norms and values (Van Vught, 2009). Ng'ethe et al. (2008) observed that the expansion of higher education in Africa had not been accompanied by differentiation; instead, there was evidence of institutional isomorphism whereby newly established institutions strive to replicate the dominant 'mother' university. In other words, the impulse has been for universities to become more and more alike, rather than to develop diverse missions.

In South Africa, the higher education system is entering an important new phase following the drafting of new white papers and implementation plans, the restructuring of science and higher education into a single Ministry of Higher Education, Science and Innovation, and the release of the National Research Foundation's Transformation Priorities Strategy 2020 as well as the National Advisory Council on Innovation's Monitoring and Evaluation Framework. It is also an opportune moment to (re)focus attention on the university's contribution to the creation of new knowledge (science) after student protests have diverted political and public attention *towards* the system's failure to massify and *away* from its research imperatives. This phase could be regarded as a second post-1994 policy moment which could well determine whether South Africa will remain an exemplary knowledge producing higher education system in Africa or fall prey to the funding, structural and capacity constraints that have maimed many African higher education systems.

At the same time, government has Gazetted new types of higher education institutions (Van Schalkwyk, 2022). Higher education policy in South Africa as articulated in the *2013 White Paper for Post-school Education and Training* refers to three types of university in the national system: traditional university, comprehensive university and university of technology. All three types are expected to fulfil a teaching function by offering undergraduate education. All three types are also expected to conduct scientific research, with some variation permitted at the organisational level in terms of the extent to which research is core function in relation to other university functions. This variation is expected to be articulated in each university's mission statement and operationalised in its strategic planning. However, the funding instruments currently in place do not incentivise or support differentiation in the system, and the establishment of new higher education institutions does not address differentiation between the 26 public universities.

A clearly differentiated *university* system is needed for the engines of knowledge production – research universities – and of knowledge transmission – teaching and professional training universities – to flourish. For that, developing countries need to clearly differentiate the missions of the institutions in their post-secondary and in their university systems, and to organise these institutions in a rational way. However, according to Altbach (2013, 328):

> The fact is that few if any developing countries have a differentiated academic system in place; and this central organisational requirement remains a key task ... These institutions must be clearly identified and supported. There must be arrangements so that the number of research universities will be sufficiently limited so that funding is available for them and that other resources, such as well-qualified academics, are not spread too thinly.

It is equally crucial that national science systems and their exemplary research universities are not separated from the global science system (Wagner, 2009). The university's role in the national science, technology and innovation (STI) system as an organisational actor should be recognised and demarcated. STI systems are interconnected but are also functionally separable. The system should

be connected by a common purpose (e.g. the development of society), and each part of the system interacts to produce, diffuse and use knowledge to achieve this purpose (Lundvall, 2010; Whitley, 2001).

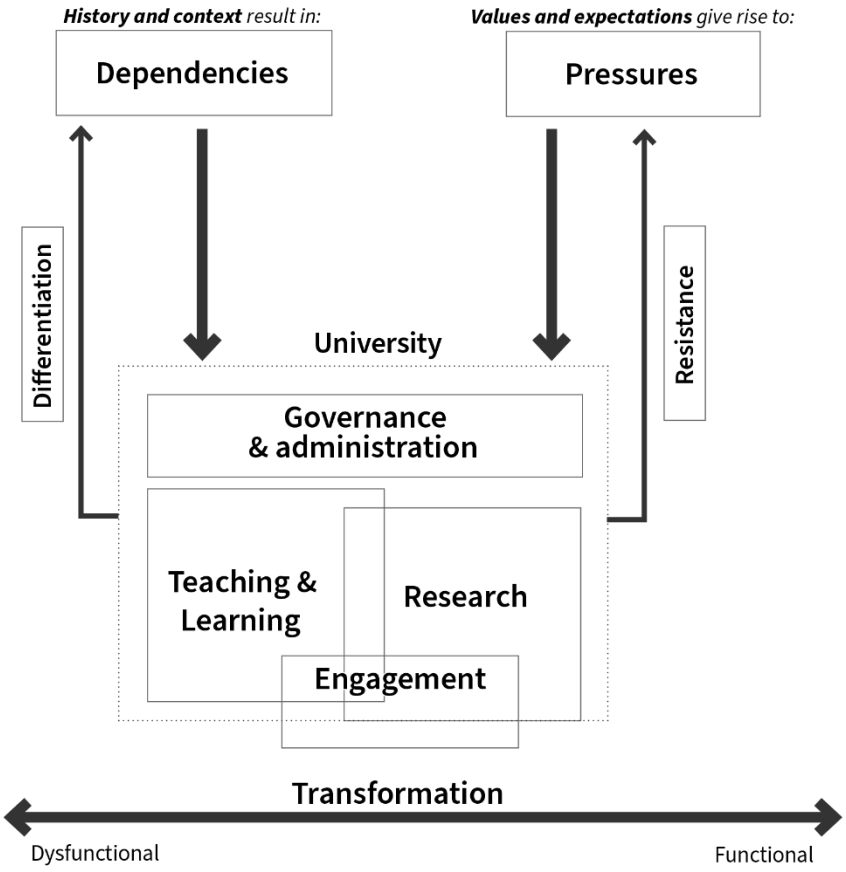
Science and innovation are processes guided by different norms. Each produces different products – non-rivalrous knowledge and rivalrous commodities. Technology enables and is enabled by both science and innovation. Ideally, science, technology and innovation share a common objective, but this is not necessarily the case. Technology may enable destructive innovation, and innovation may be driven by the market rather than by the most pressing needs of society. "Differences in these institutions, structures, and policies, and in their connections, have significant effects on patterns of innovations and technological change such that countries have developed distinctive paths of industrial specialization and economic performance. The extent to which these are especially national and systemic has, however, been questioned, and the mechanisms by which institutional variations generate different patterns of innovation remain to be systematically elaborated" (Whitley, 2001).

The South African university system as a differentiated one can accommodate the varying capacity across universities to manage multiple, competing historical functions, with fewer government resources, and against a backdrop of different development pathways because of the effects on universities by historical events.. If there is an acknowledgement that the university system should be (and in fact already is) differentiated, then there is a need for indicators that reflect in a non-normative way the inherent differentiation in the South African public university system.

One approach to dealing with the issue of differentiation in the system is to create a set of transformation indicators for each university. To be more precise, while many of the indicators would be common, the expectations and targets for universities would be different. There could also be specific, additional indicators for specific universities; unique indicators that acknowledge the different functions, geographic locations and historical trajectories of a particular university. Similarly, for some indicators it may be prudent to include in the framework different knowledge fields in order to unmask differences, for example, in the funding and related publication opportunities across different fields, or the time required to complete a doctoral degree. The objective is to create a system of horizontally differentiated universities; a university system in which not all universities fulfil the same functions and in which universities are equal to the extent that incentives do not favour one university type (as determined by the functions it performs) over another.

## Summary

The figure below shows graphically the context-dependent dependencies and the value-laden pressures being exerted on public universities, how universities may respond by resisting and/or differentiating themselves, and how the interplay between them determines the extent to which a university transforms along a continuum of dysfunctional and functional.




Based on the above, the following *working definition* of transformation is also proposed:

> The transformation of public universities in South Africa is the measurable and positive change away from the injustices and inequities of the past towards a sustainable system that aligns with the values of society and that remains aligned with the norms of science.

# 2. Considerations for developing a M&E framework for transformation at South African public universities

This section sets out key features of South Africa's public university system (within the broader post-school system) that invite consideration when developing a monitoring and evaluation framework that assesses whether the system and its constitutive components (public universities) are functional and sustainable. It should be noted that these features are described with relative brevity; it would require hundreds of pages to describe in detail the complexities of each feature requiring consideration. Instead, each is described in such way to draw attention to the key issues in the contemporary system so as to provide pointers for possible indicators to include in the monitoring and evaluation framework for the transformation of public universities in South Africa.

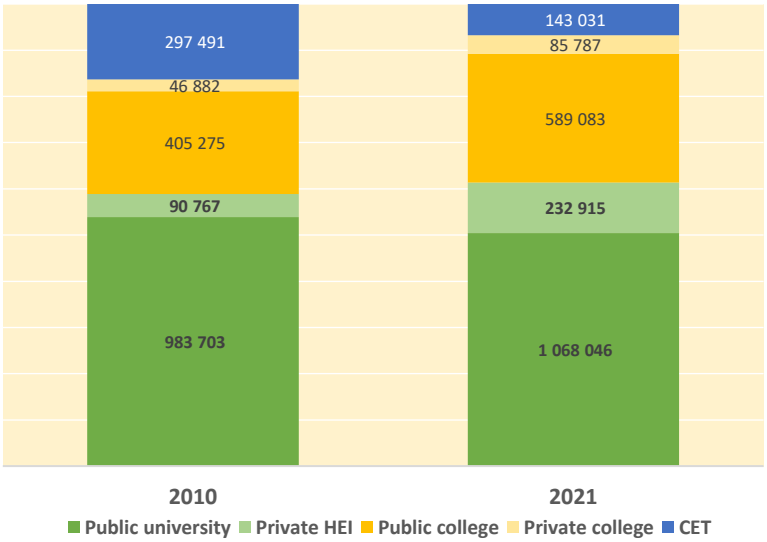
## 2.1 The shape of the post-school system in South Africa

When considering the issue of massification in the context of South Africa, it is important to take the following into consideration: (1) the increase in participation in the country's universities versus

increases in other post-school institutions of learning (e.g. colleges); and (2) the disproportionate numbers of students enrolled in South Africa's large distance education university, Unisa.

Three decades into democracy, there are indications that there has been progress in some areas of transformation, particularly those that relate to system-level change. These include claims of the integration and coordination of the higher education system, access to higher education, reconfiguration of institutions and institutional landscape, and liberalising the higher education sector to make room for private provision (Badat & Sayed, 2014; CHE, 2016b). A clear distinction should be drawn between, on the one hand, the post-school system and, on the other hand, the university system. Some of the claimed progress may well be more attributable to the broader system than to the narrower case of the country's public and private universities.

**FIGURE 2: Shape and size of the post-school system in South Africa (2001, 2010, 2021)**

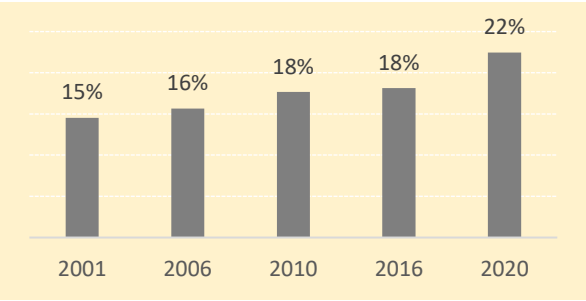



Source: DHET (2021) Statistics on Post-School Education and Training in South Africa

## Participation in public universities

Gross enrolment rates (GER). The GER for the university system is calculated by diving head count student enrolment total by the totals reported by StatsSA in the 20-24 age group. Figure 3 gives these totals for the selected years of 2001, 2006, 2010, 2016 and 2020. The graph shows an increase in GER from 15% in 2001 to 22% in 2020. This remains well below GER in comparative countries (Table 1).

**FIGURE 3: Gross enrolment rates in public universities in South Africa**




Notes: The use of the age-group 20-24 and that of total head count student enrolments follows international practice. The ratios are described as "gross" because students whose age is outside the range of 20-24 are included in the calculations.

**TABLE 1: GER for selected countries (2020)**

| Country | Est. GER (2021 or latest) |
|---|---|
| **Egypt** | 39% |
| **Morocco** | 43% |
| **Malaysia** | 43% |
| **Vietnam** | 35% |
| **Ghana** | 19% |
| **Kenya** | 10% |
| **South Africa** | **24%** |

Source: World Bank https://data.worldbank.org/indicator/SE.TER.ENRR?end=2021&locations=AR-CL-EG-MA-MY-VN-GH-KE-ZA&start=2001

Head count student enrolments. Table 2 summarises the head count student enrolments. The data show that over a decade, total enrolments increased by 362 258 students, or 39%. It shows that private universities have grown three-fold albeit from a relatively low base. In 2021, private universities accounted for 18% of all enrolments, compared to 10% in 2010. The table also shows the large enrolment burden carried by distance education universities in the South African system. In 2021, 30% of students were enrolled in distance education, a decline from 37% in 2010. The data show that public contact enrolments have remained steady at between 52% and 56% of all enrolments.

**TABLE 2: Head count enrolments: All, private, distance (Unisa) and public contact universities**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **All enrolments** | 938 703 | 1 041 237 | 1 050 851 | 1 103 639 | 1 111 712 | 1 123 422 | 1 143 245 | 1 222 030 | 1 283 466 | 1 283 890 | 1 313 839 | 1 300 961 |
| **Private universities** | 90 767 | 103 036 | 97 478 | 119 941 | 142 557 | 147 210 | 167 408 | 185 046 | 197 898 | 208 978 | 219 031 | 232 915 |
| **Unisa/distance enrolments** | 347 177 | 381 506 | 387 134 | 402 650 | 372 331 | 379 732 | 337 836 | 377 014 | 400 499 | 370 891 | 412 368 | 384 161 |
| **Total public contact** | 500 759 | 556 695 | 566 239 | 581 048 | 596 824 | 596 480 | 638 001 | 659 970 | 685 069 | 704 021 | 682 440 | 683 885 |

Source: DHET (2021) Statistics on Post-School Education and Training in South Africa

The M&E framework should take cognizance of the modest growth in enrolments in public universities, the decline in state funding for universities and the impact of NSFAS, and the roles of other parts of the post-school system (TVET colleges, private universities, SETAs, new institutional types) to absorb greater numbers of students in order alleviate pressure on the existing universities.

## 2.2 Teaching and learning

Common-sense understandings of the concept of 'curriculum' relate to the provision of a list of content. The curriculum is, however, much more than content since it also encompasses the 'how' of teaching and learning and questions related to who teaches and who is taught. As a result, the concept of curriculum is core to the transformation of teaching and learning. Transformation of the curriculum will necessarily involve the transformation of teaching and learning and other elements associated with it, including language use.

In 2015 and 2016, the South African higher education system was rocked by the #RhodesMustFall protests. In addition to protesting about the high cost of tuition fees, protestors noted that the universities in which they studied were alien to them and, drawing on the work of decolonial theorists such as Santos (2007), Grosfuegel (2013) and Maldonado Torres (2011), argued for the need for the decolonisation of curricula and institutional cultures. The protests can be seen as an indication that the South African higher education system had failed to respond to the profound

changes that had taken place in student bodies as well as in other areas of social and economic life in failing to develop curricula which were perceived as relevant by students.

The teaching and learning function of the university is made explicit in the 1997 White Paper's references to meeting "the learning needs and aspirations of individuals through the development of their intellectual abilities and aptitudes"; and equipping "individuals to make the best use of their talents and of the opportunities offered by society for self-fulfilment". In the context of transformation, the White Paper goes on to say that teaching and learning is "a key allocator of life chances an important vehicle for achieving equity in the distribution of opportunity and achievement among South African citizens".

In identifying the need for curriculum change, #RhodesMustFall protestors identified a structure that was functioning to constrain their success in higher education. Consonant with the idea, in the White Paper, that teaching and learning is 'a key allocator of life chances', this section draws on a conceptualisation of curriculum informed by the work of Bernstein (2000).

### Horizontal and vertical discourse

For Bernstein, the curriculum functions as a mechanism regulating access to what he terms 'specialised' knowledge or 'vertical discourse', terms which refer to the systematised, abstract, theorized knowledge taught in formal education. Vertical discourse is contrasted with 'horizontal discourse', or ways of knowing and talking about the world that are based in practical experience. An example of horizontal discourse would be a statement such as 'it always rains in summer'. While this might be true for some parts of the world (the eastern seaboard of South Africa, for example), it is not true for all, and might not be true into the future given climate change. An example of vertical discourse in the same context would be the rain cycle, taught from primary school level upwards and gradually made more complex as a learner proceeds up the academic ladder. The rain cycle has the potential to explain rainfall regardless of context now and into the future. In the globalized knowledge economy, Bernstein's 'specialised knowledge' is critical to economic development as it is the basis from which the research and innovation identified as key to economic success in South Africa's National Plan (National Planning Commission, 2012) proceeds. The theorised, systematised abstract knowledge of vertical discourse allows us to imagine 'worlds which do not yet exist' and thus, innovate. The ability of vertical discourse to allow us to imagine different worlds is also key to social life especially in a new democracy such as South Africa.

Mastery of vertical discourse is related to schooling and the home of origin. Children raised in homes where caregivers have benefited from an education are more likely to be introduced to vertical discourse at an early age as caregivers provide explanations of things that are happening in the world around them. Educated caregivers are also able to support children's engagement with vertical discourse at school by providing additional explanation and performing simple tasks such as helping with homework. Because of the effects of apartheid, many children in South Africa first encounter vertical discourse in school. For these learners, vertical discourse represents an entirely different, and potentially alien, way of understanding and 'being' in the world. The problem of a lack of familiarity with vertical discourse will then be impacted by the quality of schooling. As a result of the historical denial of education to black people in South Africa and the failure to develop a schooling system that will provide a quality education to all, many students entering the universities do so with a sketchy command of vertical discourse and with little understanding of the power of systematised, theorized, abstract accounts to make sense of the world around them. Vertical discourse is 'study' and is not connected to everyday life. Mastering vertical discourse in many respects entails shifts in identity as the systematised, theorized accounts that characterize it mean that adepts come to experience the world in different ways.

Vertical discourse is often referred to as 'powerful knowledge' (see, for example, Young and Muller, 2015) because of its potential to make sense of and describe the world around us regardless of time and space. However, as it is also frequently noted, it is also the 'knowledge of the powerful'. Young and Muller (2015) elaborate on this point by noting, as explained above, that access to vertical discourse is not distributed equally and that those who tend to be afforded access are already those who are privileged. However, decolonial scholars such as Connell (2007) argue that the 'powerful knowledge' taught in formal education is almost always produced in the Global North. In this case, the term 'powerful' becomes associated with political power and the 'epistemic violence' (Spivak, 1988) occasioned by the imposition of particular world views and ways of knowing on others.

The point, however, the point is that vertical discourse is a knowledge *form,* a type of knowledge and not knowledge content. As a knowledge form, it can be populated with knowledge produced anywhere in the world. Currently, the labelling of Global North scholarly traditions as 'vertical, structured, and universal' while treating Indigenous or Global South knowledge systems as 'horizontal, localized, and context-dependent', results in the construction of a hierarchy. This does not need to be the case, however, since indigenous knowledges can be verticalized. Descriptions of indigenous practices, for example, can be 'excavated' to identify the principles and theories that underpin them. This excavation would involve identifying different world views and ways of knowing to those that emanate from the Global North which could then be taught in formal education.

To some extent this has already been done in relation to knowledge produced in other parts of the world. The teaching of acupuncture in some universities, for example, involves a view of the functioning of the human body which differs from that dominating in Western medicine. This view draws on abstractions such as the 'Qi' (or life force) and 'meridians' which have been systematised into a theory of the functioning of the body which then informs practice. The important thing is that the abstract, systematised theory is not bound by context (acupuncture and be practised anywhere) and can be applied to a wide range of conditions and symptoms of conditions. It is not a description of practice ('If your back aches, do this') but rather a theory/set of theories which will explain a set of symptoms and provide a means of alleviating them and which draws on a completely different world view and way of knowing.

The identification of vertical discourse as a form of specialised knowledge has enormous implications for the 'how' of curriculum. Curricula need to scaffold the acquisition of vertical discourse and, possibly even more importantly, demonstrate the power of this form of knowledge to make sense of the world outside the lecture room. Possibly the most important implication of understandings of the distinction between vertical and horizontal discourse, however, is for academic teachers themselves.

McLean, Abbas and Ashwin (2018:7) point out that vertical discourse

> creates specific relationships between the inner worlds of individuals (broadly, what and how they think and feel) and the enablement and constraints in the outer world of systems and structures.

In this way, knowledge can be seen to relate to who we are, to identity. Access to vertical discourse changes the way we see and experience the world and, thus, impacts on our sense of self as human agents and on the way others experience our agency. Academic teachers experience the world and their roles within it differently to the way many of the students in their classes experience and perceive the world. The ability to appreciate that students' experiences of the world may be different to their own has implications for teaching and for understanding difficulties in understanding or learning behaviours. For many students, the knowledge of the curriculum is the

knowledge of the lecture room which is divorced from their everyday lives. This can then result in approaches to learning involving remembering and repeating or in a failure to apply knowledge to practical applications.

### Language

Language is often cited as a problem in South African higher education. As already indicated, the understanding of curriculum proposed above encompasses language since language is part of the 'how' of teaching.

Understandings of students' language related experiences often draw on what Christie (1985) terms a 'model of language as an instrument of communication' which sees language as a vehicle or tool for communicating ready-made meanings. From this perspective, meaning making precedes language use which is then constructed in relation to the need for accuracy in its formal features (spelling, grammar, pronunciation and so on). This common-sense model informs much of the language work in South African universities which takes the form of courses intended to develop students' academic language or literacy and which focus on teaching the formal features of language such as grammar.

In contrast to the 'model of language as an instrument of communication', Christie draws on Halliday's (1973, 1978) 'Systemic Functional Linguistics' to argue for the use of language as a resource in meaning making. For Halliday, language is a system of choices made in particular contexts. For example, in the natural sciences, language users often choose to use the passive or some other linguistic device in describing actions. So, for example, the phrase '5mls of the solution were titrated' would thus be preferred to 'I titrated 5mls of the solution'. The choice of the passive in this example relates to the valuing of objectivity in the context in which the language is used. Many natural scientists draw on an understanding of a reality that exists independently of human thought of action, and which needs to be 'uncovered' or 'discovered' by researchers. Researchers need to be as objective as possible if this reality is not to be 'tainted' by their own perceptions and potential biases. The use of a linguistic device therefore emerges from values related to objectivity. Teaching the use of the passive purely as 'grammar' without explaining the values which underpin its use fails to induct students into practices associated with knowledge making, and the role of language in them, in any meaningful way. The idea that language is a system of choices made in context means that students need to gain access to the values sustaining the disciplinary contexts in which they are working. It is unlikely that a so called 'language specialist' will be able to understand or explain these values particularly given that many are practitioners rather than researchers, or knowledge makers, themselves. The understanding of language as a resource which sees language use as emerging from contexts and as related to the making of meanings themselves calls for 'language across the curriculum' approaches where academic teachers take on more responsibility for developing their students' mastery of the language associated with vertical discourse. Such approaches have been promoted in South Africa since the early 1990s (see, for example, Boughey and Goodman, 1994; Boughey and Van Rensburg, 1994; Coetzee and Boughey, 1994) but they have not been implemented across the system in spite of the robust body of research and theory that sustains them. Rather, the development of language relies on commonsense approaches and is conditioned by a tradition of language teaching in schooling (Christie, 1994) which focuses on the formal features of the language, and which has long served as a means of ensuring that working class children, who speak varieties of the language which are different to the standard, do not excel in schooling.

The vertical discourse, or systematised, theorized, abstract ways of making meaning of the world around us, draws on particular language forms which, following Halliday (1973; 1978) emerge from

values in the contexts in which language is used. For example, the rain cycle, as an illustration of vertical discourse provided above, uses specialized vocabulary ('precipitation' rather than the more common 'rain' or 'snow') and privileges states ('the heat of the sun results in the evaporation of sea water') rather than actions ('the sun heats the water). Mastering vertical discourse therefore involves mastering the language forms associated with it. Children who have been raised in homes where vertical discourse is drawn upon to describe the world around them will be introduced to the language forms associated with it from birth. In homes where caregivers have not benefited from education, it is unlikely that children will encounter vertical discourse regardless of whether the home language is English, Afrikaans or one of the indigenous languages. It is thus possible to see how advantage begets advantage and how uncritical approaches to language development drawing on commonsense fail to challenge the potential of education to reproduce the status quo. Transformation of the curriculum would therefore encompass approaches to language development which took account of the type of thinking outlined here.

The protests of 2015 and 2016 and calls to decolonize the curriculum associated with them brought a particular focus to the use of the indigenous languages in higher education. However, a lot of popular discourse draws on Christie's (1994) 'model of language as an instrument of communication' in that it privileges the belief that, if only students were allowed to use their home languages, their experiences of reading and writing for academic purposes would be enhanced. As many who work in the African languages point out, however, the forms of the indigenous languages used in students' homes are not those associated with vertical discourse. Allowing students to use their 'home' languages as languages of learning would therefore not necessarily benefit them as the university requires command of the language forms associated with vertical discourse.

The idea that the indigenous languages need to be 'intellectualised' are indicative of an understanding of language as a resource for meaning making and of vertical discourse. Khumalo (2017), for example, draws on Havrankek's (1932, 32) definition of 'intellectualisation':

> By the intellectualization of the standard language, which we could also call its rationalization, we understand its adaptation to the goal of making possible precise and rigorous, if necessary abstract, statements, capable of expressing the continuity and complexity of thought, that is, to reinforce the intellectual side of speech. This intellectualization culminates in scientific (theoretical) speech, determined by the attempt to be as precise in expression as possible to make statements which reflect the rigor of objective (scientific) thinking in which the terms approximate concepts and the sentences approximate logical judgements (emphasis added by Khumalo).

The intellectualisation of the African languages is thus part of the curriculum transformation work that is needed. Nonetheless, caution is needed even here. A common strategy to move to the use of the indigenous language as languages of learning and teaching in many universities is to produce glossaries of technical terms. However, the success of the strategy will be impacted by the extent to which students have been introduced to, and supported in mastering, vertical discourse.

### The need for more work on the curriculum

If the curriculum is seen as a device for regulating access to specialized knowledge and, thus, arguably to the 'goods' of the world as, in the global economy, a higher education qualification is necessary for employment as a 'knowledge worker', then the curriculum has to be located at the heart of transformation in higher education.

In South Africa, the curriculum has received a great deal of attention since the early 1990s although, as Lange (2017) points out, much of this has been directed at its formal features in the form of credit values and NQF levels thanks to the need to register qualifications on the Higher Education Qualifications Sub-Framework (CHE, 2014) rather than to more substantial issues related to the what and how of teaching. One substantial issue in relation to students' familiarity with vertical discourse and the need to support their mastery of it has been noted above.

Another relates to the use of learning outcomes as an organizing principle in curriculum design. For many (see, for example, Wheelahan, 2012), the use of learning outcomes has resulted in a focus on skills and in 'knowledge poverty', since only knowledge sufficient to address outcomes specific to a programme or course is included in vocationally oriented programmes. As a result, students are not able to draw on the full disciplinary knowledge structure when/if the jobs for which they have been narrowly trained become obsolete. As already indicated, the protests brought to the fore the need for the decolonization of the curriculum and, as a result, many universities initiated projects to explore ways in which this could be achieved. Since the protests, a great deal of research on decolonization of the curriculum has also been produced (see, for example, Jansen, 2023a) One problem with the calls for decolonization made by students is that they can be seen to emanate from the privileging of horizontal discourse. Indigenous knowledges often exist at the level of practice ('We do this') and experience ('We believe that') and it is possible to posit that students struggling with the need to engage with vertical discourse in higher education could believe that the decolonization of the curriculum could result in their being allowed to 'know' in ways they have always known. Given the power of vertical discourse to make sense of the world regardless of context, the challenge for the curriculum is to make vertical discourse more accessible rather than to abandon it to allow students to continue to 'know' in common sense.

Another challenge relates to the 'verticalisation' of indigenous knowledge itself. As already indicated, indigenous knowledge tends to be expressed in terms of practice ('In my culture, we do this or we believe this'). Following Mitova (2021), one way to approach decolonization would be to 'verticalize' indigenous knowledge. So, for example, it might be possible to see that the plants used by traditional healers in one region (see, for example, Hutchings et al., 1996) to treat a condition such as high blood pressure, contained exactly the same compounds as drugs used to treat the condition in western-based medicine but were based on an entirely different anatomy and physiology of the body. 'Verticalization' of indigenous knowledge would therefore involve developing a systematized account of anatomy and physiology underpinning the practice of traditional healers. In this were done, the introduction of indigenous knowledges to higher education would still require students to engage with abstract, theorized accounts of the world but the curriculum would, indeed, be decolonized and students would be required to engage with knowledge that was African in origin. Clearly, the verticalization of indigenous knowledge is an enormous task for African scholars. In the time it takes to do this which, in terms of the understanding of curriculum expressed at the beginning of this section involves a focus on the 'what' of curriculum, transformation will involve universities focusing on the 'how' of curriculum by developing teaching to ensure that it scaffolds the mastery of vertical discourse. In practical terms this will involve capacitating teaching staff so that they understand the nature of the challenge faced by students and are equipped with strategies to allow them to support students in mastering vertical discourse.

Another possibility related to the 'how' of curriculum would be to explore the decolonization of pedagogy itself. Boughey (2022) identifies the potential of drawing on orality rather than literacy as a means of doing this as well as the need to consider 'communalism' in the classroom rather than

the long-prized individualism associated with 'Enlightenment Man'. Research (see, for example, Gough, 1990) has demonstrated the complex nature of oral communication in the indigenous languages and its ability to engage with complex, abstract thought. Historically, literacy has been privileged in the universities, and the potential of 'academic orality' needs to be explored in relation to the transformation of the 'how' of the curriculum'. The use of group work and group assessment which allowed students to collaborate and complete learning tasks would be one way of acknowledging African communalism into pedagogy.

Arguably, the focus on the 'exoskeleton' of the curriculum identified by Lange (2017) arises from the need for universities to register qualifications on the NQF and to make applications for the accreditation of new programmes to the CHE. As Boughey (2023) points out, in the early 1990s, universities began to realize that they would require expertise in teaching and learning to comply with regulations resulting from the establishment of the Higher Education Quality Committee (CHE, 2002). In the late 1990s, what were then termed 'Academic Development Centres' had been closed at many institutions because of fiscal constraints (Boughey, 2007). These centres were then re-established to cope with the new demands.

As Boughey (in press) points out (see, also, Shay, 2012; Boughey, 2022), a significant problem in the field of teaching and learning in South Africa is that the knowledge on which practitioners rely is not sufficiently strong to 'reconceptualize' problems in a way that will lead to transformation. Garraway and Bozalek (2019) point out, much of the knowledge produced in the field of teaching and learning is what they term 'show and tell'. Typically, this involves an identification of a problem in a course or in an area of student learning, the development of an initiative to address the problem and the use of student and, possibly, peer, feedback to evaluate the initiative. Boughey (in press) argues that this kind of knowledge making does not move beyond empirical levels of knowing (Bhaskar, 1979) to probe the structures and mechanisms from which observations and experiences (evidenced in the analysis of the 'problem' and the response of others to it) emerge. This is in spite of the fact that the field of teaching and learning has long recognized *structural inequities* in South African higher education as hugely problematic. One problem in the lack of attention to the curriculum in more meaningful ways could thus be seen to relate to the knowledge used by those appointed to work with it.

Yet another problem related to 'show and tell' knowledge making relates to understandings of the use of student feedback and of the term 'evaluation' in quality assurance practice at institutional levels. Boughey (2022) identifies a number of conceptual problems in the way student feedback is conceptualized and its collection and analysis are conducted.

The introduction of quality assurance has seen attempts at institutional levels to 'professionalize' academic teaching by offering courses on pedagogy. As Behari-Leak (2017) points out, however, the idea that training in pedagogy can result in meaningful change at the level of practice privileges the agency of individual academics. Her research shows how 'new' academics who had completed a formal course on teaching and learning were constrained in numerous ways as they tried to implement what they had learned in their teaching. Some of these constraints relate to dominant institutional and disciplinary discourses constructing 'good' teaching and teachers (see, also, Trowler and Cooper, 2002). Others are the result of institutional hierarchies. Transformation of the curriculum will therefore require the interrogation of conditions in universities in order to allow for the emergence of alternative teaching strategies.

In South Africa, a number of calls have been made for the use of a 'humanising' of pedagogy (see, for example, Zinn et al., 2009: Zinn and Rodgers, 2013; Zinn et al., 2016). Salazar (2013) describes a

'humanising' pedagogy as one which acknowledges the 'treasures' learners bring from their home backgrounds in the form of their belief systems, language and indigenous knowledges. It also requires the acknowledgement that the imposition of forms of knowledge privileged in formal education can 'dehumanise' learners as it denies the ways of being and knowing they have drawn on all their lives. In spite of the term 'humanising pedagogy' being used in strategic documents at institutional level in some universities,[3] a great deal of attention has not been paid to what this could mean in practice.

Shay (2012) argues for the need for the production of knowledge that can reconceptualize problems in teaching and learning. Such knowledge, following Bernstein's (2000) construct of a 'horizontal knowledge structure', would involve the use of theory as a lens through which to see 'problems' in and phenomena related to teaching and learning differently. Boughey (2021, 2022, in press) points out that 'pockets' of researchers do use 'powerful' knowledge to research teaching and learning. The reconstruction of the field of educational development in the late 1990s and early 2000s (Boughey, 2007) means, however, that these tend to be located at institutions (mostly historically white universities and some former technikons) that retained their Academic Development Centres in the face of fiscal constraints experienced in the late 1990s). However, even though powerful knowledge reconceptualizing curriculum issues is produced, with a few notable exceptions (see, for example, Blackie, 2022a; 2020b) it is not used to inform practice. Reasons for this are posited to relate to, inter alia, the positioning of teaching and learning expertise on the margins of institutional life (Boughey, in press).

### Artificial Intelligence

Much of this section on teaching and learning has drawn on the concept of 'vertical discourse' (Bernstein, 2000) and on an argument for it to be central to curriculum transformation. Given the scale and pace at which the use of Artificial Intelligence (AI) has grown, it is necessary to consider what this means for the argument made above.

AI, or large language models, produce text by predicting the most likely next word in a sequence, based on the massive datasets they were trained on. While they might replicate vertical discourse, they do not use the same methods to do so. Within vertical discourse, Bernstein (2000) differentiates between two 'knowledge structures'. A hierarchical structure, typical of the natural sciences, and a horizontal structure typical of the humanities and social sciences. In a hierarchical structure, researchers generate data and then try to develop ever more overarching principles and theories to make sense of it. Typically conceptualised as a pyramid, in a hierarchical knowledge structure researchers draw on data to challenge, refine or expand upon existing theories and principles. In a horizontal structure, researchers use a theory as a lens to look at a problem or phenomenon. The use of the theory then allows them to see things they might not otherwise have seen or to identify links between concepts which might not otherwise been obvious.

AI is not infallible. Depending on the corpus of text on which it is trained, AI can be biased. It can also 'hallucinate', particularly in producing references which do not really exist. In itself, AI does not understand. It cannot apply a theory to a problem or phenomenon in the same way as a human agent. In itself, it does not understand the theory. While academics, who are highly skilled as knowledge producers, might be able to spot problems in the texts AI produces, it is highly unlikely that students will be able to do so.

[3] See, for example, https://www.mandela.ac.za/Learning-and-Teaching

Currently, a lot of the thinking about AI in teaching and learning in South African universities focuses on its detection and punishment for its use. However, a more productive approach to the AI use would be to try to teach students about 'powerful knowledge', to persuade them of the changes that will result in the way they see the world that will result from mastering it and to convince them of the way their own agency will be enhanced as a result. AI use thus becomes a matter for education and not for detection and punishment. For this to happen, however, the focus in teaching needs to shift away from content per se to showing students how the abstract, systematised, theorised knowledge of that content can be used to see the world differently. Ultimately this is a pedagogical problem.

### Areas/strategies for transformation of the curriculum

Drawing on the discussion above, the list below what needs to be done if the curriculum is to be transformed in ways which will make it relevant to the changed demographics of South African higher education.

| | |
|---|---|
| **The 'what' of curriculum – content** | |
| 1. Verticalisation of indigenous knowledge | For example, work from descriptions of practice to identify the principles and theories from which that practice emerges |
| 2. Scrutiny of qualifications to eliminate 'knowledge poverty' | Curriculum design curriculum privileges alignment of outcomes with assessment criteria and other elements of curriculum design. Bring knowledge back in (Young, 2007) by scrutinizing type and amount of knowledge in a curriculum. |
| **The 'how' of curriculum – pedagogy** | |
| 1. Need for pedagogy to focus on scaffolding the acquisition of vertical discourse | Concepts of vertical and horizontal discourse to be discussed in professional development courses and implications for pedagogy identified. |
| 2. Need for pedagogy to be indigenized and humanized | Consider resources students bring to learning rather than focusing only on deficits. Consider students as 'social beings' who have been conditioned to think about learning, reading and writing in particular ways. |
| 3. Need for more robust knowledge about teaching and learning | Develop research capacity in field of Academic Development |
| 4. Need for attention to be paid to institutional conditions constraining development of innovative pedagogies | More seminars /presentations on teaching and learning at institutional level. |
| 5. Use of AI | Focus on educating about AI and its limitations rather than on detection and punishment |

## 2.3 Graduate employability

Being educated in the disciplinary traditions of the academy provides university students with cultural capital that will enable them to benefit from and contribute productively to the working world (Bourdieu, 1986). However, in the rapidly changing and complex global terrain, "the requisite cultural capital does not lie in canonical content but in the development of embodied practices, methods of enquiry and forms of critical thinking" (Bradbury, 2023, 170; see also Mouton et al., 2022). Notwithstanding arguments against a non-instrumentalist and for a context-sensitive approach to teaching and learning, the transfer of skills and knowledge to university students must, according to the 1997 White Paper, address "the development needs of society and provide the labour market, in a knowledge-driven and knowledge-dependent society, with the ever-changing high-level competencies and expertise necessary for the growth and prosperity of a modern

economy". Universities graduates are expected to become productive members of society, specifically by participating in the economy.

Articulation between university studies and the world of work is both essential and inevitable, "the task is to forge these relations in ways that will stimulate lines of research enquiry to tackle the wicked problems of the 21st century and sow seeds for imagining the world of work differently" (Bradbury, 2023; see also Vally and Motala, 2017). Castells (2017), points to the changing nature of society as a consequence of the global digital communication networks, and argues for universities to produce "self-programmable" instead of "generic" labour. As Muller (2017, 25) writes: "generic labour, may well possess skills of a fairly specialized sort, but they are not what Castells would call 'informational' skills, they do not lend themselves to being autonomously renewed in the workplace – once trained, always trained so to speak. Therefore, when innovation and production requirements change – and they will increasingly do so at an ever-greater pace in the network economy – the self-programmable worker can self-renew, while the generic worker must either be replaced by another more skilled worker, or by automation. In the remorseless logic of the network world, they do not have the key capacity to self-renew and are therefore replaceable".

The differential between the two forms of labour increases under the conditions of a new society propelled by information and communication technologies; and what makes the difference is education, especially higher education (Stalder, 2006, 361). This underlines the critical role of universities in effecting the new society and the new economic conditions that arise.

In this context, it is of concern that unemployed South Africans with a university qualification rose from 6% in 2000 to 15% in 2022 (Stats SA Labour Force Survey, Q2 2023, released 15 August 2023) (Ohamadike, 2023). Clearly there is a need to better understand and track the relationship between the graduates produced by universities and their absorption into the labour market and into other productive sectors of society, as well their ability to innovate and to create new employment opportunities.

## 2.4 Citizenship

The 1997 White Paper expects the university system to "contribute to the socialisation of enlightened, responsible and constructively critical citizens." Higher education is recognised as key to delivering the knowledge requirements for such socialisation. It is essential for the design and operation of the institutions of a modern political system, from the judiciary to the legislative and executive arms of government, the top staffing of the state bureaucracy as well as key institutions of civil society (Luescher-Mamashela, 2012).

The literature on the relationship between education and democratic citizenship points to a number of 'educational pathways' to democratic citizenship Nie et al. (1996) argue that formal education operates through two distinct mechanisms or pathways in its effect on citizens' democratic attitudes and behaviours. The first is the cognitive pathway which posits that formal education enhances cognitive ability in relation to politics (for example, knowing what democracy is) and formal education not only enhances people's ability to gather and process information relevant to a particular profession, but also information about government and politics, along with the ability to make sense of this information. The second mechanism is the positional pathway whereby formal education places individuals more centrally in society meaning that educational attainment 'has a profound effect on the positions of individuals by placing them in more- or less-central network positions' (Nie et al., 1996, 45) within society. Citizens who are more centrally placed in society are

also more likely to be in the centre of political networks. Higher levels of educational attainment enhance the centrality of citizens in political networks, and lower levels of attainment conversely correlate with a more peripheral positioning. The argument is that the more proximate citizens are to the 'political stage' and the more they are able to articulate their political demands, the more likely it is that they will gain the attention of political actors and be able to influence politics as 'enlightened and engaged citizens' (Luescher-Mamashela, 2012).

To achieve the ambition of graduating from universities "enlightened, responsible and constructively critical citizens", critical thinking will increasingly become an essential skill, not only for stability and effective function of political institutions but also in other spheres of the economy and society as rapid advances in technology makes information discovery and retrieval, as well as content creation and evaluation, more automated. In addition, such critical thinking will need to come from a diverse range of technical and epistemological perspectives as the challenges facing society become more complex and more urgent. The recent COVID-19 pandemic attests to this, as does the threat posed to humanity by climate change.

## 2.5 Research

The 1997 White Paper expects public universities to "contribute to the creation, sharing and evaluation of knowledge". According to Olsson and Cooke (2013, 18) "top research universities in industrialised countries […] usually dominate the global ranking tables. In contrast, their counterparts in middle- and low-income countries have, if anything, more important missions because they are the engines of local and regional knowledge development and natural leaders of their own evolving academic systems. As these systems become increasingly complex and the need to nurture knowledge networks for research grows ever more essential, the success of these institutions becomes even more crucial for national development policy". Echoing these sentiments, Altbach (2013) states that research universities are steadily improving their reputations and competitiveness on the international stage. A key point is that research universities around the world are part of an active community of institutions which share values, foci and missions in the pursuit of new knowledge.

In the South African context, the production of new knowledge (as represented by the publication of scientific articles, papers, books and the like) has witnessed a remarkable increase over the past two decades (as reported annually in DHET's university research outputs reports). There also appear to be pockets of excellence as researchers from South Africa feature among the most cited scientists in the world[4] and are acknowledged for their contribution to science.[5]

At the same time, the values that underpin the communication and sharing of research are being tested with an increase in the incidence of unscrupulous publishing practices. Mouton et al. (2019) in

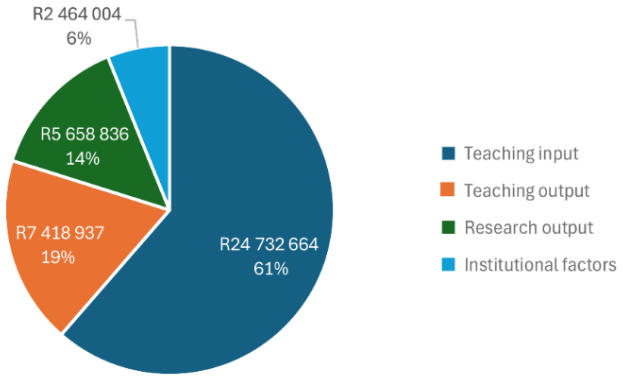
[4] South Africa featured 11 scientists in the Highly Cited Researchers 2025 list. Highly cited researchers demonstrate significant and broad influence in their field(s) of research. Each researcher selected has authored multiple Highly Cited Papers which rank in the top 1% by citations for their field(s) and publication year in the Web of Science Core Collection over the past eleven years. However, citation activity is not the sole selection indicator. This list, based on citation data, is then refined using other quantitative metrics, as well as qualitative analysis and expert judgment. https://clarivate.com/highly-cited-researchers/

[5] Examples include Prof. Tulio de Oliveira (Genomics and Bioinformatics) who was named one of TIME magazine's 100 most influential people, included in Nature's top 10 most influential scientists in the world (2021); Prof. Pumla Gobodo-Madikizela (Psychology and Social Sciences) who was awarded the highly prestigious global Templeton Prize in 2024—one of the world's most respected awards recognizing contributions to humanity's deepest questions; Prof. Alta Schutte (Biomedical Sciences) who received the African Union Kwame Nkrumah Award for Scientific Excellence (AUKNASE) in 2018, one of the continent's highest scientific honours; and Prof. David M. Richardson (Invasion Biology) also awarded the African Union Kwame Nkrumah Award for Scientific Excellence in 2018 alongside Prof. Schutte, as a Laureate of Life and Earth Sciences.

a report commissioned by the DHET state that the South African research system faces several systemic and ethical challenges, largely driven by the tension between maintaining research quality and the intense pressure to increase publication volume. The main problems include a push for quantity over quality. The introduction of a revised funding framework in 2005 led to an exponential increase in publication outputs, creating an environment where academics feel immense pressure from their universities to "publish at any cost" in order to meet performance appraisals and secure state subsidies. This incentive system has produced perverse consequences, leading researchers to prioritize the maximum accrual of subsidy funds over the intrinsic quality and integrity of their work. Among practices that erode quality in the formal communication of science are predatory publishing; unethical editorial practices; gaming of different publishing modes (for example, salami slicing; p-hackning; self-plagiarism); and an over-reliance on local journals (South African academics exhibit a highly skewed publication culture, publishing a disproportionate amount of their work in local South African journals that have a poor "international footprint," meaning they attract very few foreign contributors, lack international editorial board representation, and artificially boost their impact through high rates of journal self-citation).

Rewards for research outputs make up 14% of South African government grants (block-grant funding) paid to universities (via the Department the Department of Higher Education and Training) generating ZAR5,658 billion (approximately USD310m) for the country's 26 public universities based on research outputs in 2022 (Figure 4). Of this amount, ZAR3,118 billon (or 55%) was paid for publications; the remainder of the grant was for master's and doctoral graduates. The research outputs grant is expected to increase to approximately R 5,834 billion by 2027.

Figure 4. Government block grants to South African public universities 2024/2025 (2022 research outputs, ZAR '000)




Recent cuts in research funding are likely to result in an increase in the value of the publication subsidy as a focal resource for South African universities. Government funding is increasingly being channelled towards financial aid for students is eroding national research funding, and dependency on third-party funding is both increasing and inherently unstable as the US aid freeze triggered by a February 2024 executive order from the White House which stalled key research and development programmes, particularly in health demonstrated.[6] At the same time, the funding made available by the National Research Foundation has declined over recent years, both in real terms and in relation to the DHET subsidy. In 2018, universities received ZAR 2,0bn from DHET for publications while NRF grants for that year equalled ZAR 2,1bn. The "value" of the DHET subsidy was ZAR 113m less than the NRF grants in that year. By 2024, the picture had changed dramatically: the DHET publication

[6] https://witness.co.za/news/kzn/2025/06/07/universities-race-to-plug-r14-billion-funding-gap/#

subsidy paid exceeded the NRF grants by R1,7bn (Mouton 2025; see Table A in the supplementary data).

A decline in funding from the private sector and an increasingly unstable landscape in funding from international government agencies and philanthropic organisations due to a rise in nationalist and right-wing politics is placing increased pressure on universities to seek alternative sources of research income and/or to make the most of those public-funded resources are earmarked for them.

## 2.6 Community engagement

The National Plan on Higher Education (DoE, 2001) recognizes community engagement as one of three core functions of universities, along with research and teaching. The 2013 White Paper (DHET, 39) states that community engagement, "in its various forms – socially responsive research, partnerships with civil society organisations, formal learning programmes that engage students in community work as a formal part of their academic programmes, and many other formal and informal aspects of academic work – has become a part of the work of universities in South Africa." This statement is supported by the inclusion of community engagement in the vision and mission statements of South African universities.

On the one hand, a transformed university must take into account how its own interpretation of community engagement has shaped the behaviour of its students and staff, and whether such behaviour provides evidence of positive change for the community in which the university is located. On the other hand, the White Paper of 2013 (DHET, 39) makes it clear that however community engagement is understood, it must be "linked directly to the academic programme of universities, and form part of the teaching and research function of these institutions". Van Schalkwyk (2015) makes a similar argument and shows how a range of community engagement activities at a South African university are either connected to or disconnected from the academic programme of the university in question.

Rather than becoming mired in definitional issues related to community engagement, or embarking on an ambitious attempt to measurement systematically the social impact of those university activities deemed to be examples of community engagement, a transformation framework should focus on whether universities are in fact meeting their own commitments to being engaged universities and whether their community engagement activities do in fact yield real and sustained benefits for communities while simultaneously reinforcing the academic project of the university.

## 2.7 Governance

The transformation of the structures, values, and culture of governance is recognized as a fundamental precondition for the successful transformation of South Africa's higher education system. At its core, university governance is meant to chart and steer institutions so they can meet national policy goals, balancing institutional autonomy with public accountability. Four universities received unqualified audits in 2023 alone (Fengu, 2023). This speaks to serious concerns around the governance of South Africa's public universities; an essential component of ensuring transformation that creates both functional and sustainable universities.

University governance refers to the decision-making systems and structures through which a university is organized, managed, and directed. It encompasses the processes, policies, and other

decision-making mechanisms that guide the leadership, administration, faculty, staff, and students in the effective operation of the institution. Building the capacity of universities in terms of infrastructure, human resources, and academic programmes is integral to realising the transformation goals of public universities in South Africa (Luescher et al., 2023). Within the university, capacity is required at the leadership, management, and administrative levels, as well as at the academic level.

At the system level, South African higher education policy introduced co-operative governance following the transition to democracy, formally codified in the 1997 Education White Paper 3 and the Higher Education Act of 1997 (Department of Education, 1997; Republic of South Africa, 1997). This model was intended to foster an interactive partnership between the state and higher education institutions, mediating the tension between state intervention and institutional autonomy by linking autonomy directly to public accountability (Cloete & Kulati, 2003).

However, co-operative governance has been unsuccessful in practice (Cloete & Kulati, 2003). Policy guidance and the consultative forums the characterised the immediate post-apartheid period have been hampered by a diminished civil society (focused on higher education), poor coordination between government departments and agencies, and, until a decade ago, relatively muted student activism. Research indicates that the co-operative governance model became a hindrance that confused policy and inhibited good governance practices (Kraak, 2001, as cited in Cloete & Kulati, 2003). Faced with persistent institutional crises, inefficiencies, and a slow pace of transformation, the government's approach shifted from consultative, participatory steering to a more centralized, top-down "state control" or "state interference" model (Cloete & Kulati, 2003).

This shift has been marked by legislative amendments that significantly increased the Minister's interventionist powers, including the authority to determine institutional scope, merge institutions, and appoint independent assessors or administrators when universities face serious financial or governance maladministration (Republic of South Africa, 2016). Consequently, since 1994, there have been no fewer than twenty government interventions that led to administrators taking over the governance or management functions of troubled universities (Jansen, 2023).

Key elements of university governance in South African public universities include:

- Council: The highest governing body, typically composed of external individuals and university representatives responsible for setting the overall strategic direction of the university, approving budgets, selecting top executives, and overseeing major policy decisions.
- Vice-Chancellor and the Executive: Effectively the chief executive officer of the university, the vice-chancellor is responsible for implementing the policies set by the governing body and overseeing the day-to-day operations of the university along with a team of deputy vice-chancellors and other executive-level staff.
- Administrative and Support Staff: Various administrative and support units contribute to the smooth functioning of the university by managing human resources, finances, facilities, and providing support services. Collectively, the university leadership and administrative staff can be referred to as university management, which must transact in an increasingly complex environment containing an escalating range of stakeholders.
- Academic Senate & Faculty Boards: The Senate represents the university faculty and is responsible for academic matters and policies, setting curriculum standards, and selecting academic leaders. Faculty boards provide input on curriculum changes, academic standards, and academic appointments.

- The Institutional Forum (IF): A specialized statutory body established to advise the Council on transformation issues, race and gender equity, and fostering a tolerant institutional culture (Republic of South Africa, 1997; Soudien, 2008).

A cornerstone of the post-1994 governance model is the inclusion of diverse stakeholders to ensure accountability and representation. Students participate directly in governance through the Student Representative Council (SRC). They hold mandated seats on the Council, the Senate, and the Institutional Forum to ensure their perspectives are considered in decision-making (Republic of South Africa, 1997). Furthermore, student activism (such as the #FeesMustFall movement) has been a vital, disruptive force in driving deep transformation, pushing policies for free higher education for the poor, decolonization of the curriculum, and the insourcing of vulnerable workers (Luescher et al., 2023). However, students often feel highly disempowered within the complex agendas of Councils and Senates where they are a minority, making their mandated participation in bodies like the IF particularly important (Soudien, 2008).

The system also relies on input from external communities, alumni, and organised labour (Luescher et al., 2023). However, the influence of these groups can sometimes impede transformation. At some historically white institutions, alumni networks and donors have exerted conservative pressure, using their financial power and historical ties to actively resist changes to institutional culture, language policies, and residence integration (Soudien, 2008). Additionally, the heavy involvement of national political parties in student governance has frequently resulted in extreme factionalism and polarization on campuses, leading some universities to attempt to depoliticize their SRC models (Luescher et al., 2023; Soudien, 2008).

Deteriorating governance has severely hampered these transformation goals across the higher education sector. Councils, the highest decision-making bodies at universities, have frequently failed to realize their transformation responsibilities (Luescher et al., 2023; Soudien, 2008). Many councils display passivity and a lack of strategic direction, acting merely as conveyor belts that "rubber-stamp" policies submitted by management (Soudien, 2008). In other cases, councils have been crippled by severe factionalism, a lack of fiduciary capacity, or they defer to conservative alumni who use their influence to actively resist progressive changes (Jansen, 2023; Soudien, 2008) and which has driven institutions to the brink of collapse (Jansen, 2023).

Statutory bodies designed to broaden democratic participation and oversee transformation have been increasingly sidelined (Cloete & Kulati, 2003). Institutional Forums (IFs), which are legally mandated to advise on transformation, race, and gender equity, are often dysfunctional or reduced to "lame ducks" whose advice is ignored by management and councils (Luescher et al., 2023; Soudien, 2008). Similarly, university Senates have frequently been bypassed in strategic decision-making by assertive executives, reducing them to marginalized, reactive bodies (Cloete & Kulati, 2003).

Pressures for efficiency and market competitiveness have fostered a "managerialist" culture that centralizes discretionary power in the hands of executive management (Cloete & Kulati, 2003). This shift has alienated academic staff, subverted shared participation, and often clashed with the collegial values necessary for academic freedom (Cloete & Kulati, 2003). Conversely, many historically black universities have suffered from "crisis leadership" marked by a complete breakdown in administrative controls, deep mistrust, and highly politicized, protracted decision-making that paralyzes institutional change (Cloete & Kulati, 2003).

Corruption and state interference have eroded institutional stability, often sparking student and staff protests (Jansen, 2023; Luescher et al., 2023). Legislative amendments have increasingly granted the Minister of Higher Education expansive powers to intervene in failing universities by appointing independent assessors and administrators to completely take over governance and management functions. Ultimately, poor governance has allowed a rote "compliance culture" to take root in many institutions, where transformation is treated as a superficial, box-ticking exercise resulting in "change without change" (Luescher et al., 2023). Untransformed governance structures and informal networks have been utilized to conserve reactionary interests, maintaining institutional cultures that alienate marginalized groups and perpetuate historical racial and gender hierarchies (Luescher et al., 2023; Soudien, 2008).

## 2.8 Equity and diversity

It is expected that universities should bring together students and staff of different races, genders, abilities, nationalities, cultures, and religions and serve as a space that reflects and imbues the diversity of the environments in which universities operate and critical enquiry thrives.

This dimension of transformation that relates to addressing the demographic imbalances of the past, remains a major challenge. According to some observers, there has not been full redress on the issues of race, class and gender (Maringe & Osman, 2016), and racial segregation remains entrenched in some higher education institutions (Le Grange, 2011). The formerly white universities continue to attract predominantly white students, and students from the rich and middle-class black population. The same demographic composition is reflected among the academic and research staff of those institutions (Barnard et al., 2016). Similarly, student success rates remain skewed based on race, gender and class, with black students registering the lowest success rates (Maringe & Osman, 2016).

Nevertheless, while equity transformation may be less pronounced at some universities compared to others (Van Schalkwyk et al., 2022), the post-apartheid university system does look very different in its racial composition from the university of the past. The data for undergraduate enrolments show that between 2000 and 2017, there was a doubling of black students (at an annual average growth rate of 4.3%) while the number of white enrolments declined marginally (− 0.8%). For postgraduate enrolments, there were higher numbers of white than black students in the system in 2000. For the period analysed, the number of white postgraduates remained constant (− 0.1%), while the number of black students had nearly tripled (4.9%). It is also evident that in 2017, the proportions of black undergraduate and postgraduate enrolments to total South African undergraduate and postgraduate enrolments were 86.5% and 70.3%, respectively (Van Schalkwyk et al., 2022). There has also been an increase in the number and proportion of black academic, administrative and support staff. For all personnel categories, more than 50% of posts are held by black staff in 2017 whereas in 2000 this was only true for support staff (Van Schalkwyk et al., 2022).

Commentators have pointed out that while achieving demographic equity is a crucial precondition, these demographic changes alone are not sufficient to produce a deep, lasting transformation. Deep transformation refers to a profound structural and cultural shift in higher education that moves beyond surface-level, quantitative changes to address the fundamental "roots of inequity" rather than its symptoms. Deep transformation requires changing the underlying substance, ideologies, and practices of higher education, particularly by examining how these elements attribute power and distribute privilege within the institution.

Thus, the challenges regarding diversity, inclusion, and xenophobia at South African universities remain profound, taking on complex structural and intersectional forms. In addition, recent scholarship explicitly highlights a severe and growing crisis of xenophobia directed at foreign African nationals within the higher education sector. "Academic xenophobia" targeting foreign African scholars is now recognised as a pressing issue across South African university campuses (Simba et al., 2024; Tomaselli, 2023). This prejudice directly mirrors the endemic bouts of xenophobic violence seen in broader South African society, proving that university corridors are not insulated from the country's wider social fractures (Simba et al., 2024). While universities openly celebrate "internationalisation" when it involves institutions or scholars from the Global North, African scholars from other parts of the continent are frequently "othered" and treated with suspicion (Simba et al., 2024). This discrimination persists despite the fact that foreign African academics and teachers contribute directly and significantly to local education and employment, meaning the higher education sector would be substantially poorer without their presence (Jansen, 2022; Tomaselli, 2023).

## 2.9 Quality

By the 1970s, Martin Trowler had coined and popularised the term “massification” in higher education. But it sat uncomfortably with him because while the concept seemed both plausible and necessary, he feared what it might mean for the quality of education at his own university, Berkley.

The tension between massification and quality in higher education arises from the challenge of expanding access to education while maintaining high standards of academic excellence.

Massification refers to the process of making higher education more widely accessible to larger segments of the population, driven by the recognition of the social and economic benefits of having a more educated populace (such as increased employment opportunities, social mobility, innovation and economic growth). Governments and educational institutions aim to democratize education, reducing barriers and providing opportunities for all, regardless of socio-economic background.

Quality in higher education encompasses the standards of teaching, learning, research, and institutional infrastructure. It involves maintaining rigorous academic criteria, providing sufficient resources, and ensuring that graduates possess the necessary skills and knowledge.

The tension between massification and quality arises because increasing student numbers often puts pressure on educational resources and infrastructure. This was posited as one of the main reasons why the Department of Education did not push for the expansion of the higher education system in its inaugural white paper of 1997. The claim is that massification impacts quality in several ways, including:

1. Reduced faculty-student interaction: Higher student-to-teacher ratios reduce the opportunity for personalized instruction and mentorship.
2. Resource constraints: Limited financial and physical resources can affect the quality of facilities, access to learning materials, and research opportunities.
3. Standardization: To manage large cohorts, institutions may resort to standardized teaching methods, which can neglect the diverse needs and learning styles of individual students.

Balancing these competing demands involves strategic planning and investment to ensure that the expansion of access does not come at the expense of educational quality. This includes leveraging

technology, increasing funding, and implementing policies that effectively manage the tension between striving for both inclusivity and excellence.

## 2.10 Finances

Financial support for South African public universities still predominantly comes from the fiscus. Funding for higher education must compete with other social priorities such as health, security, infrastructure and the like. A scenario of more for everyone is clearly untenable. Nevertheless, it is possible to assess the relative commitment of government to universities in relation to other social priorities, and it is possible to assess the prioritisation of funding directed to particular universities and/or certain university functions. A case in point is the amount of funding allocated to NSFAS in relation to funding for teaching and learning, or research. The proportion of black grant to earmarked funding may also reveal government (political) priorities which may be at the expense of a healthier university system.

In the face of budget constraints, including caps determined by government on increases in student fee income, universities seek alternative sources of income. So-called third-stream income can be seen as a healthy development in the sense that it reduces dependency on government income but at the same time requires caution because of the uncertain and unpredictable nature of income from non-governmental sources. The setting of the research agenda and conditions attached to external funding may also introduce negative outcomes if they restrict universities from focusing on problems more pressing local problems and challenges.

An additional risk in the resourcing of the university is the prioritisation of administrative staff and systems over the core functions of the university. Instead of playing a supportive role in ensuring the efficient and effective allocation of scare resources, universities may overinvest in administrative functions, processes and staff.

Based on recent reports, South Africa's public university sector is facing a severe financial crisis driven by chronic underfunding, a massive student debt burden, escalating operational costs, and an overreliance on an unstable state financial aid system.

A core driver of the crisis is that government block grants and subsidies have failed to keep pace with rapid student enrolment growth. Enrolments have nearly doubled since 2000, yet government subsidies have stagnated in real terms, forcing a smaller pool of resources to cover a growing student body (Jacobs, 2026). The rate of state subsidy increases has often fallen below the Consumer Price Index (CPI), and inflation-linked increases in student fees fall short of the cost of real inflation in wages, private benefits (e.g. medical aid). These declining revenues in real terms severely squeeze universities' reserve margins (Universities South Africa, n.d.). Furthermore, South Africa's expenditure on higher education as a percentage of its GDP has historically lagged that of other upper-middle-income countries, limiting the sector's ability to maintain capacity and quality (DHET, 2018; Wolhuter, 2023).

With state subsidies declining as a share of total revenue, universities have become heavily reliant on tuition fees, which typically account for 30% to 34% of their total income (Khuluvhe & Netshifhefhe, 2024). In the context of widespread poverty and high unemployment, this reliance on private fee payment has fuelled a student debt crisis, with aggregated student debt estimated at around R24 billion (Goni, 2025). Individual institutions carry large shortfalls; for example, the University of Cape Town's student debt burden recently spiked to R1.3 billion (Goni, 2025). Unpaid fees and delayed government block grants create intense cash-flow pressures at the start of every

academic year, threatening the administrative and infrastructural stability of these institutions (Goni, 2025).

The National Student Financial Aid Scheme (NSFAS) is the primary engine of government spending on higher education and plays a vital role in expanding access (Khuluvhe & Netshifhefhe, 2022). However, it also presents systemic financial risks. While the NSFAS allocation per funded student has increased significantly, the real per-learner state subsidy allocated directly to universities has remained largely stagnant (Branson & Whitelaw, 2025). As a result, students are being funded to attend institutions that do not receive sufficient capital to maintain the infrastructure required for quality learning (Branson & Whitelaw, 2025). Additionally, administrative delays in NSFAS disbursements and strict caps on student accommodation allowances directly damage universities' cash flows (Goni, 2025). Parliamentarians have warned that institutional survival is now dangerously tethered to NSFAS, stating that "there is no university that will survive for five years if NSFAS collapses" (Jacobs, 2026).

The Auditor-General's office has cautioned that university operational costs are rising at a much faster rate than their revenues (Lemmer, 2024). This is exacerbated by medium- and long-term contracts with escalation clauses that exceed the limits placed on tuition fee increases (Lemmer, 2024). Additionally, following the #FeesMustFall protests, the mandated "insourcing" of previously contracted workers—such as security, cleaning, and catering staff—has placed financial strain on the system, adding an estimated R400 million to R2 billion to the sector's annual costs (Universities South Africa, n.d.).

To survive, universities are encouraged to generate "third-stream" income through contract research, entrepreneurial activities, and donor funding (DHET, 2024). However, this revenue stream has been declining, dropping from roughly 29% of sector income in 2012 to around 23–25% in recent years (Branson & Whitelaw, 2025; Khuluvhe & Netshifhefhe, 2024). This decline places even greater reliance on the state and deepens structural inequalities, as historically advantaged universities are far more capable of securing private funding and investments than historically disadvantaged institutions (Jacobs, 2026).

Ultimately, experts and government officials warn that the current financial model is unsustainable and point to a desperate need for sector-wide reform, fiscal discipline, and a rethinking of alternative funding strategies to prevent systemic collapse (Jacobs, 2026; Lemmer, 2024).

## 2.11 Organisational culture

People are embedded in social and cultural systems.  Those systems shape behaviour by communicating norms which indicate what is required or expected to be part of the system. Interventions that provide individual motivation and ability to change may be rendered ineffective because of strong norms, incentives, and policies that counter the intended behaviour. Ironically, this can worsen conditions because the individuals have knowledge and motivation to do the new behaviours, but feel powerless against a culture that does not value or promote those behaviours.

When norms, incentives, and policies are misaligned with desired behaviour, a much more encompassing strategy is needed to effect culture change, for example, changing the research culture to accelerate discovery, solutions and cures. The same concepts can be applied to other culture change efforts.

Perhaps more disconcerting is the realisation that, so far, transformation of higher education has

focused more on access, success and representation of the different population groups, with little focus on transforming the higher education itself (Soudien, 2010). The institutional cultures, the spaces within the institutions, the curricula, the ideologies and power relations remain untransformed (Davids, 2019). As Mbembe (2001) observed, the 'epistemological bases of what is taught in South African institutions remain sheltered in a western discourse that stubbornly refuses to open up space for new and much needed Afrocentric epistemes'. It is this realisation that has driven many researchers, including Badat and Sayed (2014), to call on government to focus on implementing a policy for the systematic and progressive transformation of institutional cultures, in congruence with constitutional ideals and values.

## 2.12 Social and environmental sustainability

Tikly et al. (2020, 8) define sustainable development as social and environmental justice which can be understood as putting in place the social arrangements that permit existing and future generations to participate equitably as peers in social and educational life, while simultaneously recognising the integrity of other species and natural systems.

Social sustainability and environmental sustainability are interconnected areas of focus within higher education studies, and the literature reflects three understandings of how universities engage with the idea of sustainability.

First is the notion of *environmental* sustainability in universities which focuses on efforts to reduce the ecological footprint of campuses and promote sustainable practices. Included are initiatives such as the adoption of renewable energy sources, the implementation of energy-efficient infrastructure, the reduction of waste generation, and the promotion of recycling and composting.

Second is the notion of *social* sustainability in universities (Hudler et al., 2021) which explore initiatives taken by universities to promote diversity, equity and inclusion. They explore how universities are addressing social issues, such as improving access to education for marginalised communities, fostering a sense of belonging among students and creating an inclusive campus environment. Social sustainability also focuses on the role of universities in engaging with local communities, partnerships and outreach programmes.

Third is the notion of an *integrated approach* to sustainability that incorporates both social and environmental dimensions. Articles that understand sustainability in an integrated manner typically explore the intersection of social and environmental sustainability within university settings, and seek to interrogate how universities are integrating these two dimensions to create holistic sustainability frameworks, including interdisciplinary research collaborations, sustainability-focused curriculum development, and the incorporation of sustainable practices into campus operations and facilities.

Sustainability can be understood as cutting across all three functions of the university. Sustainable development is taught and credentialed. Universities offer courses and degrees in sustainable development. University research and the certification of knowledge incorporates an increasing focus on sustainable development. Research funding prioritises sustainable development as an area of study, and articles on sustainable development are published in the higher education studies and other scientific journals. Engagement, whether understood as universities engaging with local communities or with industry, increasingly encompasses an expectation that engagement is for the betterment of society, rather than for the exclusive benefit of the university.

McCowan (2022) interprets the contribution of universities to sustainable development as *producing* sustainable development, *constituting* it and *reconceptualising* it. In other words, training and educating university graduates as future agents of change for a better planet (Walker and McLean, 2013), operating as organisations that embody and enact sustainable practice, and taking a critically constructive position in society and generating new knowledge on the necessity and pitfalls of sustainable development (see, for example, Elfert, 2023, and gatherings such as WHEC22[7] which gathered 2,500 higher education stakeholders to reshape ideas and practices in higher education).

Elsewhere, McCowan (2019) takes a slightly broader approach by identifying five modalities by which universities can contribute to sustainable development. These modalities, referenced to the achievement of the specific SDG of reducing poverty are as follows: (1) education ('equipping young people with the knowledge and skills to ensure decent livelihoods'), (2) knowledge production ('developing technologies for ensuring food security for farmers'), (3) public debate ('raising awareness of the negative impact of punitive debt repayments of the poorest countries'), (4) service provision ('providing free-of-charge internet facility for local communities'), and (5) embodiment ('paying its own cleaning staff a [good] living wage') (Lakhno, 2022).

McCowan (2022) reminds us that there are problematic aspects of the notion of sustainability. He argues that sustainable development and sustainability are flawed concepts; overly vague, and susceptible to co-option (Cowen, 2021; Klerides and Carney, 2021) by agendas hostile to social justice and the health of the ecosystem, and/or to a flaccid consensus accompanied by inaction (Spangenberg, 2016). Nevertheless, he remains positive about the contribution of the university to sustainability: Sustainable development "indicates a terrain on which a variety of different (quite contrasting) positions may be held. Its vagueness, which for those seeking clarity and purpose may be frustrating, could actually be its strength. In saying almost nothing in a substantive sense, it is an invitation to examine deeply and deliberate about the kind of society and planet that we would like, and which can endure through time. … In remaining committed to sustained enquiry and deep reflection, in dialogue with action, and in the context of epistemic pluralism and diversity of ideas, tertiary education can lead a critical interrogation of the notion of sustainable development, and its reimagination, setting in motion a positive societal contagion that may give us a chance of finding a way out of the current ecological crisis" (McCowan, 2022, n.p.).

Recent research of sustainability literature (Van Schalkwyk, 2023) revealed that sustainability as it relates to universities is mostly conceived of in environmental or ecological terms in the grey literature (using *University World News* as a proxy), whereas there a stronger emphasis on the social dimension of sustainability and universities in the academic literature. In terms of the functions and operations of universities in relation to sustainability, the greatest emphasis is on how the university as a physical space can be better managed in order to reduce its negative impact on the environment and on society. There is also some emphasis on how the teaching and learning function of the university can be adapted to improve positive outcomes in terms of sustainable development. There is less but nevertheless some attention given by researchers to how the research and engagement functions of the university may contribute to sustainable development.

USAf established the Higher Education Sustainability Community of Practice (HESCoP)[8] to move the higher education sector towards developing an Environmental Sustainability Framework that speaks to all core university functions of teaching and learning, research and community engagement. The envisaged Framework aspires to infuse the principles of environmental sustainability into

[7] https://www.unesco.org/en/education/higher-education/2022-world-conference
[8] https://www.usaf.ac.za/higher-education-sustainability-community-of-practice/

universities' curriculum, promote environmental sustainability-focused research and raise awareness, in campus and neighbouring communities, of environmental consciousness through advocacy. The hope is that South Africa's universities will, over time, integrate environmental sustainability principles into all disciplines' subject matter and curriculum, into research, in operations and governance and, by extension, in all their engagement. Gradually, universities will also develop capability to report annually on their environmental performance — all of these, as universities seek to contribute to the realisation of the United Nations' Sustainable Development Goals (SDGs).

## 3. Notes on indicators for the transformation M&E framework

An HSRC report, *The State of Transformation in South Africa's Public Universities*[9], recommends that the 2014 Regulations for Reporting by Public Higher Education Institutions should be revised so that universities can produce more comprehensive, standardised and transformation-focused annual reports. The goal should be that annual reports provide a trustworthy source of transformation-relevant information to the minister of higher education and training, statutory and sectoral bodies, and the universities themselves. The standardization and institutionalization of reporting is supported, as is the need for robust and trustworthy data. However, some concerns should be highlighted.

It has been suggested that transformation remains an impossible and endless task in the absence of transformation targets, in other words, without an end-goal, the process of transformation is fraught with uncertainty and contestation (Van Schalkwyk et al., 2022). Previous transformation frameworks have left the setting of targets to the universities. While taken seriously by some universities, the overall result has been uneven and prone to be treated as a public relations exercise that seeks to boost the reputation of a particular university rather than a serious attempt at 'deep' or meaningful transformation.

Setting targets is not a straightforward process. It is a process that must work towards consensus between multiple stakeholders, and it must be informed by the available evidence to ensure that the targets agreed to are realistic and achievable (Cloete et al., 2018). As indicated above, if there is consensus that a single set of targets for all 26 public universities is not viable, then there is also the possibility of setting different transformation targets for different universities or for different clusters of universities (Cloete, 2014). The latter approach of clusters may be more desirable both in terms of the practicalities of managing the monitoring and evaluation of the university system, but also because it retains a comparative dimension that would be lost if all 26 universities had a unique set of transformation targets.

In cases where targets are already in place (e.g., targets for the number of doctoral graduates by 2030), these targets should be revisited and/or differentiated to take into account varying contexts across universities and fields of study. In other words, to continue the example of doctoral graduates, the system targets for the number of PhD graduates in professional fields are likely to be vastly difference for PhD graduates in STEM.

[9] https://repository.hsrc.ac.za/bitstream/handle/20.500.11910/21354/9812929.pdf?sequence=1&isAllowed=y

# 4. Recommendations

Based on the conceptual framework on transformation towards a healthier public university system presented in this report, the following next steps are recommended:

1. ***Acknowledge existing transformation***. Where sufficient indicator data exists, assess each university according to the proposed framework. This should provide a first assessment of the transformation already achieved by individual universities, and any areas where transformation efforts may require more attention.
2. ***Reach consensus***. The success of the framework will hinge to a large degree on a set of indicators that are agreed upon by the various stakeholders in the university sector in South Africa. This will be no easy task and will likely only be achieved through open and honest dialogue between a representative group of stakeholders. A common commitment to finalizing the framework, indicators and targets combined with a willingness to make concessions for the greater good are likely to be essential elements of reaching any consensus.
3. ***Determine feasibility***. Where indicator data is insufficient or unavailable (as indicator in the table above), conduct a feasibility study to determine the possibility of systematically collecting the required data.
4. ***Set targets***. In the case of the organizational-level transformation indicators, two options should be explored in consultation with all stakeholders: (1) setting realistic transformation targets for each indicator, where each indicator target agreed upon applies to all public universities; or (2) setting realistic and context-determined transformation targets for individual universities or for clusters of universities.
5. ***Monitor***. Assess universities in terms of the transformation indicators as per the cycles determined by the indicators.
6. ***Learn and revisit***. Reassess the indicators and the targets every 5 years.

It is further recommended that the M&E framework for the transformation of public universities in South Africa be structured around seven priority areas. These are:

1. Sustainable expansion of the post-school education and training (PSET) system to reduce pressure on universities in particular and on higher education in general as the apex institutions in the broader PSET system.
2. Strengthen government support, university leadership and management capacity through academically engaged governance.
3. Enhance accessibility of powerful knowledge in university curricula to create responsive, responsible and self-programmable graduates.
4. Improve the quality of research and increase levels of academic citizenship.
5. Create a system of horizontally differentiated public universities to enable each university to deliver on a realistic and relevant vision and mission that promotes and protects the academic project.
6. Create an equitable and diverse university system.
7. Bridge the gap between the university and society.

These priority areas map to the themes and of the HSRC's "The State of Transformation in South Africa's Public Universities" and USAf's "Transformation Barometer" as follows:

| M&E framework (this report) | USAf themes | HSRC dimensions |
|---|---|---|
| 1. Sustainable expansion of the post-school system to reduce pressure on universities. | i. Inclusive enrolment planning; ii. Access and success (students) | -- |
| 2. Strengthen government support, university leadership and management capacity through academically engaged governance. | **Institutional culture**: i. Governance and Management; ii. Professionalisation of 'Transformation' work; iii. Social structure of the academy; iv. Social inclusion/cohesion; v. Language and Symbols. **Leadership~~, relations with external stakeholders, and community engagement:~~** i. Diversity, training, development and professional growth; ii. Transformational leadership~~; iii. Socially just, diverse, inclusive community engagement; iv. Equity-based external engagement~~ | Governance, leadership and management |
| 3. Enhance accessibility of powerful knowledge in university curricula to create responsive, responsible and self-programmable graduates. | **Teaching and learning**: i. Inclusive enrolment planning; ii. Access and success (students); iii. Critical pedagogies; iv. Diversity competencies | Teaching and learning |
| 4. Improve the quality of research and increase levels of academic citizenship. | **Research, scholarship and post-graduate studies**: i. Knowledge transformations; ii. Diversity and inclusivity; iii. Internationally recognised research on 'race', 'gender', 'disability' and social justice | Research and knowledge production |
| 5. Create a system of horizontally differentiated public universities to enable each university to deliver on a realistic and relevant vision and mission that promotes and protects the academic project. | -- | -- |
| 6. Equity and diversity | Equity and redress: i. Access and success (staff); ii. Race, Gender, Disability; iii. Support/opportunity; iv. Diversity and inclusivity | Staff and student profiles [~~and the higher education experience~~] |
| 7. Bridge the gap between the university and society. | ~~Leadership,~~ **relations with external stakeholders, and community engagement**: ~~i. Diversity, training, development and professional growth; ii. Transformational leadership;~~ iii. Socially just, diverse, inclusive community engagement; iv. Equity-based external engagement | Community engagement & ~~Staff and student profiles and~~ the higher education experience |

What is evident from the table above is that there is, by-and-large, a high degree of overlap between the priority areas proposed in this framework and the transformation themes and dimensions set out in previous reports. Where there is divergence (i.e., the university's place in the broader PSET system and a differentiated *university* subsystem within PSET), it highlights our broader interest in system-wide transformation as opposed to transformation limited only to the organizational or university level of analysis.

# SECTION 3: M&E Framework

# 1. Introduction to the M&E framework

After three decades of democracy, transformation remains ingrained in the South African higher education discourse. This is perhaps unsurprising as the outcomes of university students remain inequitable and staffing demographics unpalatable. At the same time, the campuses, labs and senate meetings of today bear little resemblance to the country's public university system in 1994. More problematic is that there is little consensus on what is necessary for transformation to be achieved, nor are there standardised indicators with which we can measure progress towards a transformed system at the national level.

This M&E framework has been extracted from a conceptual framework (Section 1 of this document) developed to provide a coherent notion of university transformation in the South African context. This M&E framework therefore follows the definitions and concepts related to transformation introduced therein.

This M&E framework draws on the principle of The Equitable Evaluation Framework. It is a framework that challenges deeply held assumptions about what makes evaluation "credible" and urges a critical engagement with accepted definitions of rigour, objectivity and validity. At its core, the Equitable Evaluation Framework pushes for an unlearning, reflection, and a shift from the transactional to the relational; from extraction to reciprocity; and from judgement to curiosity. It several orthodoxies that shape evaluations and the way they are designed and used, including:

- Evaluators are the experts → Lived experience is more valuable than formal credentials
- Credible evidence comes from quantitative data → We must embrace multiple ways of knowing
- Evaluation is about measuring programme success → Evaluation should be used to learn our way into the future

This resource frames mindsets, tensions and sticking points that help navigate real-world challenges in shifting towards more equitable, just and meaningful evaluation practice.

The conceptual framework outlines the need for a National Transformation M&E Plan for universities that provides a common set of indicators and context-sensitive targets that enable an assessment of transformation at the national level.

While major strides have been made to make access to the university more equitable, equity of outcomes is still problematic nationally. For transformation to occur within this area, a different perspective on transformation is required and is captured in the definition presented in the conceptual framework:

> The transformation of public universities in South Africa is the measurable and positive change away from the injustices and inequities of the past towards a sustainable system that aligns with the values of society and that remains aligned with the norms of science.

This definition summarizes the argument in the conceptual framework, that true transformation will not occur until all those who access the university also access the powerful knowledge that the university bestows on students. If students who enter the university system do not leave as self-programmable individuals with the ability to critique and contribute to society in relevant ways, then true transformation cannot be achieved both in the short and long terms. At the same time, in a

functional and sustainable system, academics must be granted the freedoms required to teach and research, while taking seriously the trust placed in them by society.

Having the national goal of moving towards a functional and sustainable university system allows for an examination of transformation across all 26 public universities as it focuses on the different pillars of how powerful knowledge is presented, discovered and disseminated. Transformation can be assessed at each university acknowledging that, while each institution is uniquely situated historically, culturally and geographically, the pursuit and protection of the academic project should be at the core of *all* universities.

## 2. Scope of the M&E framework

This framework offers a starting point for a national assessment of the transformation of public universities in South Africa. It focuses primarily on what can be monitored and implemented at the institutional level but also includes some outcomes at the system level. It offers a high-level view on the state of transformation of universities, and relies on each to determine what is necessary within their organisation. Each university is therefore expected to be responsible for transformation at the organisational level within all the tenets and expectations of being a functional and sustainable university.

The direct beneficiaries of this transformation framework are the staff and students of the university as they are the key agents in the academic project. The aim of this framework is that these target groups will experience better learning and working environments, and more equitable outcomes without compromising the value of those outcomes nor the values of the university as an institution.

Transformation of this nature will involve many iterations where the outcomes change; what is presented here is merely one the iterations necessary for moving public universities forward. What can be seen in the last 30 years is that meaningful transformation takes time. However, it is also true that the complexity of transformation at a high level can lead to “choice paralysis”, as no indicators or outcomes fully capture the magnitude of change necessary for system-wide transformation.

For this reason, a relatively small set of outcomes and indicators have been developed in line with the definition of transformation presented within the conceptual framework. The focus is on seven priority areas:

1. Sustainable expansion of the post-school education and training (PSET) system, including the university, to reduce existing enrolment and performance pressures on universities.
2. Strengthen university leadership and management capacity through academically engaged governance.
3. Enhance accessibility of powerful knowledge in university curricula to create responsive, responsible and self-programmable graduates.
4. Improve the quality of research and increase levels of academic citizenship.
5. Create a system of horizontally differentiated public universities to enable each university to deliver on a realistic and relevant vision and mission that promotes and protects the academic project.
6. Create an equitable and diverse university system.
7. Bridge the gap between the university and society.

These key priorities have been ordered purposively to begin with transformation in the Post-School Education and Training (PSET) system (Priority Area 1) in acknowledgement that the university does not function in isolation and, more importantly, is one of several institutions in the education and science systems. Priority Area 1 and its focus on the educational and knowledge context in which universities are situated is followed by transformation priorities within individual universities (Priority Areas 2 to 6). The final priority area again takes a broader view by contextualizing the university within society (Priority Area 7). Transforming the university as organisation or tweaking the PSET system are insufficient to create a functional and sustainable university system; there must be a concomitant understanding in society of what the university is, what is does, and why it matters.

*Priority Area 1*: The outcomes associated with sustainable expansion of the university aim to address the issue of massification. For universities to develop into functional and sustainable institutions, they need to maintain a feasible increase in enrolments to ensure staff to student ratios which, in turn, make possible the delivery of quality education. This cuts across all university faculties and departments but is nuanced to the unique attributes of each faculty and department. The university is also but one option for post-school education and strengthening TVET programmes is an important part of achieving a massified post-school system without threatening the academic project of the university.

*Priority Area 2:* Strengthening government support, leadership and management capacity focus on maintaining the integrity of the academic project by ensuring that government provides adequate financial support for universities as public institutions, and by appointing university leaders who have a deep understanding of what the university is and the requisite skills to manage such universities. Support staff also need to have a deeper understanding of universities and the academic project such that the public university is operated in a manner that is sensitive to the idiosyncrasies of the university, while bringing other, relevant skills to advance the university.

*Priority Area 3:* Enhancing accessibility of powerful knowledge in university curricula requires a looking at the deeper level of access at universities, understanding that not all students have access to powerful knowledge. This involves student support on various levels and aims to reduce the achievement gap between black and white students.

*Priority Area 4:* Improving the quality of research and increasing academic citizenship requires a recognition that academics are agents of change and should actively be involved in the academic project. Academics committed to the university are best placed to regulate and ensure the quality of university teaching and research. Professors should be professing, and all academics should be supporting and critiquing their peers while not shying away from the public eye when necessary. Emerging scholars must be socialized into the academy.

*Priority Area 5:* External factors such as funding regimes imply that not all universities can specialize in both teaching and research in all disciplines. The University Capacity Development Grant has aimed to address some of the factors that have limited institutional advancement in the past. However, financial resources are diminishing in support of universities globally. To address this, universities should differentiate their offerings and prioritise some university functions over others. This priority area looks at ways in which universities can position themselves as differentiated while at the same time avoiding potentially unhealthy competition and organisational hierarchies.

*Priority Area 6:* Given the racial injustices of the past, it is impossible to avoid monitoring and evaluating the racial transformation of universities in South Africa. This became evident during the

consultations held in the development of this framework. This framework is not the first to include indicators of racial transformation and the lessons in attempting to do so in the past are heeded in this framework, not least the need to avoid head-counting and to acknowledge deeply institutionalised discriminatory practices. Any framework that takes seriously racial equity in the university system also needs to acknowledge the social justice imperative and scientific value of equity in terms of gender, nationality, disability, and age.

*Priority Area 7*: The gap in understanding between society and the university perpetuates both the privileging of universities over other post-school places of learning as well as an awareness about the commitments necessary to be a university student. This results in students entering the system that are unaware how the university works, and parents/guardians who may not understand the rigidity of the term timetables, the nature of assessment, and the detrimental impacts of student absenteeism. Building trust between universities, government and society would also benefit from an improved understanding of the university. The aim of this priority area is to bridge the understanding gap so that society is more aware of what the university is and how it operates. Broadly, the value of the university must be better understood (which is not to say that it should be regard as the only viable choice of study in the post-school system, or that trust in the university should be automatic).

In keeping the focus on the overall purpose of the academic project, this framework aims to minimize the number of indicators necessary for measuring transformation at the system level with consensual transformation targets. It also leaves institutional transformation targets to individual universities as this is consistent with a differentiated public university system and an acknowledged of different path dependencies. In other words, the framework does not seek to override or replace institutional transformation plans, which are critically important, but rather aims to provide an umbrella concept of transformation from which to contextualise transformation *and* to produce standardised, robust and comparable indicators of transformation across the university system. For this reason, this framework should be considered within a cascading monitoring and evaluation monitoring model, where this framework is the system-level imperative that a university's Institutional Transformation Plans can expand into, developing additional complexity that is nuanced to their context but without deviating from the transformation towards a sustainable public university system in South Africa.

This framework and the revisions thereafter will consider transformation on a 10- to 15-year timeline.

# 3. Theory of Change

The purpose of this transformation framework is to offer an empirically based roadmap for creating a functional and sustainable public university system in South Africa. The purpose of this section is to highlight the necessary inputs, activities, and outcomes in a logical process (Figure 1). It will posit the main hypothesis of this framework and briefly unpack the overarching assumptions and external factors impacting the transformation of the university.

Transformation within higher education is not solely about racially diverse university staff and student populations. The system is not transformed if students of all backgrounds are leaving universities without the powerful knowledge that enables them to be critical citizens within any work environment. Real transformation of higher education will also only be realized when the quality of teaching and research are sustained; revisable curricula are in place; academics and

university leaders are inculcated with the purpose of the academic project; support structures for students are put in place; when research produces new knowledge; and when the university system grows sustainably.

## *Hypotheses*

The overriding hypothesis of this framework is that transformation can be attained and sustained when positive change occurs across multiple facets of the university.

Through the sustainable expansion of the post-school system, academically qualifying students will have access to powerful knowledge.

Powerful knowledge will be produced through quality teaching with the appointment of academically engaged staff and with the support of administrative staff who understand the academic project.

With powerful knowledge, students will be equipped to progress to producing quality research or to enter the labour market as self-programmable, critical citizens.

With adequate funding support, autonomy, and responsible self-regulation, universities will produce research that is recognised internationally and valued locally.

By appointing academically experienced leadership, the university will be guided, through ever-changing times, to produce excellent research and/or deliver outstanding teaching appropriate for its context, and to the benefit of staff, students and broader society.

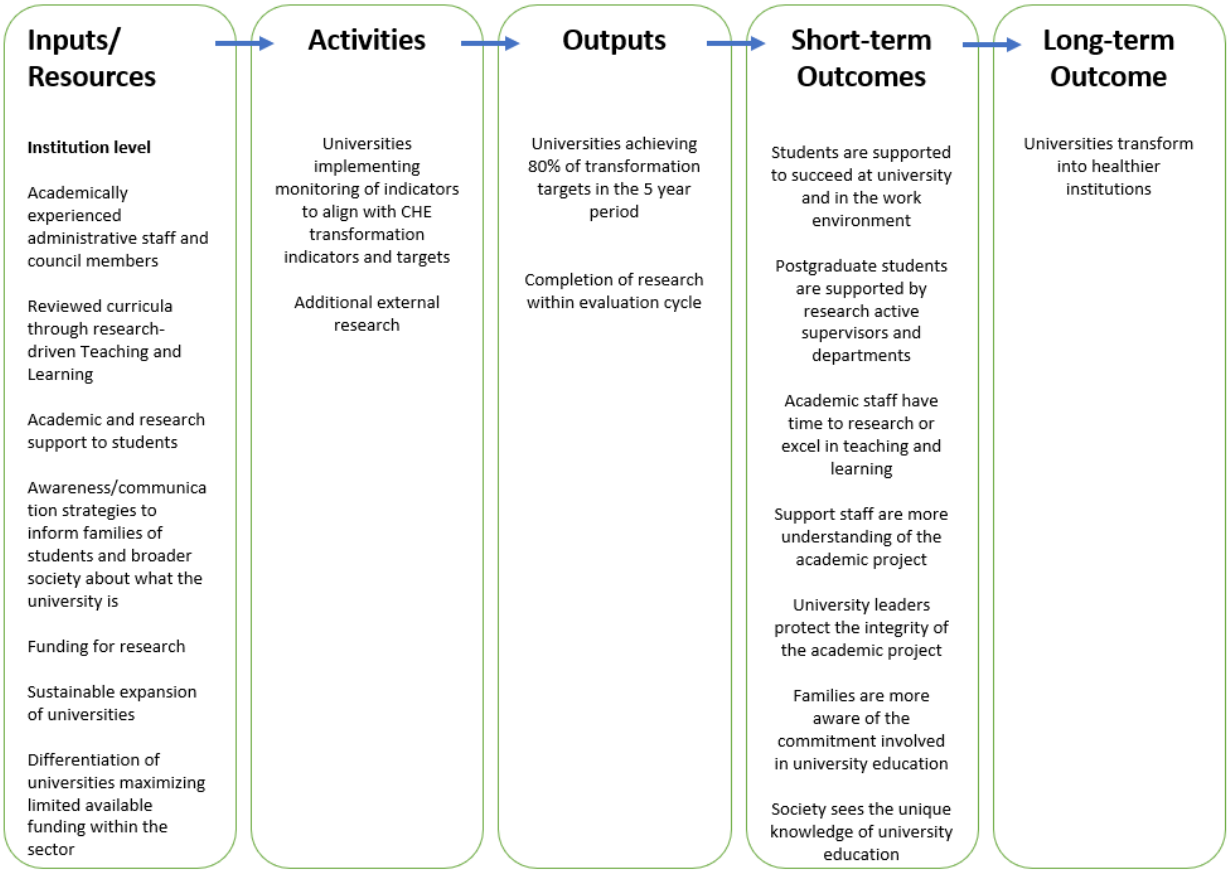



*Figure 1: Theory of change*

### *Assumptions and external factors*

To make progress towards the desired outcomes of this framework, it is assumed that each university in South Africa has their own implementable and contextually relevant forward-looking plans that are grounded in theory and have the means to collect accurate data to monitor and evaluate their plans alongside this M&E framework.

This framework also assumes that each university has the resources available to become and remain a functional and sustainable university. This includes both social and financial resources that may, in many universities, be limited by external factors such as the level of municipal services provided in the town the university is located, safety and security, location (remoteness from urban centres and/or major transport routes), and/or the cost of living, resulting in difficulties attracting staff and students.

In terms of financial resources, it also assumes the provision of sufficient government support for teaching, learning and research at public universities.

Other underlying assumptions within each priority area are provided explored within the framework.

## 4. Proposed M&E indicators

The outcomes and indicators below look at each priority area as a collection of several outcomes that work together to achieve the broader priority. Each outcome will have a number of indicators that are used to measure progress and to evaluate whether the outcome has been achieved.

For purposes of usability, familiarity and increased uptake, priority areas have been merged into indicator groups. This grouping should also make it easier to focus only on the most necessary indicators which, in turn, facilitates a leaner and more realistically measurable set of indicators. Each group is accompanied by the objectives of the priority area.

> **GROUP 1** (Priority Areas 1, 6 & 7): **The university and society indicators**: Sustainable expansion of the post-school education and training (PSET) system, including the university, to reduce existing enrolment and performance pressures on universities, redress past social injustices, and to bridge the gap between the university and society
>
> **GROUP 2** (Priority Area 2): **Governance indicators**: Strengthen leadership and management capacity through academically engaged governance
>
> **GROUP 3** (Priority Area 3): **Teaching and learning indicators**: Enhance accessibility of powerful knowledge in university curricula to create responsive and self-programmable graduates
>
> **GROUP 4** (Priority Area 4): **Research indicators**: Improve the quality of research and increase academic citizenship
>
> **GROUP 5** (Priority Area 5): **Differentiation indicators**: Create a system of equal but differentiated public universities that enables each university to deliver on a realistic and relevant vision and mission

Each indicator has a source of evidence necessary for verifying whether the target was met or not.

The targets are determined based on baseline data (which will need to be collected before this framework is initiated) and aim to facilitate movement towards the achievement of transformation

of the public university system in South Africa. At present, very few targets are presented. This is for three reasons. First, as already stated, baseline data are required to set realistic and attainable targets. Second, targets should be discussed and agreed to in consultation with universities. Third, for some indicators, targets may differ between universities (or university types); in these cases, there will not be a single, universal target.

To improve readability of the table, the 🗣 icon indicates that the target is to be determined through consultation and with reference to baseline data, whereas the addition of the 🛠 icon indicates that different targets should be considered for different university types.

The monitoring timeframe shows the frequency that data should be collected. Some indicators measure aspects of the university that do not change frequently and therefore have longer monitoring timeframe, while others can be monitored on an annual basis. To harmonise reporting across different timeframes, data collection is standardised to three frequencies: 1, 3 and 6 years. This means that annual reporting will show change for other indicators remain unchanged; after every 3 years, additional indicators will change; and after every 6 years, all indicators will be updated.

In the final column, the collection of each indicator requires a designated entity to be responsible for data collection.

## GROUP 1: THE UNIVERSITY AND SOCIETY INDICATORS

*Sustainable expansion of the post-school system to reduce pressure on universities, and bridge the gap between the university and society*

| **Outcomes** | **Indicators** | **Indicator description** | **Conceptual Framework Reference** | **Indicator alignment** HRSC report, USAf Barometer, DHET White Papers | **Source of evidence** | **Target** | **Monitoring timeframe** | **Responsible** |
|---|---|---|---|---|---|---|---|---|
| **System level** | | | | | | | | |
| Change in the size and shape of the post-school system | Gross enrolment ratio (GER) | Participation in university education is an important part of understanding levels of access to universities as part of the larger post-school system | Increased participation | Social Inclusion, Student access, Increasing participation | HEMIS & StatsSA | 25% | 3 years | DHET |
| | Distribution of post-school enrolments across institutional types | A transformed post-school education system should reflect a distribution of enrolments in which universities do not have the largest number of enrolments. | Sustainable shape of the tertiary education sector | N/A - most work focuses on transformation at the institutional level | DHET (post-school data) | | 3 years | DHET |
| | Implementation of penalties by DHET for under or over enrolments (% deviation from zero) | Maintaining the sustainable growth of university enrolment is important to ensure resources from government are well-utilized in the institution. Under-enrolment and over-enrolment expose a lack of alignment and planning necessary for reaching DHET's targets. Under-enrolment impacts participation. Over-enrolment in the total student cohort impacts the quality of teaching and learning and may indirectly impact research. | Diversity, Participation, Teaching and Learning Function, Quality, Resources | Inclusive enrolment planning | DHET annual reports | Deviation = 0. Acceptable limits: | 3 years | DHET |
| Equity & diversity | Percentage of black men and women professors as a function of all professor-level staff | Racial and gender representation at the professor reflects equity transformation at the most senior levels of academic staff. Equitable representation can positively impact university experience for both staff and students. | Equity, Organisational culture | University experience, Diversity, Equity | HEMIS | | 3 years | HR |
| | Achievement gap between white and black students | Reducing the gap in performance between White and Black students is of paramount importance to transformation. It highlights issues within the Teaching and Learning function of the university. | Teaching & Learning, Equity | Access, success and redress | HEMIS | Zero. | 3 years | IPU |
| | Proportion of non-South African permanent academic staff | A diversity of perspectives from different nationalities and cultural backgrounds is of benefit to science. Staff from different backgrounds create a more conducive research and learning environment for students | Diversity | Diversity | HEMIS | | 3 years | IPU |
| **University level** | | | | | | | | |
| Equity & diversity | Progress made in terms of Institutional Transformation Plan (ITP) (% of all targets met or exceeded in Transformation Plan) | ITPs should be a reflection of what transformation looks like at each university. The specific targets were decided by each university and achievement of targets indicates positive movement towards transformation within their unique contexts | Governance, Equity | Governance, leadership and management, Transformation & diversity competencies | Institutional Transformation Plans | 100% | 3 years | Transformation Office |
| | Gender ratios by CESM | Transforming universities into functional and sustainable institutions requires equitable gender representation across disciplines. Equitable representation can positively impact university experience for both staff and students. | Equity, Organisational culture | University experience, Staff access, Diversity, Equity | HEMIS | Women:men :other 45:45:10 | 3 years | HR |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Percentage of black men and women within leadership at the DVC, Director and Dean levels | Racial and gender equity in high-level positions reflects equity transformation at the management decision-making level of the university. Equitable representation can positively impact university experience for both staff and students. | Equity, Organisational culture | University experience, Diversity, Equity | University HR system | | 3 years | HR |
| | Percentage of black men and women professors as a function of all professor-level staff | Racial and gender representation at the professor reflects equity transformation at the most senior levels of academic staff. Equitable representation can positively impact university experience for both staff and students. | Equity, Organisational culture | University experience, Diversity, Equity | HEMIS | | 3 years | HR |
| | Achievement gap between white and black students | Reducing the gap in performance between White and Black students is of paramount importance to transformation. It highlights issues within the Teaching and Learning function of the university. | Teaching & Learning, Equity | Access, success and redress | HEMIS | Zero. | 3 years | IPU |
| | Achievement gap between female and male students | Reducing the gap in performance between Male and Female students is of paramount importance to an equitable higher education system. | Equity | Access, success | HEMIS | Zero. | 3 years | IPU |
| | Proportion of non-South African postgraduate students | A diversity of perspectives from different nationalities and cultural backgrounds is of benefit to science. A diversity of postgraduate students exposes and sensitises supervisors to different worldviews. | Diversity | Diversity | HEMIS | | 3 years | IPU |
| | Proportion of non-South African permanent academic staff | A diversity of perspectives from different nationalities and cultural backgrounds is of benefit to science. Staff from different backgrounds create a more conducive research and learning environment for students | Diversity | Diversity | HEMIS | | 3 years | IPU |
| Appropriate size and shape in faculties | Staff to student ratio per CESM category | The adequate staff capacity to support students in each discipline ensures that all programmes offer equitable and quality support at various institutions. This measure also has an impact on the university experience of both staff and students. | Teaching and Learning, Quality | Student and staff experience | HEMIS | | 3 years | IPU |
| | Percentage of students enrolled per faculty | The disciplines that students enrol in have a bearing on the university's relevance to society. It also highlights areas of need within curricula and pedagogy to ensure students acquire vertical discourse necessary to succeed in their studies. | Relevance to society, Teaching and Learning | Development | HEMIS and university annual reports | | 3 years | IPU |
| Improve student success to ensure the flow of students through the university system and into the labour market | Graduates as a percentage of enrolments per CESM | The proportion of graduates to enrolments in the same year. There should not be major deviation in this indicator between CESM categories in a transformed university system i.e. student success should not be dependent on what programme a student is in in a transformed university system. | Relevance to society, Teaching and Learning Function, Equity, Quality | Development, Student success, Diversity in STEM | HEMIS | Increasing trend. | 3 years | IPU |
| | Percentage of first-year dropouts (3-year average) | First-year dropouts expose various issues that are both internal to the university (such as difficulties adjusting to university studies) and external to the university (e.g. quality of school education and living condition). | Teaching and Learning Function, Equity, Quality | Student success, University experience | HEMIS | | 3 years | IPU |
| | Percentage of first year Masters' dropouts (3-year average) | In order to achieve NDP goals, preventative measures need to be put in place to decrease master's dropouts over time. Master's programmes are a critical part of the development of future academics and researchers. This measure may also indicate potential issues with postgraduate student experience. | Research Function, Quality | Student success, Research & knowledge production, Student experience | HEMIS | | 3 years | IPU |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Increase awareness of the university and the academic project | Existence of university communication plan, with a section on communications targeted at parents *and* cognizant of language and context | Bridging the gap between the university and society is a matter of transformation as it exposes the general public to university processes and research procedures and provide a greater general knowledge about the university. This is important for parents sending first-generation students to university. Making this knowledge accessible should be a strategic imperative. | Social sustainability | Social inclusion | University communication plan | Yes | 3 years | Comms division, DSA |
| | Number of posts on social media platforms | Social sustainability and social inclusion in the academic project is transformative in that is breaks down the barrier between university and society. This can be achieved through active social media engagement | Social sustainability | Social inclusion | University social media accounts |  | 3 years | External agency |
| | Trust in the university | A lack of trust in universities exposes a rift between the public and the university that needs to be closed. It has implications for all students, particularly first-generation students. | Social sustainability | Social inclusion | HSRC Surveys of public entities, universities, and other institutions (e.g. church, military, media, parliament) | Increased level of trust in the university relative to other institutions. | 3 years | HSRC |
| Promote critical citizenry that links the university to the community | Percentage of publications that are locally focused | Engaged Research and locally relevant research can act as an important tool for raising awareness about the academic project and bring communities into one of the mandates of the university. | Relevance to society, Citizenship function, Community Engagement | Community engagement, Knowledge production | Bibliometric data |  | 3 years | External agency |
| | Number of courses or programmes with community engagement activities (e.g. service learning or outreach) | Student engagement with the local community is an important part of developing students into critical and engaged citizens. It also improves awareness of the needs of society, promoting relevance. This is turm may improve the trust the public has in universities. | Relevance to society, Citizenship function, Community Engagement | Community engagement, Diversity and inclusivity, Socially just, diverse and inclusive community engagement | University |  | 3 years | Community Engagement Office and T&L |

| **Assumptions** | **External factors** |
|---|---|
| Well-sized and staffed university will enable a functional and sustainable university system | DHET funding and rules on fee increases. |
| Appropriately sized universities will allow for a steady and sufficient flow of students through the university system | Perception of university by society relative to TVETs. Poorly qualified students and/or the quality in the school system is non-uniform. Additional funding is provided for poorly qualified students |
| University has functional structures to communicate with external stakeholders | Communication expertise is in short supply and/or the university cannot attract communication experts from other sectors of the labour market. |
| Frequent communication about what the university is and does will increase levels of trust in the university | Image of the university will also depend on the governance of the university, i.e. negative communication resulting from dysfunctional governance is possible |
| Improved communication will lead to a better public understanding of what a university is | Literate and attentive publics. |
| Improved communication will lead to a better understanding among parents and matriculants of alternative pathways through the post-school system | Literate and attentive parents. |
| Improved communication will lead to better understanding of what is expected from university students and the commitments they need to make. | Literate parents and attentive students. |
| University-community engagement activities improve the public's understanding of what the university is and does | Engagement activities are inclusive by design. |

## GROUP 2: GOVERNANCE & FINANCIAL INDICATORS

*Strengthen government support, leadership and management capacity through academically engaged governance*

| Outcomes | Indicators | Indicator description | Conceptual Framework Reference | Indicator alignment HRSC report, USAf Barometer, White Papers | Source of evidence | Target | Monitoring timeframe | Responsible |
|---|---|---|---|---|---|---|---|---|
| **System level** | | | | | | | | |
| Improve functioning of leadership structures for the advancement of the academic project | Number of universities that have been placed under administration during the evaluation period | Being placed under administration is a strong indication of poor governance which has drastic implications for transformation across all functions of the university | Accountability, Governance, Resources | Governance, leadership and management, USAf barometer 4.2 Transformative budgeting | Administration notice | 0 | 6 years | DHET |
| Ensure financial security of public universities | Percentage of GDP budgeted to higher education | Proportion of national GDP committed to public universities from the public purse | Financial sustainability | None | Government budget vote by National Treasury | Equal or more than prior year budget in real terms | 1 year | Treasury |
| **University level** | | | | | | | | |
| Ensure financial sustainability of universities | Student debt as % of block grant for teaching | The extent to which student debt is placing pressure on a university's financial sustainability | Financial sustainability | None | DHET, university annual financial statements |  | 1 year | DHET |
| | Third-stream income as % of total income | The extent to which a university is able to match or supplement income from government sources with funding from external sources | Financial sustainability | None | DHET, university annual financial statements |  | 1 year | CHE |
| Improve functioning of leadership structures for the advancement of the academic project | Percentage of Council members who have a masters' degree | Council members who are familiar with the academic project play a key role in maintaining the quality of the academic project for the benefit of the university. | Diversity, Governance, Capacity | Governance, leadership and management, Social inclusion | Research on Council composition list | 75% of council members have a maters' degree | 3 years | Registrar |
| | Percentage of Council members with 5+ years' experience of working at a university | | Diversity, Governance, Capacity | Governance, leadership and management, Social inclusion | Research on Council composition list |  | 3 years | Registrar |
| | Ratio of academic to administrative matters on Senate agenda | The academic project is central mandate of the university. Administrative matters often cloud the pressing academic matters that the Senate is first and foremost equipped to resolve. | Governance | Governance, leadership and management | Senate agendas | Ratio of 2 academic matters to 1 administrative matter | 3 years | Registrar |
| | Percentage of Senate-approved appointments | There should be consensus among peers on all appointments made. | Governance | Governance, leadership and management | Senate meeting minutes | 100%.  | 3 years | Registrar |
| | Attendance at faculty board meetings (average per year) | A functional faculty board should be a key marker of a transformed university. Poor attendance indicates that the faculty boards are not functioning as they should. | Governance | Governance, leadership and management | Faculty board attendance register | 75% of faculty attend faculty board meetings | 3 years | Registrar |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Number of teaching days lost due to student protests | Instability within the student body is part and parcel of a transforming higher education system. However, functional and sustainable universities should have procedures that limit the disruption that protests cause to the academic project | Governance | Governance, leadership and management | Registrars records/media | 0 | 3 years | Registrar |
| | Number of fraud cases linked to the university | Sound financial governance has major outcomes for student support, access and university resources. Fraud indicates that measures in place are inadequate to safeguard critical financial resources. | Accountability, Governance | Governance, leadership and management, USaf Barometer 4.2 and 4.3 | Legal Unit records | 0 | 3 years | Legal Unit |
| Increase academically experienced leadership with management experience | Field-weighted H-5 index of the Vice-chancellor | Vice Chancellors who have been academically productive have an intimate knowledge of the academic project and can govern the university in a way that strengthens the university's mandate. This measure also has implications for the organizational culture. | Governance, Capacity, Organisational culture | Governance, leadership and management, Institutional culture | Google Scholar |  | 3 years | Research Office |
| | Percentage of academic DVCs (research, T&L, engagement, innovation) with NRF rating | Deputy-vice Chancellors who have been/are academically productive have an intimate knowledge of the academic project and can govern the university in a way that strengthens the university's mandate. This measure also has implications for the organizational culture. | Governance, Capacity, Organisational culture | Governance, leadership and management, Institutional culture | NRF Rated Scientists public list |  | Annual | Research Office |
| | Average term-length of VC and DVCs for past 10 years | Continuity in leadership can allow for greater outcomes to be achieved with the right leaders as increased experience can translate to increased capacity in leadership | Governance, Capacity | Governance, leadership and management | HR |  | 3 years | HR |
| Strengthen capacity of academic and non-academic senior management | Percentage of director level-posts that have been vacant for more than 6 months per annum | Directors provide strategic leadership in the support side of the university. Having these positions vacant for a long period of time impacts governance of a university and potentially exposes issues with recruitment for high-level positions. It may also degrade university experience for both staff and students. | Governance, Capacity | Governance, leadership and management, Student support, University experience staff and students | HR | 0 | 3 years | HR |
| | Percentage of directors with Masters' or PhD degrees | Although directors reside in the support side of the university, it is advantageous for development of the academic project if this leadership has academic experience at the postgraduate level and has implications for staff and student experience. | Governance, Capacity | Governance, leadership and management, Student support, University experience staff and students | HR |  | 3 years | HR |
| Transformed organizational culture | Average retention rate per rank for support staff | Retention rate gives an indication of workplace capacity and also provides an indication of university experience for both staff and students (i.e. staff satisfaction). | Capacity | University experience, Institutional culture, Staff support, Access and success | University HR system |  | 3 years | |
| | Average retention rate per rank for academic staff | | Capacity, Quality | | University HR system |  | 3 years | HR |

| Assumptions | External factors |
|---|---|
| Good governance will promote the academic project and facilitate institutional-specific transformation planning | Availability and interest of persons who, in additional to other expertise made available to Councils, understand what the university and how it works. Political interference in the appointment of Council members. |
| Academically experienced council members will drive academic project forward instead of running the university purely as a business | Availability and interest of academically experienced persons to serve as a Council both as a function of time and based on location |
| Consistency in VC and DVC leadership will achieve greater advances in implementing strategic plan | Availability and interest of suitably qualified persons to serve as VCs and DVCs. Appointments made on political grounds rather than merit. |
| Qualifications of staff are awarded from universities with strong academic culture | |
| Seniority implies greater knowledge of the academy in academic staff | Attempts by university leadership and management to reduce the salary burden of the university resulting in the juniorisation of academic staff |
| Academic management promotes and protects the academic project | |
| Academically qualified directorate will improve relationship between support and academic functions | |
| Teaching days lost are purely due to the ability of leadership to maintain functionality during student protests or defuse student protests before major disruption | Municipal supply issues or other non-university issues may also lead to protesting |

## GROUP 3: TEACHING AND LEARNING INDICATORS

*Enhance accessibility of powerful knowledge in university curricula to create responsive and self-programmable graduates*

| Outcomes | Indicators | Indicator description | Conceptual Framework Reference | Indicator alignment HRSC report, USAf Barometer, White Papers | Evidence | Target | Monitoring timeframe | Responsible |
|---|---|---|---|---|---|---|---|---|
| **System level** | | | | | | | | |
| Enhance educational outcomes | Employment rates of graduates (% of graduates employed against total graduated at all levels: undergraduate, honours, master's, doctorate) | If students are struggling to find employment after graduating, it highlights a number of issues, such as whether they have accessed the powerful knowledge presented at university or whether the university is remaining relevant to societal/developmental needs. | Relevance to society, Meeting aspirations of individuals, Teaching & Learning, Employability Function, Citizenship function | Redress, Social Inclusivity, Development | Tracer study | | 3 years | External agency |
| | Percentage of first-year dropouts (3-year average) | First-year dropouts expose various issues that are both internal to the university (such as difficulties adjusting to university studies) and external to the university (e.g. quality of school education and living condition). | Teaching and Learning Function, Equity, Quality | Student success, University experience | HEMIS | | 3 years | IPU |
| **Organisational level** | | | | | | | | |
| Improve equity of student experiences and outcomes | Achievement gap between mainstream curricula and extended studies | There should be no difference in the success of students in the mainstream programme and extended studies. This works both ways. | Teaching & Learning, Equity | Access, success and redress | HEMIS | Zero. | Annual | IPU |
| | Percentage of programmes with a four-year structure | Programmes structured over 4 years have the potential to increase student success outcomes. | Teaching & Learning | Access, success and redress | University calendar | . | 3 years | Registrar |

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|---|---|---|---|---|---|---|---|---|
| | w.r.t total programmes offered | | | | | | | |
| | Percentage of empty beds in residence as a function of university population | Residential life facilitates close interaction with a diverse range of students. Empty bed in residences shows that either residences are too expensive for incoming students or this vibrant experience is not promoted as the best way to experience university. | Diversity, Social Sustainability | Diversity & inclusivity, Student experience | HEMIS |  | Annual | IPU |
| Investment in T&L | Proportion of student development component of the UCDP spent | The UCDP is an important vehicle for supporting institutional development. However, universities often struggle to spend all of the funds provided. Unspent funds in student development mark capacity and management issues within T&L and student support offices and has knock on impacts for institutional resources. | Accountability - Fiscal Responsibility, Capacity, Resources | Student success, Governance, leadership and management, Transformative budgeting, Improving efficiencies | UCDP reporting |  | Annual | IPU |
| Enhance educational outcomes | Employment rates of graduates (percentage of graduates employed against total graduated at all levels: undergraduate, honours, master's, doctorate) | If students are struggling to find employment after graduating, it highlights a number of issues, such as whether they have accessed the powerful knowledge presented at university or whether the university is remaining relevant to societal/developmental needs. | Relevance to society, Meeting aspirations of individuals, Teaching & Learning, Employability Function, Citizenship function | Redress, Social Inclusivity, Development | Tracer study |  | 3 years | External agency |
| Strengthen capacity within Teaching and Learning Centres | Budget allocation to T&L | Teaching and Learning may be a core mandate of the university but it may not be supported financially like the other mandates. Adequate budget for T&L is important for developing programmes, assessing curricula and enabling change within institutions. | Fiscal Responsibility, Teaching & Learning, Resources | Curriculum transformation, Access and success for staff and students, Critical pedagogies, Professionalized teaching and learning | University Finance |  | Annual | Finance Division |
| | Percentage of T&L budget that is funded through institutional support and not from DHET earmarked grants | A university that is reliant on DHET funds for T&L has not made this a core function of their establishment and limits the capacity that is able to be built into T&L. | Governance, Accountability, Capacity, Resources | Curriculum transformation, Transformative budgeting | University Finance |  | Annual | Finance Division |
| | Retention rate of T&L centre staff | This indicator assesses the continuity of the T&L centre staff as this has an impact on the services provided to staff and students. This measure also has implications for university experience for staff and students | Capacity, Teaching & Learning | Curriculum transformation, University experience | HR |  | 3 years | HR |
| | Percentage of permanent positions in T&L centre | | Capacity, Teaching & Learning | Curriculum transformation, University experience | HR |  | 3 years | HR |
| | Percentage of T&L staff with a PhD | T&L staff who apply a research mind to T&L are in a better position to shape curricula in a deeply transformative way. They can also foster the professionalisation of T&L within their institution. | Capacity, Teaching & Learning | Curriculum transformation, University experience | HR |  | Annual | HR |
| Maintain quality of programmes to ensure powerful knowledge is present in curricula | Number of programmes with notice of withdrawal on CHE reviews | This indicator highlights a number of issues such as a university not being able to detect the need for a programme withdrawal, inability to revise the programme appropriately or not being able to achieve this timeously. Quality cannot be | Governance, Capacity, Quality | Curriculum transformation, Governance, leadership, management | CHE |  | 3 years | CHE |

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|---|---|---|---|---|---|---|---|---|
| | | maintained if the capacity for curriculum transformation is not present. | | | | | | |
| | Number of staff employed as curriculum review experts | Curriculum review is a critical part of curriculum transformation. This indicator highlights any capacity deficits a university may have in this regard. | Capacity, Teaching & Learning | Curriculum transformation | HR |  | 3 years | HR |
| Linkages between global and local and systematized knowledge in the curricula | Number of programmes where review of knowledge pedagogy in the curriculum has taken place | Transformative curriculum reviews need to address knowledge pedagogy. This indicator helps determine how many programme reviews cover this component of change. | Quality, Teaching & Learning | Curriculum transformation, Critical Pedagogy | Programme review report |  | 3 years | T&L centre |

| **Assumptions** | **External factors** |
|---|---|
| Student success is directly related to university support mechanisms | Financial obligations of students to family and familial stressors |
| Tutors are knowledgeable and trained to teach | |
| Employability is directly related to skills developed at university | |
| Residential life promotes academic activities and has academically experienced wardens | University may not be in an area is conducive to high percentages of students living in residences |
| Permanent positions help with continuity in T&L work | Attempts by university leadership and management to reduce the salary burden of the university resulting in the casualisation of academic teaching staff |
| Curriculum/Programme reviews lead to actionable changes and improvements long term | |

## GROUP 4: RESEARCH INDICATORS

*Protect the quality of research and increase academic citizenship*

| **Outcomes** | **Indicators** | **Indicator description** | **Conceptual Framework Reference** | **Indicator alignment** HRSC report, USAf Barometer, White Papers | **Evidence** | **Target** | **Monitoring timeframe** | **Responsible** |
|---|---|---|---|---|---|---|---|---|
| **System level** | | | | | | | | |
| Research capacity | Number of permanent academic staff with a doctoral degree | Staff with PhD degrees are needed to supervise doctoral candidates which, in turn, are needed to reproduce the academy and to generate highly skilled graduates for the labour market | Research function | Capacity | HEMIS | 75% | 3 years | CHE |
| Research productivity | % of publications in relation to global publications | The proportion of publications that the university system produces in relation to global research publications with the expectation that South Africa maintains or improves its share of global knowledge production | Research function | Productivity | Bibliometric indexes | 1% | 3 years | CHE |
| Improve production of high-quality research | Number of top-cited researchers | Quality research provides a model for quality future researchers. It also highlights how the research mandate is being carried out. Research outputs alone do not show the quality of research present. | Research function, Quality | Quality | Elsevier | <1.  | 3 years | Research Office |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **University level** | | | | | | | | |
| Improve production of high-quality research | A-rated scientists as % of academic staff | Quality research provides a model for quality future researchers. It also highlights how the research mandate is being carried out. Research outputs alone do not show the quality of research present. | Research function, Quality | Quality | NRF | | 3 years | Research Office |
| | % of subsidy-earning journal articles published in Q1 journals | | Research function, Quality | Quality | Bibliometric data | | 3 years | Research Office |
| | Research outputs per academic | | Research function, Productivity | Research | DHET report | | 3 years | Research Office |
| Improve structure to postgraduate support | Staff with PhDs: PhD graduates | Staff with PhDs are needed to support the development of PhD graduates, not just as supervisors but as mentors. This support is needed for improving graduation outcomes. | Capacity | Quality | HEMIS | | 3 years | IPU |
| | PhD graduates: PhD enrolments (3-year average) | This indicator highlights any major differences between graduations and enrolments. These differences expose a wide range of issues that impact on transformation. | Research function | Redress, Student success | HEMIS | | 3 years | IPU |
| | Percentage of vacant academic posts | Academic posts need to be filled to ensure adequate support to all students, particularly postgraduate students. High vacancies also impact university experience for both staff and students. | Research function, Capacity | University experience (staff and students) | HR | | 3 years | HR |
| | Library opening hours (No. of days per year open) | The library is a resource which can offset data, computer and electricity limitations and provide a quiet, safe space for learning. Having this resource accessible and available throughout the year (including holidays) plays a role in positive student support and fostering inclusion. | Equality, Social sustainability | ICT access, Student support | University library website | | 3 years | Library |

| **Assumptions** | **External factors** |
|---|---|
| Bibliometric indicators provide an accurate proxy of the quantity and quality of research | |
| Improved supervision will lead to improved PhD throughput | Non-academic life matters have more presence in postgraduate education (greater family responsibilities, work) |
| Postgraduate centre has the capacity to provide support to all postgraduate students | |

## GROUP 5: DIFFERENTIATION INDICATORS

*Create a system of equal but differentiated public universities that enables each university to deliver on a realistic and relevant vision and mission*

| **Outcomes** | **Indicators** | **Indicator description** | **Conceptual Framework Reference** | **Indicator alignment** HRSC report, USAf Barometer, White Papers | **Evidence** | **Target** | **Monitoring timeframe** | **Responsible** |
|---|---|---|---|---|---|---|---|---|
| **System level** | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Different university types based on differentiated emphasis placed on research and teaching, and on levels of specialisation within each | Clearly identifiable clusters of university types | A clusters analysis of all public universities based on both inputs and outputs should reveal groups of similar universities and differences between the groups in terms of focus on the different functions of the university | Differentiation | Differentiation | HEMIS |  | 3 years | CHE |
| | Number of universities with a strong focus in a specific scientific area or field (relative field strengths across the system) | Universities that have a strong research focus may still be required to concentrate their resource towards niche research areas to produce relevant and high-quality research | Differentiation | Differentiation | Bibliometric data (relative field strength) |  | 3 years | CHE |
| | Head count enrolments by field of specialisation | A differentiated system should include graduate degrees from all fields (e.g. humanities, business, STEM, health) | Differentiation | Differentiation | HEMIS |  | 3 years | IPU |
| Even out the importance of Teaching and Learning and Research | Postgraduates as a % of total students | Differentiation highlights that not every university needs to be research intensive. This measure shows which universities have a strong research focus | Differentiation | Differentiation | HEMIS |  | 3 years | IPU |
| | Ratio of postdoctoral fellows to staff with a PhD | The number of postdoctoral fellows is another strong indicator of whether a university is research focused and has research capacity. However, an overreliance on postdoctoral candidates shows an imbalance in the university that needs to be highlighted. | Capacity, Research function | Differentiation, University experience | HEMIS |  | 3 years l | IPU |
| Improve strategies for sustainable income-generation | Source of university revenue | Establishing whether most university funds arise from student fees (teaching and learning) or research can help universities better strategize which mandate to focus on as their core operations. | Resources | Differentiation, Funding strategies to diversity the sectoral funding pool, Transformative budgeting | Annual Financial Reports |  | 3 years | Finance |
| | Ratio of Research Outputs subsidy income to T&L income (fees + block grant) | | Resources, Accountability, Efficiency | Differentiation | DHET Annual Reports + DHET Universities' Research Outputs Reports |  | 3 years | DHET |
| Improved disability services to students as a result of differentiation | University specialization in one form of disability | It is important to have support for disabled individuals but it may not be feasible for all universities to offer support for all disabilities. Applying differentiation to disability support enables universities to specialise in at least one form of disability so that the sector can cater to all forms of disability. | Capacity, Differentiation, Resources | Differentiation, Access, Student Support | Transformation report |  | 3 years | Transformation Division |

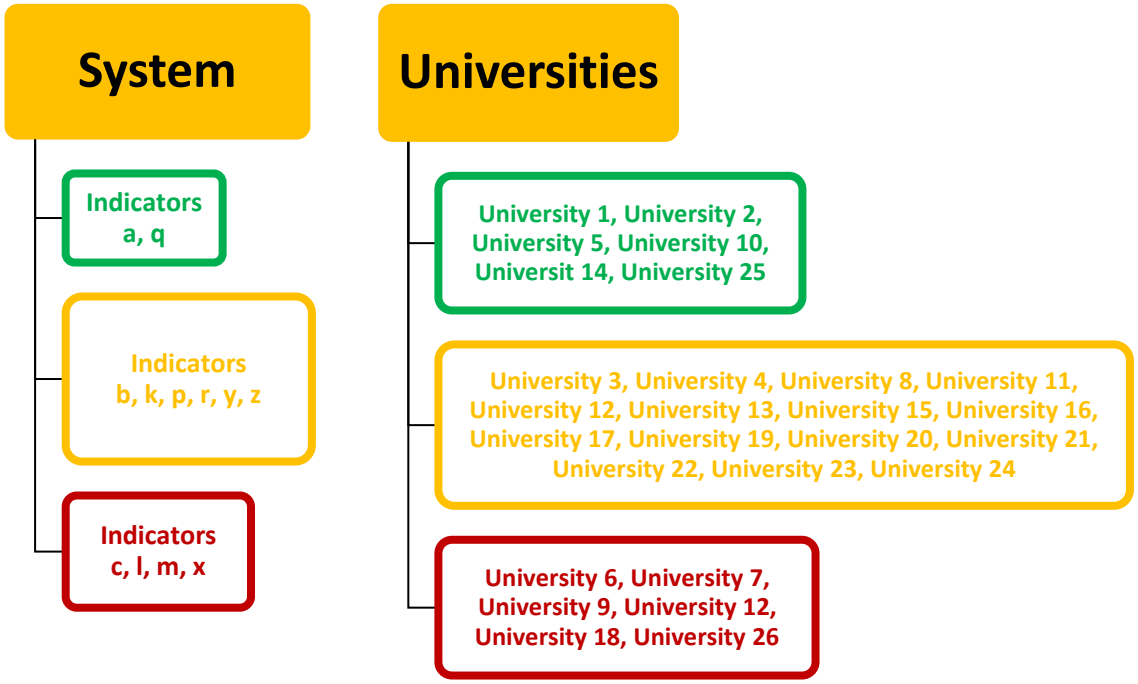
| **Assumptions** | **External factors** |
|---|---|
| Regular financial analysis will allow universities to better design diverse mission and vision statements and strategic plans | Research Outputs Subsidy perpetuates universities trying to excel in research |
| Diverse and more focused missions and visions for universities will enable more focused and manageable delivery of high-quality teaching and research | Resistance if research universities are also those perceived to be high-status and historically advantaged universities |

## Proposed dashboard

A dual-level dashboard is proposed to provide a high-level, visual and easily interpretable reading of the state of transformation in South Africa's public university system. Level 1 provides an indication of the state of transformation at the system level, while Level 2 provides an indication of the state of transformation at the organisational or university level. Both levels rely on a traffic-light system to indicate the state of transformation: green indicates positive change; amber indicates intermediate progress; and red indicates limited or slow transformation.

In the case of Level 1 or the system level, each indicator is indicated using the traffic-light system which collectively provide a snapshot of transformation at the system level. In the case of Level 2 or at the university level, each university is assigned a colour based on the aggregation of all university-level indicators, and each of the 26 universities is placed in green, amber or red cluster. See the illustration below.

For each indicator, the thresholds for being assigned to each of the three colours will need to be determined. In keeping with the historical dependencies and de facto differentiation within the university system, it is suggested that each university would have different thresholds. All thresholds – whether at the system or university level – would need to be agreed on based on consultative process.




## Strategies to operationalise the transformation framework

This framework is a comprehensive view on transformation in higher education requiring the involvement of many different stakeholders. For effective implementation at all universities, a plan for implementation is required that considers conditions before, during and after implementation.

## *Plan prior to implementation*

In order for data comparisons to be made across different universities, it is necessary to develop a data dictionary of terms within the indicators. This will help to provide a clear directive as to what data needs to be collected. This should be the first step in operationalizing this framework. This should be accompanied by a data collection template which will be sent to the Institutional Planning Units at all universities. This will be particularly helpful for indicators that require data collected at the faculty or departmental level. The CHE will be responsible for this prior to implementation.

Data collection for baselines will be another critical starting point and will require university support and research from external entities. This process is critical as it highlights where capacity building is necessary in individual universities as there may not be processes in place for collecting certain kinds of data. Through this process, formal data collection and management plans will be presented to institutions to distribute to the various stakeholders involved in data collection.

## *Plan for data collection and management*

Data collection should follow the monitoring timeline listed in the M&E framework and organised by the unit responsible for data collection. Some indicators may require frequent data collection and processes should be put in place to capture this data timeously. The data will need to be stored by those responsible and sent to the Institutional Planning Unit at the end of each year. Other indicators will need to be collected less frequently.

The CHE will be responsible for collecting monitoring reports from the universities and compiling the evaluation report at the end of the 1-, 3- and 6-year cycles. The CHE will also be responsible for arranging the required tracer studies, surveys and secondary research required for indicators that fall outside of the universities' domain.

## *Plan for data analysis and synthesis and reporting*

Some of the indicators will require basic analysis to be done by the Institutional Planning Unit, such as determining percentages or ratios. These should be entered into the data collection template received from the CHE. The CHE will then analyse and synthesize the data collected on an annual basis to monitor the implementation of the framework on the national level.

At the end of the framework cycle, the CHE will be responsible for compiling a transformation evaluation report on the university system. This report will be distributed to all universities and the DHET.

## *Evaluation Plan*

The evaluation report will address each of the outcomes listed in the M&E framework, reporting both an aggregated view of the indicators and at disaggregated university data. The aim of the evaluation report is not to criticise the universities where progress has been slow but rather to provide the support necessary to bring about sustainable improvement.

In addition, the report will also seek to address evaluation questions that are broader than those posed in the listed outcomes. These include:

- What has been the most prominent change experienced across the public university system within the reporting cycle?
- What areas of university transformation have seen the least progress within the reporting cycle?
- Have perceptions about the university changed in the public?
- Are universities beginning to produce students that have access to powerful knowledge?
- Are universities producing knowledge that is enriching science and benefiting society?

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