



Annual Performance Plan: 2022

Compiled by the Office for Institutional Strategy

2 December 2021

TABLE OF CONTENTS

FOREWORD BY CHAIRPERSON OF COUNCIL	1
OFFICIAL SIGN-OFF	2
SECTION A: SITUATIONAL ANALYSIS	3
1. Performance delivery environment	3
<i>Global impact of COVID-19 pandemic</i>	3
<i>Online learning and the digital divide</i>	4
<i>Student expectations and youth disillusionment</i>	5
<i>Gender discrimination, inequality and gender-based violence</i>	7
<i>Decolonisation of higher education</i>	8
<i>Future world of work</i>	9
<i>Lifelong learning and upskilling</i>	10
<i>Inequality and economic recovery</i>	11
<i>Unemployment and livelihood crises</i>	13
<i>Green growth and sustainability</i>	14
<i>Urbanisation and human settlements</i>	16
<i>Access to quality healthcare</i>	17
2. Legislative mandate	19
3. State of the University	23
<i>Strengths</i>	23
<i>Opportunities</i>	26

SECTION B: STRATEGIC OVERVIEW	32
1. Vision	33
2. Mission	33
3. Values.....	33
4. Distinctive Knowledge Paradigm	35
5. Educational Purpose and Philosophy	35
6. Desired Graduate Attributes	36
7. Strategic focus areas, enablers and goals.....	38
<i>Ethical governance and leadership</i>	<i>42</i>
<i>Values-driven institutional culture and empowered employees.....</i>	<i>42</i>
<i>Enabling innovation.....</i>	<i>42</i>
<i>Digitalisation and modernised infrastructure.....</i>	<i>42</i>
<i>Sustainability and responsible resource stewardship.....</i>	<i>42</i>
SECTION C: ANNUAL PERFORMANCE PLAN 2022 KEY PERFORMANCE INDICATORS.....	47
1. Student access.....	51
<i>First-time entering undergraduate students.....</i>	<i>51</i>
<i>Student headcount enrolments.....</i>	<i>52</i>
<i>Foundation provisioning.....</i>	<i>54</i>
<i>Occasional student enrolments.....</i>	<i>55</i>
<i>Postgraduate enrolments.....</i>	<i>55</i>
<i>Teaching input units (TIUs).....</i>	<i>56</i>
<i>Student enrolments by major field of study</i>	<i>57</i>
2. Student success	59
<i>Graduate outputs.....</i>	<i>65</i>

3. Academic staff profile	66
4. Student: staff full-time equivalent (FTE) ratios.....	67
5. Research output.....	68
SECTION D: EARMARKED GRANTS: 2021/22.....	71
SECTION E: LONG-TERM CAPITAL EXPENDITURE PLAN AND PROPOSED LONG-TERM BORROWINGS	80
SECTION F: 2022 BUDGET AND THREE-YEAR FINANCIAL PROJECTIONS (2022-2024)	82
SECTION G: BUDGET 2022.....	89
SECTION H: CASH FLOW PROJECTIONS 2022 - 2024.....	91
SECTION I: INSTITUTIONAL RISKS AND MITIGATING STRATEGIES.....	92
CONCLUSION	96

FOREWORD BY CHAIRPERSON OF COUNCIL

In South Africa, access to quality and affordable post-school education continues to be in high demand given the need to accommodate high proportions of our youth who are not in employment, education or training (so called NEETs). The demand to demonstrate the responsiveness and impact of higher education is simultaneously increasing, particularly in developing nations. Universities in South Africa are increasingly called upon to participate more actively in addressing the developmental needs of the African continent, with specific reference to the United Nations Sustainable Development Goals, the African Union Agenda 2063, and South Africa's National Development Plan.

As the only university in the world to carry the name of Nelson Mandela, our institutional identity is underpinned by the significant responsibility to embody the legacy and ethos our iconic namesake, in particular his lifelong struggle for a non-racial, non-sexist, democratic society where all citizens are treated with respect and dignity. Our Vision 2030 Strategy strives to ensure that the University is poised to change the world through key strategic trajectories mandated by Council, such as:

- Re-centering Africa by awakening African scholarship, epistemologies and systems of thought, expanding our partnership footprint on the continent, and developing the next generation of African scholars and academics who advance excellence through their scholarly contributions.
- Revitalising the humanities and advancing the praxes of a transformative, engaged university.
- Becoming the leading ocean sciences destination in the country, and in the longer term, on the African continent.
- Establishing the tenth medical school in the country recognised for its pioneering interprofessional and community-based approach to health sciences education.

As a comprehensive university, we continue to invest in student access for success, with a specific focus on providing life-changing educational opportunities from certificate to doctoral levels across a wide range of disciplines and fields of study. Through our humanising pedagogies and student-centric approaches, Mandela University cultivates graduates as responsible, innovative global citizens who make a positive impact on society by contributing meaningfully to promoting social justice and equality. The University furthermore seeks to differentiate itself within the higher education sector nationally and globally by pushing forward the frontiers of knowledge through research and innovation which is recognised for its leadership in generating cutting-edge knowledge for a sustainable future.

OFFICIAL SIGN-OFF

It is hereby certified that the Nelson Mandela University Annual Performance Plan for 2022:

- Was developed by the senior management of the Nelson Mandela University under the guidance of the Vice Chancellor, Professor Sibongile Muthwa;
- Was prepared in alignment with Nelson Mandela University's Vision 2030 Strategic Plan; and
- Accurately reflects the performance targets which Nelson Mandela University will endeavour to achieve given the resources made available in the budget for 2022.

AMBASSADOR NOZIPHO JANUARY-BARDILL
CHAIRPERSON OF COUNCIL

PROFESSOR SIBONGILE MUTHWA
VICE-CHANCELLOR

SECTION A: SITUATIONAL ANALYSIS

Performance delivery environment

Higher education is increasingly viewed as playing a key role in fulfilling certain societal agendas such as democratisation, social mobility, economic development, innovation and a better quality of life for all citizens (Maassen and Olsen, 2007). South Africa's [National Development Plan for 2030](#) outlines the main functions of universities in society as follows, namely to: provide people with indispensable high-level skills; serve as the dominant producers of new knowledge; critique information and find new local and global applications for existing knowledge; and provide opportunities for social mobility thereby strengthening equity, social justice and democracy.

The constant and ever-increasing pace of change nationally and globally acts a driver for universities to fundamentally revisit their core purpose, academic missions and operating models to ensure that they thrive within a [volatile, uncertain, complex and ambiguous \(VUCA\)](#) context. Most recently, these external drivers have manifested themselves in a variety of forms, such as the impact of the COVID-19 global pandemic, shifts in the global and national economies, demographic trends, and rising societal expectations of universities to tangibly contribute to the public good.

Challenges such as food security, quality health and education for all, secure and clean water, green and efficient energy sources, climate change, and inclusive communities need the engagement of universities responding at global and local levels as [catalysts for development](#). In this regard, universities can make a substantial contribution, not only as providers of education and research, but also as actors playing an active role in the development of their economic, social and cultural surroundings. In 2020, the risk of a global pandemic became a reality and demonstrated the need to strengthen strategic foresight to anticipate future trends. In this section, some of these trends will be explored in more depth to extricate the key implications for the Vision 2030 Strategy.

Global impact of COVID-19 pandemic

The COVID-19 pandemic threatens to scale back years of progress on reducing poverty and inequality and strengthening social cohesion. Job losses, a widening digital divide, disrupted social interactions, and abrupt shifts in markets could result in lost opportunities for significant parts of the global population. All generations have been affected by the crisis with older populations being the most vulnerable to contracting the virus, while the youth face new barriers to social mobility, strains on mental health, uncertain economic prospects and the continued degradation of the planet.

The COVID-19 pandemic has caused one of the most significant disruptions of education systems in history, affecting [nearly 1.6 billion learners](#) in more than 190 countries across all continents. More than 166 countries implemented various forms of national lockdown as a response to curbing the spread of the virus, which resulted in the closures of schools and other learning spaces impacting on 94 per cent of the world's student population. This unprecedented global disruption has catalysed and accelerated various trends that had already emerged before the pandemic, several of which are outlined below.

Online learning and the digital divide

Universities across the world implemented various emergency remote learning (ERL) interventions to recover the 2020 academic year against the backdrop of national lockdowns, social distancing regulations and quarantines to curb the spread of the virus. In South Africa, large proportions of the student population lack access to mobile devices, data connectivity, electricity, water and conducive study spaces, all of which serve as significant barriers to ERL. In response, universities invested in large-scale data purchases and mobile devices for digitally excluded students to ensure that no student was left behind in completing the 2020 academic year.

Among the many inequalities exposed by COVID-19, the digital divide is one of the starkest with [3.6 billion people globally](#) remaining offline with the majority living in developing countries. The '[digital divide](#)' refers to uneven access to information and communication technologies (ICT) in societies, particularly pronounced on the African continent. According to [GSMA](#), a mobile operators trade body, approximately three-quarters of the population (747 million people) in sub-Saharan Africa have a mobile connection, but only a third of these use a smartphone.

With only [37% of South African households](#) having consistent access to the internet through cell phones or computers, the imperative of continuing with online learning while leaving no student behind becomes almost impossible. Against this backdrop, the pandemic is challenging deep-rooted notions of when, where, and how education is delivered to promote lifelong learning, as well as how universities contribute to socially engaged scholarship to improve digital inclusivity for those who are the most vulnerable and marginalised.

A widening digital gap can entrench societal fractures and undermine prospects for an inclusive recovery. Progress towards [digital inclusivity](#) is threatened by growing digital dependency, rapidly accelerating automation, ineffective technology regulation, and gaps in digital skills and capabilities. Education systems worldwide are set to undergo a challenging structural transformation underpinned by the widespread adoption of online learning. This shift can potentially reduce costs and expand access, but students and employees who lack the digital tools, online access and knowledge to participate are at risk of being excluded. Ensuring a smooth digital transition and mitigating the risks to social cohesion from digital divides will require managing innovation without stifling it.

Social distancing will require millions of employees and students to continue working and learning remotely for the foreseeable future. Within this context, the [2016 declaration](#) by the United Nations Human Rights Council of the internet as a basic human right becomes even more important. Similarly, the adoption of the [Digital Transformation Strategy](#) by the African Union in February 2020 is a step in the right direction towards narrowing the digital divide by ensuring that access to digital technologies and the internet are regarded as basic rights. To achieve this, [multi-stakeholder collaboration](#) is needed between national government, the ICT and telecommunications corporate sector and development partners, to prioritise investment in ICT infrastructure to connect the highest number of people possible to the internet at affordable prices.

It has become clear that universities are highly dependent on universal access to affordable broadband and mobile devices, digital literacy, and digitalised systems as critical preconditions for the successful adoption of fully online, blended or hybrid learning at scale. In addition, hybrid or fully online learning is not necessarily cheaper than traditional educational models due to the increased upfront [investments](#) required in digital infrastructure, equipment, learning management systems, and employees upskilling. Financing shortfalls constitute a significant risk for universities that may not be able to afford to absorb these costs.

Once universities move beyond the current crisis, the [focus of academic employee development](#) should shift from basic training in the use of digital tools for emergency remote learning to more advanced training incorporating instructional design and assessment of learning. Linked to this, messaging should celebrate their current achievements with blended and online learning tools while also recognising their pain points and offering the training as an opportunity to build on their successes and solving their technology-related teaching challenges.

Student expectations and youth disillusionment

Many of the trends that have come to the fore during the pandemic were there before the crisis, including the adoption of hybrid or blended learning. However, these trends have been considerably [accelerated](#) by COVID-19 and are not likely to reverse after the crisis. There is no blueprint for future higher education success, but universities will probably need to change the way they operate to thrive in a post-pandemic world. This includes admitting students and offering courses in person or online throughout the year, and connecting with students before acceptance, during enrolment, and after graduation.

Universities must understand and deliver on students' evolving expectations, including quick pivots to quality online and hybrid learning, touch-of-a-button convenience and affordability. In universities, the appetite for fully online learning is likely to be lower for digitally adept young students who perceive learning as a social act and are likely to enrol at a university with a proven track record for student-centric approaches that meet

their academic, financial and future career needs through the provision of sought after qualifications, vibrant student life, robust academic support, as well as experiential and lifelong learning opportunities. This probably points to the need for residential universities to adopt hybrid or [blended approaches](#) to learning, with some teaching online and some face-to-face.

Students are more socially conscious and inclined towards activism. As such, they expect their universities to provide them with [inclusive learning environments](#) and experiences that enable them to fully succeed in their academic and extracurricular pursuits. This includes committing to providing quality online or in-person wellness, inclusion and student life initiatives that equip students to become conscientious global citizens who drive positive societal change.

COVID-19 has reinforced the criticality of [youth disillusionment](#) with their dire economic outlook and missed educational opportunities. The compounding trends of lower intergenerational mobility and widening socio-economic inequalities, exacerbated by the COVID-19 crisis, have markedly deteriorated the mental health of young people. Since the start of the coronavirus pandemic, mental health has deteriorated for 80% of children and young people across the globe pointing to the need to steward a global effort to open pathways for youth to acquire the necessary tools and skills for a more sustainable post-pandemic world.

With the number of young Africans projected to increase to [42 percent of the world's youth by 2030](#) and doubling the current numbers of African youth by 2055 – African countries must invest in youth economic opportunities for a more prosperous future for all. Access to good health care and knowledge of healthy practices are essential services for positively enhancing youth development and harnessing Africa's demographic dividend. Focusing campaigns on youth well-being, rather than only physical health, recognises that psychological, social, and environmental health are equally important throughout youth development. Concerted efforts to destigmatise conversations around youth health will be needed in order to generate buy in from youth, particularly as it relates to safe sex, suicide, and substance abuse.

A rapidly growing youth workforce in Africa needs targeted interventions for high-quality job growth and economic opportunities. High economic growth rates do not necessarily translate into youth employment and entrepreneurship. This is particularly evident in Southern Africa, which had the highest [rates of youth unemployment](#) and youth not in education, employment, or training (NEET) in 2017, at 32.3 and 35.6 percent respectively. Policies and programmes focused on creating economically resilient and dynamic job opportunities and training programmes for youth will drive an innovative and productive future for the continent. Expanding on employment and entrepreneurship initiatives for African youth in the short term will reduce poverty, contribute to sustainable development, and foster social inclusion for all Africans in the long term.

The challenges associated with the COVID pandemic have constituted a catalytic [existential moment](#) for higher education, but this will not be a

crisis for those universities who can quickly adapt their efforts to embrace approaches that are student-centric and seek to promote social justice. In doing so, urgent and dedicated efforts need to be undertaken to address the persistent scourge of gender discrimination, inequality and gender-based violence.

Gender discrimination, inequality and gender-based violence

Gender-based discrimination persists in many parts of the world, and challenges associated with children, youth and older persons are growing. The COVID-19 crisis has exacerbated gender inequalities in education and work. As the world witnesses an increased feminisation of poverty, women make up a large proportion of the [informal sector](#) of employment and are disproportionately affected by limited access to safe places of work, education, skills, resources and technology. This often leaves women without any protection of labour laws, social benefits such as pension, health insurance or paid sick leave. They routinely work for lower wages and in unsafe conditions, including risk of sexual harassment.

Recognising this gap is the first step in closing it. Schools, universities and employers need to adopt measures to [close the gender gap](#), such as adopting flexible and remote work, ensuring that young women can return to school or the workplace after lengthy absences for caregiving, and implementing support programmes for victims of gender-based violence. According to the GSMA, a global network of mobile operators, 48% of women in low- and middle-income countries use mobile internet and they estimate that a [gender gap of 23%](#) persists, representing 313 million fewer women using mobile internet than men. [Lack of access to connectivity](#) deprives women of the ability to work from home and access critical services like survivor support groups, counselling, health information (including sexual and reproductive health), and other online resources that can be critical lifelines to women experiencing GBV during the lockdown.

This is a key imperative given that gender-based violence (GBV) continues to be one of the most intractable challenges confronting South Africa where the rate of femicide is [five times higher than the global average](#), with women from low-income households and those aged between 18 to 24 years being most likely to experience physical violence. GBV is an expression of gender inequality and toxic masculinity requiring the same effort and attention that governments globally have devoted to curbing the spread of COVID-19. GBV occurs in all societies, social classes and cultural groups and, pre-COVID 19, it affected [one in three women in their lifetime](#).

The social and economic stress caused by the pandemic exacerbated pre-existing toxic social norms and the number of women and girls between ages of 15 and 49 who had been subjected to sexual and/or physical violence perpetrated by an intimate partner (GBV) during lockdowns globally was [no less than 243 million](#). The intersection of marginalisation and discrimination made certain groups of women more vulnerable to the GBV and COVID-19 pandemics.

In his [State of the Nation Address](#), the President re-affirmed the urgency of ending gender-based violence (GBV) to create a society rooted in equality and non-sexism. The National Strategic Plan on Gender-Based Violence and Femicide (GBVF) was launched in April last year and the government will allocate approximately R12 billion over next three years to implement the various components of this plan. A ground-breaking GBV and Femicide Response Fund led by the private sector has also been established and several South African companies and global philanthropies have made pledges to the value of R128 million.

Given that women constitute 59 percent of all students at public HEIs in South Africa, addressing sexual and gender-based violence remains a high priority for universities. The [Policy and Strategy Framework Addressing Gender-based Violence in the Post-School Education Sector](#) is an important step in this direction with its focus on improving survivor support services and challenging social norms that perpetuate gender inequality.

Against a backdrop of global change and volatility, it is also becoming clearer now more than ever, that university graduates need to be [adaptable lifelong learners](#) capable of finding information, analysing it for its validity, understanding its application in different circumstances, and communicating it clearly and accurately to others. Moreover, graduates will be well served by knowledge, skills and competencies that are transferrable from one context to another, as well as by the ability to be nimble and imaginative, digitally literate and ethical decision makers.

Higher education institutions need to shape their futures by reflecting on what has worked well in managing the pandemic and how these innovations can be scaled up and mainstreamed to enhance student access for success, while also embracing the future world of work and creating optimal conditions for flexible and remote ways of working for employees.

Decolonisation of higher education

Institutional racism is still part of the [fabric of university spaces](#), texturing the experiences of students, employees and communities. In South Africa, continuing dissatisfaction with this led to the emergence of student-led #RhodesMustFall and #FeesMustFall campaigns in 2015/16 to call for the decolonisation of higher education and the reintegration of previously outsourced employees who were being exploited and paid poverty wages. Students highlighted several other concerns which impact their experiences negatively such as unequal access to higher education for financially disadvantaged, academically deserving students, continuing institutional racism, unwelcoming institutional cultures, curricula which continue to be Eurocentric, and a lack of demographic diversity among academic staff, especially at the senior levels.

According to [Zezeza](#), Eurocentrism frames African humanity and history as less than and perpetually infantile, which serves to distort, disparage

and demean African realities, lives, and experiences. The term decolonisation is the epistemic desire for decentring Eurocentric knowledges. It is imperative that the various key stakeholders in African higher education raise the value proposition of African higher education for 21st century African societies, economies, and polities. This requires commitment to the provision of education that develops the whole person, inclusion and valuing institutional diversity, innovation and cultivating creative and entrepreneurial mindsets, and impact through fostering cultures of continuous assessment. Only then will our universities serve as powerful engines for building the kind of Africa we all wish to live in and be proud of.

Future world of work

The shape that the workforce of the future takes will be the result of complex, changing and competing forces, some of which are certain, but the speed at which they unfold can be hard to predict. It is clear, however, that organisations need a clear and [meaningful purpose](#) and mandate to attract and retain employees in the decade ahead.

Automation and artificial intelligence are replacing human tasks and changing the skills that organisations are looking for. By replacing employees performing routine, methodical tasks, automation can amplify the comparative advantage of those employees performing tasks requiring skills and attributes that are uniquely human, such as problem-solving, adaptability, collaboration, leadership, creativity, innovation, imagination, and design thinking.

Attracting and retaining pivotal talent will be a significant challenge in the future and organisations will need to devote careful attention to the [employee value proposition](#) - the reasons why these employees were attracted to working with them in the first place. Collectively, the macro trends shaping the future world of work require employers to adopt a set of [new principles](#) as an increasingly critical condition for survival. These include embracing experimentation, adaptability, complexity and systemic views of organisation, human-centricity, and inspiration in place of control.

Quarantines, lockdowns and social distancing imposed by governments and employers to curb the spread of the coronavirus have compelled tens of millions of employees around the world to work from home, accelerating a workplace innovation that had struggled to gain traction previously. It is estimated that [more than 20 percent of the global workforce](#), most of them in high-skilled jobs, could work remotely from home and be just as effective.

In South Africa, of the [14.2 million persons](#) who were employed in the second quarter of 2020, more than half (58.1%) were expected to work

during the national lockdown by the organisations they work for. Although most of those who worked during the national lockdown did so from their usual place of work, about 17% indicated that they worked from home. The proportion of those who worked from home was higher among professionals (44.7%) and managers (40.6%), indicating access to tools of the trade to facilitate work from home for these employees. COVID-19 has provided an opportunity to develop policy and regulatory frameworks that ensure a better employment future after the crisis by accelerating the digitalisation of work.

Resilient organisations are better able to adapt to change and complexity. As organisations shift to more [remote work operations](#), there is a need to explore the critical competencies employees require to collaborate digitally and to transition performance goal-setting and employee evaluations. Roles and structures should be designed around outcomes to increase agility and empower employees with cross-functional knowledge and training.

The potential for remote work depends on the mix of activities undertaken in each occupation and on their physical, spatial, and interpersonal context. Although many people are returning to the workplace as economies reopen, the pandemic has broken through cultural and technological barriers that served as barriers to remote work in the past. This has set in motion a structural shift where hybrid models of remote work will prevail in the future, especially for highly skilled jobs in industries such as finance, insurance, management, business services, and information technology.

The transition to remote work surfaces two key challenges for organisations, the first of which relates to deciding on the [role of the office](#) as the traditional centre for creating culture and a sense of belonging. In the short term, universities will have to make key decisions relating to their investment in digitalisation as compared to physical infrastructure development, as well as strategies to refurbish, modernise and optimally utilise existing infrastructure to facilitate hybrid learning and remote, flexible ways of working. More attention will need to be devoted to [infrastructure](#) - IT hardware, cyber-security measures and software - to aid collaboration, to measure employee performance and effectiveness, and to prepare teams for similar future disruptions. The other challenge will be to ready the workforce for the requirements of automation, digitalisation, and other technological advancements.

Lifelong learning and upskilling

The window of opportunity to re- and upskill employees has become shorter in the newly constrained labour market. In 2020, the [World Economic Forum](#) estimated that 50 percent of all employees would need significant re- or upskilling by 2025. Evidence shows that the benefits of reskilling current employees, rather than letting them go and finding new people, typically costs less and brings benefits that outweigh the costs, such as improved loyalty, employee satisfaction and productivity. Successful reskilling starts with knowing what skills are needed, offering tailored learning

opportunities to address these needs, and inculcating a culture of lifelong learning.

Regions and economies with the potential for the biggest gains from upskilling are those in which the skills gaps are larger, and the potential is greatest to improve productivity through skills augmentation aligned with new technology. The Sub-Saharan Africa and Latin America regions could see [over 7% additional GDP](#) by 2030 if they start investing in upskilling now. Both regions are characterised by a high proportion of youth, high inequality and underdeveloped business and consumer sectors. Upskilling could propel the transition to an economy where human labour is increasingly complemented and augmented by new technology, thus improving the overall quality of jobs.

Educators and training providers must play a central role in any [comprehensive upskilling agenda](#) by providing a wide range of self-directed, online learning opportunities that also combine face-to-face and experiential learning for a more human-centric experience. Several areas urgently need to be addressed as part of these interventions, including curricula that prioritise “just in time” learning; recognition systems that build bridges between national qualification systems and lifelong learning experiences obtained in informal sectors and settings; and credentialing that seeks to develop and adopt a more joined-up taxonomy and recognition system for skills and credentials across countries, education systems and industries.

Widespread and inclusive upskilling initiatives empower more employees to improve their productivity, leading to better job options, which in turn helps reduce wage inequalities especially those created by skill-biased technological change. However, an enabling environment needs to be in place to optimise the “return on investment” of education and upskilling.

South Africa annually spends one of the highest percentages in the world of close to 6% of GDP on education, yet unemployment remains high and labour market participation low. Furthermore, while South Africa has made significant improvements in basic and tertiary education enrolment, the country still suffers from significant challenges in the [quality of educational achievement](#) by almost any international metric. This is largely due to the poorest 75-80% of learners depending on dysfunctional public schooling and achieving poor outcomes while the wealthiest 20-25% of learners can afford to enrol in private schools and functional public schools and achieve better academic outcomes. Reversing this requires collaboration and commitment, policy change and active business and governmental participation driven by a new sense of purpose.

Inequality and economic recovery

The pandemic has widened disparities in health outcomes, technology, or workforce opportunities and has strained weak safety nets and economic structures beyond capacity. Whether these gaps can be narrowed will depend on the decisiveness of the actions taken in the wake of

COVID-19 to rebuild towards an [inclusive and accessible future](#).

The COVID-19 pandemic and the ensuing lockdown triggered a [sharp decline in economic activity](#) in South Africa. Persistent electricity shortages, rising government debt and policy uncertainty will continue to hold back investment and underscore low growth. The economy is set to recover only progressively from the coronavirus recession as sectors reopen. The government relief plan will mitigate the fall in household consumption, but investment will decline to a record low level.

South Africa is consistently ranked as one of the most unequal countries in the world and the level of inequality remains persistently high with a Gini coefficient hovering at about [0.65](#). The Gini coefficient ranges from 0 to 1, where 0 indicates perfect equality (all individuals have the same income) and 1 indicates perfect inequality (where one person has all the income and the rest have none). Therefore, the closer the Gini coefficient gets to 1, the more unequal the population is. The [National Development Plan](#) (NDP) aims to reduce income inequality to reduce the Gini coefficient to 0.60 by 2030. This will require considerable efforts to create favourable conditions for job creation, entrepreneurship and labour market absorption, particularly for those who are the most deprived.

More recently, national government outlined the [South African Economic Reconstruction and Recovery Plan](#) on 15 October 2020 to provide an overview of strategies aimed at stimulating equitable and inclusive growth to mitigate the negative impact of the COVID-19 pandemic on an already flailing economy. This recovery plan seeks to build a new, inclusive economy that benefits all South Africans by decisively addressing low and declining economic growth, falling per capita incomes, low investment, as well as high and deeply entrenched levels of inequality, poverty and unemployment. The [eight priority areas](#) include the following priority interventions, namely: aggressive infrastructure investment; employment orientated strategic localisation, reindustrialisation and export promotion; energy security; support for tourism recovery and growth; gender equality and economic inclusion of women and youth; green economy interventions; mass public employment interventions; strengthening food security; and macro-economic interventions.

In his [State of the Nation Address](#) (SONA) on 11 February 2021, President Ramaphosa reported on progress in the implementation of the economic recovery plan and the priority actions to restore growth and create jobs. Since the launch of the plan, government has focused on four priority interventions, namely, an expansive rollout of infrastructure throughout the country, a massive increase in local production, an employment stimulus to create jobs and support livelihoods, and the rapid expansion of our energy generation capacity. An infrastructure investment project pipeline has been developed worth R340 billion in network industries such as energy, water, transport and telecommunications. The R100 billion Infrastructure Fund is in full operation and these infrastructure projects will lead to the revival of the construction industry and the creation of much-needed jobs. The approved project pipeline for 2021 is varied and includes the Student Housing Infrastructure Programme, which aims to provide

300 000 student beds.

Unemployment and livelihood crises

The impact of the pandemic on livelihoods has been significant, especially for the youth, unskilled workers, and working mothers due to long-standing gender, race, age and income inequalities. Disadvantaged groups went into the crisis with lower resilience as a result of disparities in well-being, financial security, and access to healthcare, education and technology.

Although 2.5 million jobs have been created over the past nine years, many South Africans remain unemployed. This burden is disproportionately felt by the youth, women and people with disabilities and unlocking the barriers to full employment remains a critical priority. The [Quarterly Labour Force Survey](#) for quarter four of 2020 recorded an unemployment rate of 32.5 percent in South Africa. Among the nine provinces, the Eastern Cape recorded the highest unemployment rate of 47.9 percent. Of the 7.2 million unemployed persons, as many as 52.3% had attained education levels below matric, followed by those with matric at 37.9%. Only 1.8% of unemployed persons were graduates, while 7.5% had other tertiary qualifications as their highest level of education. There were about 10.3 million young people aged 15-24 years, of which 29.8% were not in employment, education or training (NEET).

The South African government has recently published the [National Youth Policy](#) (NYP), aimed at promoting young South Africans aged between 14 and 35 years over the next decade, which constitutes 37% of the population. The policy reflects on the country's [high youth unemployment rate](#) (63.2% in Q4: 2020) and the interventions that could be introduced to improve the employment rate for South African youth, including:

- Introducing a new basic income grant aimed specifically at the country's unemployed youth.
- Abolishing the requirement for experience for entry-level jobs to enable more youth to enter the labour market and gain job experience.
- Creating a national pathway management network to provide work seekers with access to a basic package of support and work-readiness training to better match them to economic opportunities.
- Equipping young people with skills in key growth sectors to access opportunities such as the green, waste and food economies and advocate for the development of a catch-up strategy for those who have been left behind due to dropping out of the school system.
- The National Youth Development Agency (NYDA) and the Department of Small Business Development should implement grant funding and business support for 100 000 young entrepreneurs in the next three years.
- Offer practical experience to young people through the scaling up of the Youth Employment Service (YES) to assist them in obtaining practical job experience.

In addition to the above, government provided grant funding to the National Youth Development Agency and the Department of Small Business Development to extend business support to [1 000 young entrepreneurs](#) in 2020 in an effort to address the high levels of youth unemployment. This programme was placed on hold in 2020 due to the coronavirus restrictions, but nevertheless managed to reach its target of 1 000 businesses by International Youth Day on 12 August 2020. This provides a firm foundation for efforts to support 15 000 start-ups by 2024. The National Pathway Management Network, comprising more than 1.2 million people, will also provide support and opportunities to young people across the country.

The COVID-19 pandemic has been an [economic and human catastrophe](#), but with vaccines beginning to roll out across the world, it is possible to be cautiously optimistic that good leadership from both business and government could address the prevailing fiscal difficulties. Supporting economic recovery in the short-term while undertaking reforms to increase long-term economic growth and productivity are key and include supportive regulation, well-trained workforces, and the continued diffusion of technologies. More significantly, the growth opportunities that a green economy portends abound across massive sectors such as energy, mobility, and agriculture.

Green growth and sustainability

All over the world, the costs of pollution and the benefits of environmental sustainability are increasingly recognised as a global megatrend. Climate change is resulting in natural disasters becoming more frequent and global temperatures set to increase by at least 3°C towards the end of the century. As [climate change](#) continues, natural disasters and abnormal weather patterns will increasingly impact on economies, demographics, crop production, food security, migration, and political landscapes in unprecedented ways. Humanity faces a future of resource scarcity with the demand for global water, energy and food projected to increase exponentially by 2030, while the stress on earth systems to provide these resources are [exceeding critical limits](#). Biodiversity loss has critical implications for humanity, from the collapse of food and health systems to the disruption of entire supply chains.

According to the UN [Food and Agricultural Organization](#) (FAO), as the global population is estimated to reach 10 billion people by 2050, the demand for food and water is expected to increase. Water scarcity is one of the greatest challenges of our time and global demand for water could increase by 50 percent by 2030. Evidence further suggests that two-thirds of the world population could be living in water-stressed countries by 2025 if current consumption patterns continue.

Climate change projections for the [SADC region](#) show that the greatest impacts will mostly be felt through water resources, which could severely affect food production and energy generation. Annual rainfall is expected to decrease by 20% by 2080 in southern Africa, and that could worsen

the challenges of water and food insecurity, especially in countries that already face resource scarcities. The challenges are exacerbated by population increase and industrial growth thereby negatively impacting on the development targets of the region.

Water, energy, and food are vital resources for human well-being, poverty reduction, and sustainable development. The three resources are strongly linked and any impact on one affects the other two. These interconnections are described as the [water-energy-food \(WEF\) nexus](#), which promote socio-economic securities and development when effectively implemented.

Rapid urbanisation is one of the greatest challenges that must be contended with in achieving the intention of the [Paris agreement](#) to hold the increase in the global average temperature to well below 2°C, and preferably to 1.5°C, compared to pre-industrial levels. Cities account for 60 to 80 percent of energy consumption and generate as much as 70 percent of the human-induced greenhouse gas emissions, primarily through the consumption of fossil fuels for energy supply and transportation. Climate change projections predict significant impacts on human development progress within just a few decades. Urgent and radical action to transform urban systems is required well before 2030 to contribute to limiting global warming to 1.5°C. Urban areas also absorb significant climate risks and must be prepared to withstand the climatic extremes currently predicted with 3 to 4°C of global warming.

South Africa is among the pioneers in adopting [green economy strategies](#) and has put in place many programmes and policy frameworks in the recent past, to translate the NDP Vision 2030 into action. The country is currently implementing programmes to promote energy efficiency, green transport, sustainable housing and climate resilient agriculture. Communities remain at the heart of all efforts to boost the green economy and biodiversity economy sectors ensuring that they derive maximum benefits while conserving biodiversity and natural resources.

In the quest to respond to the threat of climate change, national government is implementing measures to fulfil the country's commitments under the [United Nations Framework Convention on Climate Change](#) and its Paris Agreement which include the reduction of greenhouse gas emissions. As the largest greenhouse gas emitter, Eskom has committed in principle to [net zero emission by 2050](#) and to increase its renewable capacity. This will be done in a way that stimulates investment, local economic activity and local manufacturing, as part of a just transition to a low-carbon economy and climate resilient society.

While South Africa is making significant strides towards the realisation of SDG 7 on [affordable and clean energy](#), there are challenges that need to be addressed. Affordability remains a concern especially considering that not every poor household can access energy subsidies such as Free Basic Electricity (FBE) and Free Basic Alternative Energy (FBAE). A further challenge is the poor uptake of off-grid solar energy technologies to meet cooking, lighting, and heating needs. Moreover, the policies and programmes on universal electrification in South Africa currently aim for a

97% electrification target and not 100% as per the international targets. The increasing informal settlements in urban areas make it difficult for the country to achieve a 100% access to electricity, while the barriers to renewable energy include a lack of capacity, corruption, poverty, environmental degradation, and the high cost of renewable energy technologies.

The COVID-19 crisis foreshadows what a climate crisis could look like: systemic, fast moving, wide ranging, and global. This creates the case for organisations to take action to limit their climate risks and universities are no exception. Although the COVID-19 crisis has brought hardship to countless households, the urgency of responding to the pandemic is arguably matched by the [urgency of addressing climate change](#). Climate change causes storms, floods, wildfires, and other natural disasters that inflict billions of dollars in damage. To keep temperatures below thresholds that would trigger runaway warming, significant short-term reductions of greenhouse-gas emissions must occur through rapid, capital-intensive action across every part of the economy.

The simultaneity of the COVID-19 crisis and the climate challenge means that the post-pandemic recovery will be a decisive period for fending off climate change. A [climate-smart approach to economic recovery](#) could put the world on an emissions pathway that would hold the average temperature increase to a relatively safe 1.5°C. Since recovery efforts usually involve much higher public spending, governments can bring about extensive, lasting changes in the structure of national economies through targeted low-carbon programmes that stimulate economic growth and job creation while ushering in a more environmentally sustainable future.

Urbanisation and human settlements

More than half the global population (55%) currently live in urban areas and the number of city dwellers is projected to rise continuously in future. Urban centres will absorb significant rural to urban migration and the bulk of population growth over the next decades. Hence, this proportion is expected to increase to 68 percent, reaching [6.3 billion people by 2050](#), adding 2.3 billion more people to urban areas. Most of this increase (about 90%) is likely to occur in the two poorest regions of the world, South Asia and Sub-Saharan Africa, where the urban population is likely to double in the next twenty years.

Urbanisation in these parts of the world is largely unplanned, fuelling the continuous growth of informal or slum settlements, which are the physical manifestation of urban poverty and inequality and currently accommodate close to 1 billion people. Migration adds complexity to the numerous issues, cities and other human settlements must deal with. Currently, there are 763 million internal migrants and 224 million international migrants in the world. This means that [every seventh person in the world is a migrant](#) and most of these migrants are found in urban areas.

The nationwide COVID-19 lockdowns were an effective public health strategy to flatten the curve and delay more infections to reduce the peak number of people needing health care. However, given the [high levels of informal urbanism in Africa](#), measures to address COVID-19 could have adverse effects with the potential of endangering more lives than they were meant to save. The housing in which the urban poor live is characterised by lack of basic services, particularly water and sanitation, thereby increasing the risk of disease outbreaks. This is exacerbated by a lack of major investment in the urban health sector in most developing countries. Poverty, humanitarian crises, and conflict are becoming increasingly urban phenomena. Rural areas do not benefit from overall growth, feeding a continuous rural-urban migration.

In sum, the challenges posed by the current model of urbanisation have global ramifications that, if not addressed adequately, could jeopardise chances of achieving the SDGs. The current economic model of investment, consumption and growth also drives the exploitative extraction of the planet's natural assets. Urbanisation has not completed a full transition away from fossil-fuelled energy, resulting in extensive air pollution which damages the health of vulnerable groups of people, particularly children and the elderly. Furthermore, urban development is increasingly occupying land that was previously used for forestry and/or food production, while the demand for food, timber products, and biomass for heating is increasing due to rapid population growth.

Despite the challenges, urbanisation is a once-in-a-lifetime opportunity for change at all levels and all types of human settlements. Cities and towns can help drive the sustainable agenda across social and cultural change, environmental protection and economic growth as the principles of the circular economy are embraced. Contributing about [80 per cent of global GDP](#), cities function as catalysts, driving innovation, consumption, and investment worldwide, making them a positive force for addressing issues related to poverty, social exclusion and spatial inequality.

Access to quality healthcare

Being better prepared for the next pandemic is a high priority, both nationally and internationally. This requires investments in [upgrading public health infrastructure and modernising health care systems](#), including the wider use of telemedicine and virtual health. Employers should learn from the pandemic and take the opportunity to redesign workplaces, build healthier work environments, and invest effectively in employee health and well-being.

Although South Africa is making progress on SDG 3 on [good health and well-being](#), historic inequities from the apartheid era are still prevalent in the healthcare system. The key challenges facing the healthcare sector in South Africa include poor access to and quality of universal healthcare in some areas, including mental healthcare and services for the disabled. The retention of skilled, senior health professionals in the public sector also remains a challenge with many leaving the country. To counter this, the Occupational Specific Dispensation (OSD) for health professionals

has been introduced in the South African public sector.

Extreme poverty rose in 2020 for the first time in more than two decades as the COVID-19 pandemic pushed an [additional 88 million](#) to 115 million people below the threshold of living on less than \$1.90 a day. The convergence of the COVID-19 pandemic with the pressures of conflict and climate change will put the goal of ending poverty by 2030 beyond reach without swift, significant and substantial policy action. By 2030, the global poverty rate could be about 7%.

Rising poverty levels means that more families who were barely managing to survive before the pandemic will struggle to do so as unemployment increases. Many will be unable to withstand the [“health shock”](#) of a family member falling ill – a risk that is even greater as the coronavirus spreads in overcrowded informal settlements across the developing world. Tackling the inter-linked challenges of poverty and health starts with a recognition that treating patients medically needs to be accompanied by integrated approaches to health care that address the underlying social determinants of health, such as access to decent housing, education and social services.

Against this backdrop, the philosophy and principles of [Primary Health Care](#) (PHC) form the basis of South Africa’s health policy and service delivery. These include equity, community participation, social and economic development, interventions focused on the determinants of poor health, health promotion, prevention, cure and rehabilitation, an integrated referral system to facilitate a continuum of care, teams of health professionals with specific and sophisticated biomedical- and social skills, adequate resources, and a client-centred approach.

This is reinforced in national government’s [Medium-Term Strategic Framework 2019-2024](#), which asserts that integrated, patient-centric models of health care that prioritise early diagnosis and continuity and quality of care must be implemented to halt the progression of multi-morbidity. Good health is not only an outcome of delivering on health services, but also a reflection of a multi-sectoral effort to address the social determinants of health such as water and sanitation, housing, quality education, food security and decent employment. The South African health sector must place dedicated focus on health services for vulnerable populations and those with special needs. These include women, youth, people with disabilities and the elderly

South Africa needs to scale up [key interventions](#) within the health system such as adopting innovative models in healthcare delivery, addressing the bottlenecks in the procurement of quality medicines, vaccines, medical equipment, and improving the quality of health care services underpinned by evidence-based clinical practise. There is also a need to improve the operational efficiency and utilisation of human resources in the health system supported by appropriate recruitment, retention, and human resources forecasting strategies.

In conclusion, there are many dynamic forces of change influencing higher education, many of which stem from the COVID-19 pandemic and how it is expected to unfold. Considering and organising these factors can challenge us to think broadly and plan for influences from unexpected domains. Although significant attention and resources have been necessarily focused on emergency measures to mitigate the adverse consequences of the COVID-19 pandemic over the past year, it is crucial to start thinking ahead and design forward-looking strategies that enhance the strategic positioning and future sustainability of higher education institutions.

Despite the range of uncertainties currently facing universities regarding the future impacts of COVID-19 on the higher education sector nationally and globally, several [concrete actions](#) can be taken. Among these, the University can apply a social justice lens to planning and decision-making, to ensure that we do not perpetuate or amplify existing inequalities or disadvantages through our decisions. Specifically, we can work towards equitable policies, plans and decisions by recognising and rectifying historical injustices and allocating resources according to need. In addition, the axes of uncertainty and identified macro-environmental factors can be expanded, both as the pandemic unfolds and new knowledge is generated, to identify and scope additional key uncertainties about the future and how these are likely to impact on strategy.

As part of the strategic planning process, the legislative mandate within which the University operates must be continuously evaluated to assess the impact of national policy provisions on institutional strategy.

Legislative mandate

The [United Nations Sustainable Development Goals](#) (SDGs) seek to address global challenges such as those related to poverty, inequality, global unemployment, climate change, and environmental degradation. Of the 17 SDGs, [Goal 4](#) aims to *“ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”* with one of the targets seeking to *“ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university”* by 2030. This positions higher education as crucial in promoting democracy and human rights, enhancing responsible global citizenship and civic engagement, facilitating intercultural dialogue, and fostering respect for cultural, religious and linguistic diversity, all of which are vital to achieving social cohesion. In addition to imparting skills required by the labour market, universities play a vital role in stimulating critical and creative thinking and generating knowledge for social, cultural, ecological and economic development.

The [African Union Agenda 2063](#) also emphasises the importance of developing human capabilities and skills to drive innovation on the African continent. Through fostering better links with industry and alignment to labour markets, higher education can fulfil a critical role in developing much-needed human capabilities and skills in Africa thereby improving employability and entrepreneurship, especially among the youth and

women. In the bid to cultivate a new African citizen who will be an effective change agent for the continent's sustainable development as envisioned by the AU and its 2063 Agenda, the African Union Commission developed a comprehensive ten-year [Continental Education Strategy for Africa](#) (CESA 16-25). The guiding principles underpinning CESA 16-25 include the recognition that knowledge societies are driven by holistic, inclusive and equitable education and lifelong learning to develop skilled human resources adapted to African core values and capable of achieving the ambitions of Agenda 2063. To this end, CESA 16-25 calls for national governments to honour their commitment to spend 1% of gross domestic product on research and to create "conducive environments" for innovation by providing adequate infrastructure and resources, including competitive awards to nurture young academics.

Within the context of South African higher education and training, key legislation and policy frameworks guide the purpose and mandate of public universities. The [White Paper on Higher Education Transformation](#) (WPHET), 1997 is the cornerstone policy that clearly states the transformation imperatives confronting the higher education sector. The WPHET calls for a new system of higher education based on equity of access and fair chances of success for all who are seeking to realise their potential through higher education, while eradicating all forms of unfair discrimination and advancing redress for past inequalities. In addition, the White Paper furthermore stresses the need for higher education to meet the high-skilled employment needs presented by a growing economy operating in a global environment. Added to this, universities are called up to contribute to the advancement of all forms of knowledge and scholarship thereby generating innovative solutions to the diverse problems and demands of the local, national, southern African and African contexts. The WPHET urges higher education institutions to support a democratic ethos and a culture of human rights through educational programmes and practices conducive to critical discourse and creative thinking, cultural tolerance, and a common commitment to a humane, non-racist and non-sexist social order.

The [Medium-Term Strategic Framework, 2019-2024](#) acknowledges the critical role of education and training in building the capabilities of South Africans, developing their social assets, and ultimately addressing the triple challenge of poverty, inequality and unemployment. Priority 3 of the MTSF focuses on [education, skills and health](#) with an emphasis on the achieving the following outcomes as it relates to post-school education and training (PSET). The MTSF indicates that the PSET sub-sectors need to expand significantly to accommodate more young South Africans. This will be costly and requires a finance regime to regulate fees and ensure affordability for the middle classes (or "missing middle"). There is also a need for more rapid adoption of innovative delivery models and methods, such as digital learning, alternative and more efficient degree structures, improved institutional models, and approaches to improve quality and throughput. The MTSF also emphasises the importance of high-level planning to ensure adequate high-level research and lecturing staff, as well as teaching, research and accommodation resources.

The MTSF 2019-2024 serves as a five-year roadmap towards achieving the targets set in the [National Development Plan 2030](#). The NDP emphasises the centrality of education, training and innovation to the attainment of the broad national vision of inclusive growth and development. Education is the cornerstone upon which to provide opportunities for social mobility, equity, social justice and democracy. Higher levels of

education, skills, research and innovation capacity are also required for:

- The transition to a low carbon economy and meeting the greenhouse gas emission targets.
- Tackling health challenges by producing health professionals in different occupational classes to deliver quality healthcare.
- Developing new and utilising existing technologies and taking advantage of the opportunities that arise from economic growth.
- Expanding the pool of researchers and improving their productivity significantly.

An [assessment of progress](#) made by universities towards achieving the NDP targets for the PSET system is outlined below:

National Development Plan 2030 Targets	Progress
Increase enrolments from 950 000 to 1.62million (GER of 30%)	1.085 million enrolments in universities in 2018 GER increased from 17.7% in 2010 to 21.6% in 2018
Ensure that disadvantaged students are fully subsidised	In 2016, 26.4% of university graduates were supported by NSFAS funding
Increase graduates from 170 000 to 425 000, particularly in scarce skills areas	227 188 graduates in 2018
Increase doctoral graduates from 1 420 per annum to 5 000 per annum (100 per million)	Increase in doctoral graduates from 28 per million in 2010 to 58 per million in 2018
Expand the number of PhD qualified employees from 34% to over 75%	Average of all academic employees with PhDs was 47% in 2018 compared to 35% in 2010
A quarter (25%) of all degrees obtained should be postgraduate degrees (with emphasis on black-African and female students)	22% in 2018
Expansion of distance education	Enrolments in distance programmes have increased at Unisa by 80 000 (or 27.4% growth from 2010)
75% throughput (Note: A throughput rate must not be confused with a graduation rate. A graduation rate is simply a ratio of graduates each year divided by enrolments in that year.)	The overall graduation rate was 20.9% in 2018
Increase research outputs in form of research publications	Research publications have increased by 93% between 2010 and 2017
Create research environment that is welcoming to all	Female doctoral graduates and African male plus female graduates increased to 1 440 in 2018.
Strengthen universities that have embedded culture of research	Although informally acknowledged as a subgroup of traditional universities, "research universities" are not funded as such.

In analysing the progress of the post-school education and training sector in achieving the ambitious targets set in the NDP, the [National Planning Commission](#) acknowledges the need for various enabling conditions to make this possible, such as:

- Planned growth across the PSET system to respond to broad demand, including funding for academically deserving “missing middle” students in need of financial assistance.
- A focus on priority sectors for growth to drive PSET strategies for key formal industry sectors.
- Institutional incentives to drive improvement in quality, student success and throughput.
- Partnerships between universities and industry to ensure meaningful workplace experience for university graduates.

The WPHET was followed 16 years later by the [White Paper for Post-School Education and Training](#), 2014 to set out a vision of a differentiated post-school system that supports a wide range of citizens in accessing diverse opportunities for further study and self-advancement to prepare them for meaningful livelihoods. In keeping with the NDP and MTSF targets, the White Paper furthermore rightfully emphasises that, while enhancing access, universities also need to focus on improving student success and throughput rates, to move towards achieving the national benchmarks of 80% and 25% respectively.

The draft [National Plan for Post-School Education and Training](#), 2017 is a roadmap for the development and reinvigoration of post-school education and training from 2018 to 2030. It provides an implementation framework to achieve the broad policy goals of the White Paper, such as ensuring the delivery of a diverse range of quality post-school qualifications and programmes that are responsive to the needs of students, society and the world of work. The NPPSET also seeks to better integrate the post-school system and support the continued implementation of initiatives that will result in improved quality of programmes and curricula, excellent teaching and learning, and significantly improved student success and throughput. The NPPSET aims to ensure that the different components of the PSET system work towards common goals, by aligning planning, funding and monitoring and enhancing collaboration and resource-sharing.

The [White Paper on Science, Technology and Innovation](#), 2019 complements the WPPSET and NPPSET by providing the long-term policy direction to ensure a growing role for science, technology and innovation (STI) in improving economic competitiveness and creating a more prosperous and inclusive society. The White Paper on STI introduces policy approaches to ensure an open, responsive and diverse knowledge system, including adopting an open science paradigm, supporting a diversity of knowledge fields, advancing a greater focus on inter- and transdisciplinary research, and acknowledging the contribution of the humanities and social sciences to addressing complex societal problems. Furthermore, the White Paper introduces a systematic approach to expanding the internationalisation of STI and science diplomacy with a strong focus on the African continent to support a pan-African agenda.

Against this legislative and national policy backdrop, Nelson Mandela University will distinguish itself through innovative, student-centric approaches to learning and teaching, research, innovation and engagement that facilitate student access for success in keeping with the mandates endowed upon South African public universities. The University will strive to position itself strategically within a differentiated PSET system through its values-driven ethos, comprehensive academic programme and qualification mix, innovative inter- and transdisciplinary research, and transformative engagement that contributes to socially just and sustainable futures. In navigating the challenges outlined as part of the situational analysis, it is crucial that the University optimises its strengths and opportunities to distinguish itself as a distinctive higher education of choice nationally and globally.

State of the University

Nelson Mandela University situates its forward planning by analysing the strengths and opportunities that can be optimised over the next decade in pursuit of Vision 2030.

Strengths

The formulation of Vision 2030 has revealed distinctive intellectual niches and strategic opportunities that need to be optimised by Mandela University as it seeks to chart its future strategic directions and game-changing differentiators. As part of recognising the privilege of carrying the revered name of Nelson Mandela, the University has been exploring how to give intellectual and practical expression to its intentions to promote the public good in the service of society.

Mandela University places the pursuit of social justice at the heart of its academic core missions of learning, teaching, research, innovation and engagement. This aligns with the [United Nations resolution](#) in adopting the 2030 Sustainable Development Goals wherein it is stated that: *“We are determined to take bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path... We recognise that eradicating poverty in all its forms and dimensions, including extreme poverty, is the global challenge and an indispensable requirement for sustainable development. We are committed to achieving sustainable development in three dimensions - economic, social and environmental - in a balanced and integrated manner”.*

Given its distinctive niche as one of only six comprehensive universities in South Africa, Mandela University seeks to provide opportunities for enhanced access and articulation within a broad range of general formative and vocational, career-focused qualifications from certificate to doctoral levels. The University has been systematically increasing access to higher education for first generation students from quintile one to

three schools, with the proportion increasing from 24% in 2010 to 53% in 2020. The changing profile of the incoming student population is also reflected in the increased percentage of NSFAS-funded undergraduate students from 16% in 2010 to 51% in 2019 compared to the national average of 39%. Drawing a higher percentage of students from economically disadvantaged backgrounds also led to a rapid increase in extended programme enrolments, which more than doubled from 1 149 in 2010 to 2 457 in 2020.

In embracing the core mandate of facilitating inclusive student access for success, the University invests extensively in various strategies to provide supportive living and learning environments conducive to improved academic performance. These student success interventions within and beyond the classroom include the following:

- An integrated early-warning data analytics system (RADAR), which monitors student academic performance and proactively identifies students who are academically vulnerable and in need of targeted support interventions.
- A wide range of student academic development and support services such as peer support, academic advising, mentoring, tutorials and supplemental instruction especially in high-risk or gateway modules, which have historically proven to be a barrier to student success.
- A first-year success (FYS) programme and various forms of extended curricula and/or foundation provisioning to assist vulnerable first-time entering students with the transition to university studies.
- Assistance to students who do not have access to mobile devices and data connectivity for the purposes of digital learning.
- Holistic psychosocial, mental health and nutritional support to promote holistic student health and wellbeing.
- Developing the pedagogical, curriculum development and assessment skills of academic staff, particularly within the context of the rapid transition to hybrid learning.

The advent of the COVID-19 global pandemic in 2020 has fundamentally shifted the higher education landscape nationally and globally through the rapid transition to remote, online learning and ways of working. Within the prevailing uncertainty and complexity of this moment in history, higher education institutions are being called upon to take stock of where they have come from and to chart future directions informed by a rapidly evolving context and responsiveness to societal needs, particularly within a context of deep social inequalities that foreground the plight of the marginalised. This includes critically reflecting on the effectiveness of current operating models, systems and processes and exploring innovative practices that promote organisational resilience and agility in pursuit of our overarching mission to be in the service of society. In so doing, Mandela University has been ramping up its digital transformation trajectory to transition towards improved efficiencies, responsive decision-making, and value-creating service delivery in support of academic excellence. This has been decisively accelerated by the COVID-19 pandemic and the need to support hybrid, flexible approaches to learning.

The University is widely recognised for its engaged, innovative scholarship, which seeks to co-create pioneering solutions to a broad spectrum of

societal challenges in collaboration with key publics. The University strives to facilitate convergence¹ - or the “coming together” - of University scholars and students across all disciplines with communities to address the so-called [wicked problems](#) confronting society and the planet by accelerating inclusive economic growth, promoting universal access to quality healthcare and education, and protecting ecological diversity. This is part of a broader strategy to reconfigure the University in alignment with a reimagined and non-paternalistic paradigm of engagement that can more meaningfully contribute to alleviating human precarity.

This underscores the importance of universities contributing to building a more democratic, inclusive society in which the pursuit of knowledge is not for narrow elitist ends, but to contribute to improving the quality of life of all communities and citizens. In diverse ways, our University’s research and innovation endeavours seek to better understand humanity and the planet, with the aim of achieving a healthier, more sustainable future for all. To this end, the University is well positioned to create an enabling environment for the pursuit of inter- and transdisciplinary research as the centrepiece of progressive scholarly inquiry in response to the major challenges of our time such as poverty, the burden of disease, unequal access to quality schooling, global inequality, and environmental degradation.

A key area of engagement in which we are participating at several levels is the crisis in basic education, which has been further heightened by the challenges caused by COVID-19. As part of the solution, the Faculty of Education’s Centre for Community Schools (CCS) continues to work with under-served schools and communities to develop alternative approaches to school improvement that are relevant and responsive to contextual realities. The Govan Mbeki Mathematics Development Centre (GMMDC) is successfully addressing mathematics and science challenges in under-resourced South African public schools to improve higher education access and success. This flagship project of the GMMDC aims at improving the self-directed learning of Grade 10 to 12 learners who show potential using the TouchTutor® programme. More than 700 selected learners from under-resourced schools benefitted from this programme, improving their mathematics and science results, and their access to university studies.

Within the context of rapid technological advancements, it is important to introduce learners to coding at a young age. There is a desperate shortage of developers globally and, without access to computers, most South African learners cannot pursue this as a career option. To overcome this, the Computing Sciences Department developed an educational gaming app called TANKS, which enables school learners to build a code with a smartphone and customised puzzle pieces. In addition, through the work of the Centre for Community Technologies (CCT), various groundbreaking apps and web-based solutions have been developed for the benefit of disadvantaged communities. An example of these is Ncediso™, a complementary mobile application developed by the CCT, which received the United Nation’s Innovation Award. This app upskills community

¹ Muthwa, S. (2018) *Taking Nelson Mandela University Boldly into the Future in Service of Society*, Inaugural Address, 17 April 2018

healthcare workers in rural areas and townships where clinics and basic healthcare are scarce. It facilitates the early detection and management of chronic disease and provides information on infectious and non-infectious diseases.

In its pursuit of innovation excellence, eNtsa (Innovation through Engineering Institute) is widely recognised for its pioneering contribution to the field of friction welding and the associated development of the analysis of metal turbines and high pressure/high-temperature pipes. These techniques, currently being used at both Eskom and Sasol, are crucial to energy security in South Africa. eNtsa is also working to provide subsidised engineering support for small and medium businesses in the manufacturing sector during these trying economic circumstances in order to remain open and avoid job losses.

The University's internationally recognised institute for chemical technology, InnoVenton, started its microalgae project a decade ago, with the aim of using the algae to mitigate harmful carbon dioxide emissions from factory flue gas, and then harvesting the algal biomass for various renewable energy uses. InnoVenton also discovered that the biomass could bind with otherwise wasted coal dust to form coal briquettes trademarked as Coalgae®. This pioneering microalgae-to-energy project is proving to be a highly versatile eco-solution by cleaning up the atmosphere and serving as a source of renewable energy by producing a low-smoke, long-lasting fuel for households.

As we step into the next decade, the drive for sustainability is non-negotiable in a world where the demand for natural resources has far outstripped supply and we are facing climate change, pollution and severe shortages of life-supporting ecosystems such as fresh water. The University has focused on harnessing its research excellence in sustainability science to achieve a sustainable, green campus with the implementation of critical projects for water, energy, waste, green policies and infrastructure development. As part of this endeavour, the University has launched a R16.5-million solar power plant, which generates 1MW of sustainable electricity contributing five to six percent of the University's total energy needs. Within a context of water scarcity, the University is also implementing innovative strategies to increase the use of secondary sources of water such as return effluent (RE), borehole water, rain and grey water to reduce its reliance on a potable municipal supply.

Opportunities

The University's Vision 2030 strategic aspirations have been crafted against the backdrop of the global, continental and national development goals articulated in the United Nations 2030 Sustainable Development Goals, the African Union Agenda 2063, and the South African 2030 National Development Plan (NDP) respectively. This will ensure that the University is poised to change the world through generating cutting-edge knowledge that contributes to a sustainable future. To this end, the University is breaking exciting new ground in respect of key strategic trajectories mandated by Council, namely, ocean sciences, the establishment of the country's tenth medical school, and fostering intellectual

renewal and transdisciplinarity through revitalising the humanities.

Ocean sciences

The United Nations proclaimed 2021-2030 as the International [Decade of Ocean Science for Sustainable Development](#) in an effort to mobilise stakeholders worldwide behind a common framework that will serve as a pivotal driver in protecting the world's oceans. The [Ocean Decade Implementation Plan](#) seeks to strengthen existing capacity development, training and education to link with the relevant supply and demand of skills required by the oceans sector through academic and higher education opportunities.

By establishing the first dedicated Ocean Sciences Campus in South Africa, Nelson Mandela University aspires to be a higher education institution of choice for ocean sciences nationally and on the African continent. Our vision is that the Ocean Sciences Campus will house transdisciplinary clusters of research chairs and entities, postgraduate students, postdoctoral fellows, visiting scholars and other partners who are working collaboratively to address grand challenges confronting our oceans and coastal communities. To this end, infrastructure developments funded by the Department of Higher Education and Training are enabling the University to invest in modernised laboratories, facilities and equipment on the campus.

As part of our five-year ocean sciences strategy (2021-2025) we will scale up existing and emerging ocean sciences academic qualification offerings at under- and postgraduate levels across all faculties, develop short learning programmes (SLPs) offered through flexible modes of delivery to respond to the continuing professional development needs of various sectors of the oceans economy, and harness inter- and transdisciplinary research and innovation capabilities that contribute to addressing global sustainability challenges confronting our oceans.

Developing our ocean sciences niches leverages off our existing strategic advantages such as our five NRF-funded SARChI (South African Research Chairs Initiative) Chairs in Marine Spatial Planning, Ocean Science and Marine Food Security, Shallow Water Ecosystems, Law of the Sea and Development in Africa, and a bilateral Chair in Ocean Cultures and Heritage. In addition, the University has established various research entities such as the Institute for Coastal and Marine Research (CMR), the FishFORCE Academy, the Centre for Coastal Paleosciences and the Marine Robotics Unit to advance pioneering research and innovation in support of global, continental and national [Operation Phakisa](#) endeavours to unlock the economic potential of the oceans that promotes sustainable livelihoods for marginalised coastal communities.

The University is also actively promoting extensive and ongoing engagement and collaboration with relevant industry, government, civil society and educational partners nationally and internationally to enhance our scientific, socio-economic and policy impact. Several important

partnerships, both nationally and internationally, have assisted the University to deepen its impact in the transdisciplinary spheres of ocean sciences.

On a global scale, we are partners in the One Ocean Hub initiative, a research project seeking to tackle threats to the world's oceans such as plastic pollution, over-fishing and acidification. Our SARChI Chair in the Law of the Sea and Development in Africa fulfils the role of the regional lead for the project on the African continent. In addition, the support from the Norwegian Embassy for the interventions led by our FishFORCE Academy has enabled our University to establish training academies in several African coastal countries, such as Kenya, Tanzania, Mozambique, Namibia and Angola. This initiative seeks to provide legal training in ocean governance to reduce illegal fishing, poaching and related crime on our high seas, such as human and drug trafficking.

One of our long-standing international partnerships is with the University of Southampton (UoS), UK, initially established through our SARChI Chair in Ocean Science and Marine Food Security, and now including Marine Engineering and Naval Architecture. The Second International Indian Ocean Expedition (IIOE-2) selected Mandela University to be the hub for marine robotics as part of a research network Western Indian Ocean partners. In March 2019, the Faculty of Engineering, the Built Environment and Technology (EBET) launched its transdisciplinary Marine Robotics Unit, enabling oceanographic researchers to collect data in situ using robotic technologies.

Establishing the tenth medical school in South Africa

There is a dire need to significantly increase the provision of adequately trained health care professionals, particularly medical doctors, to improve access to health care services. It is widely known that South Africa has a [shortage of medical doctors](#). This is while pressure on health services is growing as a result of the COVID-19 pandemic, HIV/Aids, tuberculosis, violent crime, and high mortality rates among children and pregnant women.

This context underscores the need for the tenth medical school in the country at Nelson Mandela University, which aims to offer a full undergraduate medical degree (MBChB) and to evolve further to offer medical specialist training a few years later. The medical programme (MBChB) has received the requisite accreditation by the Health Professions Council of South Africa (HPCSA), the Council on Higher Education (CHE) and the South African Qualifications Authority (SAQA) and the University will be admitting its first cohort of students in March 2021. They will be the first to study medicine in a unique, community-focused setting using an interprofessional educational approach.

The University looks forward to collaborating with all partner institutions, provincially and nationally, in producing fit-for-purpose, service oriented

and civic-minded medical professionals committed to making a difference in the lives of the disadvantaged. The medical school is based at the Missionvale Campus close to the Dora Nginza and Livingstone hospitals and will serve as a beacon of hope for the communities it aims to serve, as well as the Eastern Cape and South Africa at large.

Revitalising the humanities and fostering transdisciplinarity

Revitalising the humanities is a core component of the University's overall academic strategy to reimagine the transformative potential of all disciplines in the quest to awaken African scholarship and systems of thought. Cultivating humanity, as a core dimension of the identity and ethos of the University, requires that the frontiers between "science" and the "humanities" be reconceptualised and redrawn. To this end, it is crucial that the University revitalises the transformative potential of the humanities as part of its efforts to decolonise the curriculum and embody African-rooted knowledge generation. This, in turn, will contribute to the University's efforts to promote social cohesion and democratic citizenship through fostering the depth of critical thinking required to engage creatively in identifying innovative solutions and approaches.

Progress towards achieving this has included the launch of the Centre for Philosophy in Africa and the SARCHI Chair for Identities and Social Cohesion in Africa. The University also launched the Centre for Women and Gender Studies (CWGS) in October 2019 to research and foreground African women's biographical thinking, intellectual production, and political histories. The Centre is fulfilling a crucial role in championing sectoral efforts to advance intersectional, inter-disciplinary approaches to the promotion of gender equality and transformation. This scholarly work was recently bolstered by the awarding of a prestigious research chair in African Feminist Imaginations.

Responding to the debates about the decolonisation of universities, the Chair for Critical Studies in Higher Education Transformation (*CriSHET*) is driving the transformation agenda by grounding it in critical studies and framing it within the concept of an African-purposed curriculum. Since its launch in 2018, *CriSHET* has made great strides in working towards its vision of being a premier national, regional and international site for critical studies and praxes in higher education transformation. Under the rubric of Critical Mandela Studies, the Transdisciplinary Institute for Mandela Studies (TIMS) has been established and will constitute a key intellectual differentiator for the University. The signing of the Memorandum of Understanding (MoU) with the Nelson Mandela Foundation is serving to catalyse and advance this scholarly endeavour.

The Faculty of Humanities has also been pursuing a series of strategic interventions to reposition and recentre the humanities and social sciences. As part of these endeavours, the Faculty is engaged in re-curriculating the BA undergraduate degree programme to ensure that this sought-after general formative qualification contributes to cultivating critically conscious, socially aware graduates.

In addition to the above strengths and opportunities, the University seeks to optimise as part of the Vision 2030 Strategy, the stakeholder engagement processes also yielded key inputs that shaped the situational analysis, including the strengths, weaknesses, opportunities and threats (SWOT) outlined on the next page. The SWOT analysis has informed the formulation of the Vision 2030 strategic focus areas, enablers and associated goals to ensure that the University is well placed to leverage its strengths and opportunities, while proactively addressing the areas for improvement and threats that could potentially have a negative impact on the implementation of Vision 2030.

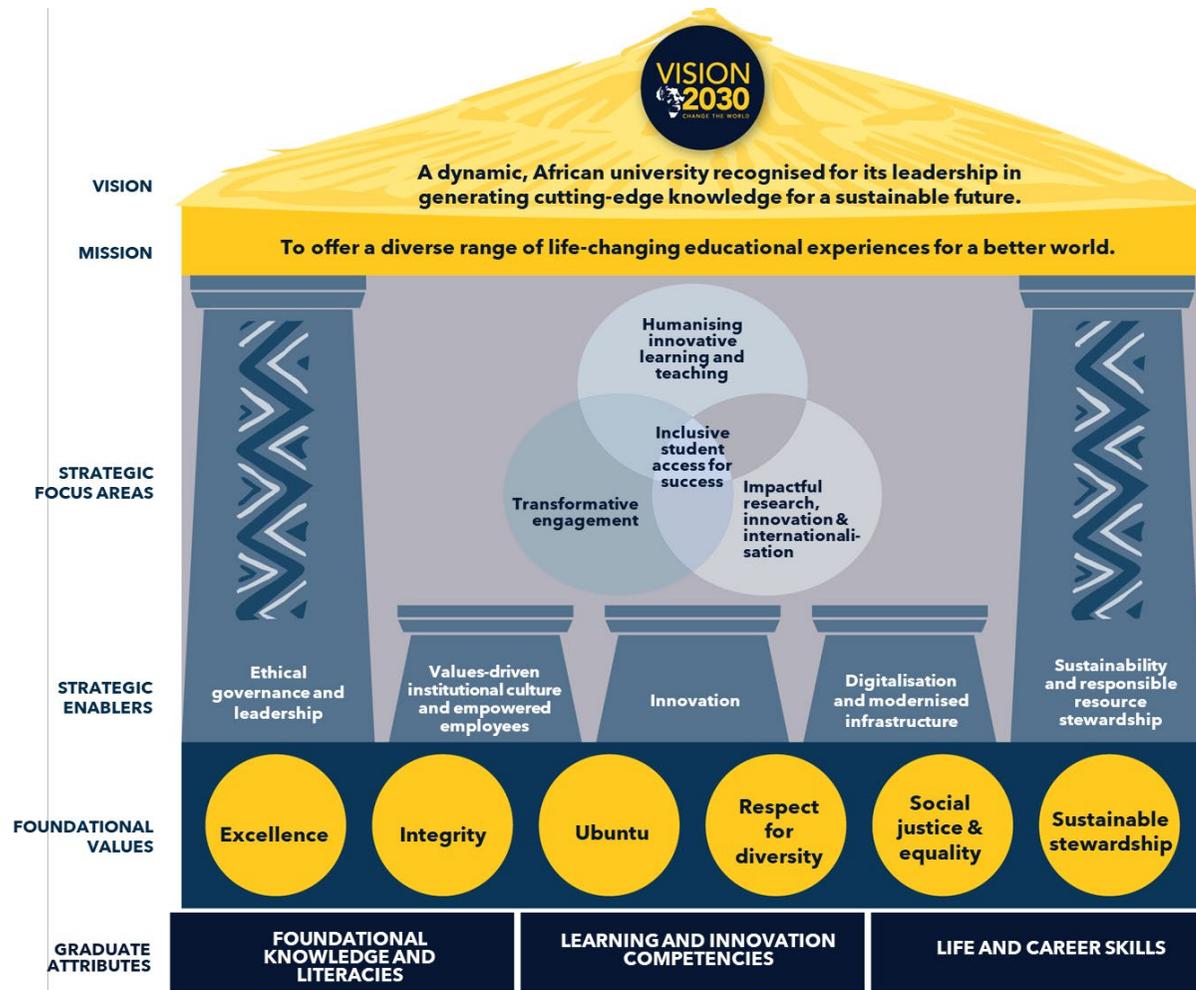
<h2>STRENGTHS</h2>  <ul style="list-style-type: none"> • Transformational and transformative leadership • Diversity and ubuntu – humane face • Social justice orientation • Impact on society – engagement and responsiveness • Sustainability science – innovative solutions for environmental challenges • Leader in decolonising HE • Spirit of innovation and dynamism • Pockets of academic excellence • Student access for success • Excellent student support • Humanising pedagogy and human-centred relational communication • Multiple pathways of learning • Science for society • Comprehensive range of programmes and qualifications 	<h2>WEAKNESSES</h2>  <ul style="list-style-type: none"> • Ineffective HR operations and processes • Staff workload too high • Lack of succession planning and talent continuity • Low staff morale and wellness • Student health – suicide, mental health • Remuneration and conditions of service not competitive • Lack of career pathing and promotion opportunities for PASS employees • Slow transformation • Cumbersome governance and administrative processes – bureaucracy stifles innovation and creativity • Uneven implementation of strategy – need for visionary leadership at all levels • Graduate employability (e.g., experiential learning opportunities) • Lack of postgraduate supervisory capacity and low research outputs
<h2>OPPORTUNITIES</h2>  <ul style="list-style-type: none"> • Vision, strategic planning and implementation • Meaningful stakeholder engagement • Attracting and retaining the best staff and students • United collected effort from all stakeholders and hard work • Partnerships with industry/employers • International partnerships and collaboration • Leverage alumni networks • Innovative technology – systems, processes, workflows, policies, service delivery • A University which is in touch with the plight of its immediate community • An African university with solutions for challenges in Africa • Relevant programmes/qualifications • Inclusive institutional culture • Increased and enhanced student support • Improved research outputs and postgraduate studies • Marketing and leveraging the Nelson Mandela name • An HR orientation that meets international standards • New and revitalised infrastructure and campus safety • Entrepreneurship and commercialisation • Adult market – upskilling and flexible, stackable credentials • Africa’s demographic dividend – tap into potential of youth 	<h2>THREATS</h2>  <ul style="list-style-type: none"> • Covid-19 and subsequent variants • Digital divide and unequal access to mobile devices and connectivity • Lack of good quality senior management and leadership • Financial sustainability – rising costs, declining state subsidies and rising student debt • Environmental risks – Impact of climate change and pollution • Political instability – political instability in SA as elections approach • Higher education model and curriculum outdated • Online learning – pace and technology requirements • Poor quality of basic education and schooling • Crime and violence • High unemployment, poverty and inequality • Global competition for talent • Gender inequality, GBV, rape and femicide • Youth disillusionment

Against the backdrop of the situational analysis and a careful assessment of institutional strengths and strategic opportunities, the University has crafted a set of core positioning messages that underpin the Vision 2030 Strategy. The philosophical underpinnings of these core messages of Vision 2030 are diagrammatically illustrated below.



SECTION B: STRATEGIC OVERVIEW

The Vision 2030 Strategic Plan outlines the University’s vision, mission, values, educational purpose and philosophy, distinctive knowledge paradigm, desired graduate attributes, and strategic priorities. This is diagrammatically depicted below with an elaboration of each dimension outlined in this section.



1. Vision

To be a dynamic, African university recognised for its leadership in generating cutting-edge knowledge for a sustainable future.

2. Mission

To offer a diverse range of life-changing educational experiences for a better world.

To achieve our vision and mission, we will ensure that:

- Our values inform and define our institutional ethos and distinctive educational purpose and philosophy.
- We are committed to promoting equity of access and opportunities to give students the best chance of success in their pursuit of lifelong learning and diverse educational goals.
- We provide a vibrant, stimulating and richly diverse environment that enables employees and students to reach their full potential.
- We develop graduates and diplomates to be responsible global citizens capable of critical reasoning, innovation, and adaptability.
- We create and sustain an environment that encourages and supports a vibrant research, scholarship and innovation culture.
- We engage in mutually beneficial partnerships locally, nationally and globally to enhance social, economic, and ecological sustainability.

3. Values

The Vision 2030 stakeholder engagement processes re-affirmed the importance of all students, employees and alumni living the University's core values to ensure that we embody the enduring legacy and ethos of our iconic namesake, Nelson Mandela. We therefore hold ourselves accountable to our values in the execution of our vision and mission, the design of our academic programmes and curricula, the execution of our academic core missions, the delivery of our services, the ways in which we engage with our stakeholders, and in the evaluation of our performance.

Respect for diversity

- We reflect and serve diverse regional, national and global communities.
- We promote an open society where critical scholarship and the expression of a multiplicity of opinions and ideas are actively encouraged.
- We foster an environment in which diversity is appreciated, respected and celebrated.
- We foster a culture that welcomes and respects diverse identities, heritages and life experiences.

Excellence

- We encourage the pursuit of the highest levels of academic, civic and personal achievement.
- We provide a supportive and affirming environment that enables our students, employees and publics to reach their full potential.
- We pursue inclusive excellence by embedding equality of access and opportunity in our policies, processes, systems and practices.
- We seek to foster a culture of intellectual and personal growth and lifelong learning.
- We promote, recognise and reward excellence in our teaching, learning, research, innovation, creative outputs, engagement and service delivery.

Social justice and equality

- We are dedicated to the realisation of a socially just, democratic society that promotes equality for all irrespective of race, gender, sex, pregnancy, marital status, ethnic or social origin, sexual orientation, age, physical and learning abilities, national origins, religion, conscience, belief, culture and language.
- We encourage mutually beneficial, equalising partnerships and engagement with our core publics to co-create sustainable, innovative solutions to persistent societal and planetary challenges.
- We cultivate living, learning and work environments that enable students and employees to realise their full potential, without fear of discrimination, harassment or violence.
- We develop our graduates as global citizens capable of developing and applying knowledge across multiple contexts to make meaningful contributions to advancing a socially just, equal society.

Ubuntu

- We are a people-centred, values-driven university that seeks to foster a compassionate and caring institutional culture.
- We respect the dignity of others and strive to be human-centred and relational.
- We recognise our mutual interdependence.
- We promote socially conscious and responsible citizenship.

Integrity

- We commit ourselves to the highest standards of personal honesty and exemplary moral character.
- We are dedicated to cultivating an atmosphere of trust.

- We take responsibility for our decisions, behaviours, actions and the consequences thereof.
- We ensure the integrity of our policies, information, systems and processes.

Sustainable stewardship

- We are committed to environmental sustainability and recognise our responsibility to conserve, protect and sustainably manage natural resources for current and future generations.
- We promote the integration of sustainability into our governance, leadership, academic core missions, operations, as well as the design and maintenance of physical and digital infrastructure.
- We inspire students and employees to embrace responsible stewardship of all financial, human, infrastructural and environmental resources entrusted to them.

Distinctive Knowledge Paradigm

Nelson Mandela University adopts a distinctive knowledge paradigm guided by the following principles:

- The University as an open society of students and employees committed to generating knowledge that has a liberating effect on our world.
- Application of ethical knowledge to advance social justice, the public good and a sustainable future for our planet and all its inhabitants.
- Freedom of expression and thought in speech, writing and all art forms.
- Advancement of disciplinary depth while embracing collaborative inter- and transdisciplinary approaches to address complex and intractable challenges.

Educational Purpose and Philosophy

We strive to be in the service of society through our learning and teaching, research, innovation and engagement activities. To achieve this:

- We are committed to liberating the full human potential of our employees and students in the pursuit of responsible, democratic global citizenship.
- We advance the frontiers of knowledge to contribute to a socially just and sustainable future in the service of society.
- We adopt innovative, humanising pedagogies and practices that affirm diverse knowledge paradigms and world views.
- We inspire our stakeholders to be passionate about and respectful of an ecologically diverse and sustainable natural environment.
- We are known for our values-driven, inclusive institutional culture that encourages all members of the University community to contribute

optimally to the vibrancy of intellectual discourse and the respectful contestation of ideas.

- We place students at the centre of all we do to enable them to deploy their agency during their studies and in their future lives as alumni.
- We seek to address the grand challenges confronting society & the planet through the co-creation of sustainable solutions with all our publics.

As an elaboration of our values, distinctive knowledge paradigm and educational purpose and philosophy, we recognise that an inclusive institutional culture is a foundational enabler of excellence in all its manifestations.

Desired Graduate Attributes

[Graduate attributes](#) are the high-level knowledge, skills, qualities and understandings that a student should gain as a result of the learning and experiences they engage with while at the university. These attributes equip graduates for lifelong personal development, learning and to be successful in society and shape the contribution they can make to their profession and as citizens. Within a rapidly changing global context, graduates need to be flexible and adaptive to manage uncertainty, ambiguity, and unpredictability, as opposed to only acquiring a fixed set of skills that prepare them narrowly for the world of work.

The Vision 2030 Strategy makes provision for generic, cross-cutting graduate attributes that can be developed in numerous ways within and beyond the curriculum. These attributes outline the highly valued skills, mindsets and attitudes that equip graduates to grapple with challenges and adapt to new environments quickly and effectively. Moreover, students with these generic attributes are better able to apply their skills in diverse contexts and find ways to innovate by applying the depth of knowledge acquired through their core discipline and/or profession, while also embracing inter- and transdisciplinary thinking to solve complex problems and challenges.

Through benefitting from a life-changing educational experience at Nelson Mandela University, our graduates will develop the knowledge, skills and attributes required for success in life and work in a complex and rapidly changing world. The key categories within which our generic graduate attributes have been identified and conceptualised include the following:

- **Foundational knowledge and literacies** represent how graduates apply core disciplinary and interdisciplinary knowledge to everyday tasks. Knowledge includes theoretical concepts and ideas in addition to practical understanding based on the experience of having performed certain tasks. Foundational literacies serve as the basis upon which graduates need to build more advanced competencies and character qualities. This includes numeracy and various literacies such as scientific, linguistic, digital, financial, cultural and civic literacy. To meet the challenges of the 21st century, students need also need to be equipped with [transformative competencies](#) to shape a better, more sustainable future. These include:

- Creating new value means innovating to shape better lives, such as developing new knowledge, insights, ideas, techniques, strategies and solutions, and applying them to problems.
- Reconciling tensions implies the acquisition of a deeper understanding of opposing positions, developing arguments to support their own position, and find practical solutions to dilemmas and conflicts.
- Taking responsibility is connected to the ability to reflect upon and evaluate one’s own actions, experience and education to achieve personal, ethical and societal goals.
- **Learning and innovation competencies** are increasingly are being recognised as the skills that distinguish graduates who are prepared for increasingly complex life and work environments in the 21st century. Such competencies include intellectual curiosity, critical thinking, creativity, communication and collaboration.
- **Life and career skills** need rigorous attention to ensure that graduates are equipped to confidently navigate life and work environments in the globally competitive information age. Such skills include professionalism and integrity, resilience and persistence, adaptive expertise, and exercising progressive agency to bring about constructive change as socially conscious, responsible global citizens.

As part of Vision 2030, our intention is to articulate a broad framework of generic graduate attributes, which can be customised and elaborated on by faculties and professional support divisions to address the specific learning and teaching requirements of various disciplines and professions. The University also acknowledges the importance of students exercising their own agency in advancing their personal development and growth while they are studying at Mandela University.

Lifelong learning				
Lifelong learning	FOUNDATIONAL KNOWLEDGE AND LITERACIES	LEARNING AND INNOVATION COMPETENCIES	LIFE AND CAREER SKILLS	Lifelong learning
	Core disciplinary depth	Intellectual curiosity	Professionalism and integrity	
	Inter-disciplinary breadth and synthesis	Critical thinking	Resilience and persistence	
	Knowledge creation	Innovation and creativity	Adaptive expertise	
	Multiple literacies (academic, digital, numeracy, civic, etc)	Communication	Socially conscious, responsible global citizens	
	Transformative competencies	Collaboration	Progressive agency	
Lifelong learning				

Strategic focus areas, enablers and goals

The cultivation of sought-after and highly valued graduates depends largely on the pursuit of excellence in the University's core academic missions. While every university defines these missions broadly as learning and teaching, research and engagement, Nelson Mandela University seeks to offer holistic curricular and co-curricular living and learning experiences that are student-centric and create an enabling, inclusive and supportive environment for students to succeed in life and work.

To this end our core academic missions are not pursued in independent silos, but are integrated to ensure that humanising, innovative learning and teaching is informed by and shapes impactful research, innovation and internationalisation, as well as transformative engagement. This integrated approach to our academic core missions in pursuit of educational experiences that facilitate student access for success is at the heart of what makes Mandela University distinctive.

Each of these strategic focus areas is unpacked further to indicate the University's Vision 2030 strategic goals.

Vision 2030 strategic focus areas	Goals
SFA 1: Liberate human potential through humanising, innovative lifelong learning experiences that prepare graduates to be socially conscious, responsible global citizens who serve the public good	<ul style="list-style-type: none">• Scale up distinguishing strategic academic directions that differentiate Mandela University within a diverse higher education landscape nationally and globally.• Embrace the distinctive features of a comprehensive programme and qualification mix that provide a range of access routes and learning pathways for multi-generational learners from diverse educational backgrounds.• Design and implement strategies to support the progressive migration towards high-quality, technology-rich hybrid learning within and beyond the classroom.• Design and offer hybrid and fully online short learning programmes and stackable credentials in support of lifelong learning and continuing professional development.

	<ul style="list-style-type: none"> • Advance humanising learning experiences and curriculum transformation interventions that seek to prepare graduates for success at work, entrepreneurship and in life. • Promote University-wide internationalisation initiatives aimed at enhancing global pedagogical relevance.
Vision 2030 strategic focus areas	Goals
<p>SFA 2: Pursue impactful, pioneering research, innovation and internationalisation to address grand societal challenges and promote sustainable futures</p>	<ul style="list-style-type: none"> • Establish nationally and internationally renowned, inter- and transdisciplinary research themes that address key issues facing society and the planet. • Review recognition, rewards, resourcing and workload models to provide an enabling environment for the generation of impactful research and innovation outputs that are locally relevant and globally significant. • Invest in the attraction, development and retention of socially diverse, research active postgraduate students, postdoctoral fellows and early career academics to promote talent continuity, research productivity and academic excellence. • Leverage the expertise of the HEAVA appointees and research associates for postgraduate student supervision, co-authoring of publications and joint applications for external grant funding. • Provide sustainable support to research chairs and entities as institutionalised mechanisms to promote synergies, enhance research and innovation productivity, and leverage external funding. • Enhance the global reach and visibility of the University through expanded international networks, strategic partnerships and collaborative international research grants, particularly on the African continent and in the global South. • Ensure that the physical and electronic library and information services collections are appropriately resourced to maintain currency with trends in scholarship across all knowledge domains.

Vision 2030 strategic focus areas	Goals
<p>SFA 3: Engage with all publics in equalising partnerships to co-create transformative, contextually responsive solutions in pursuit of social justice and equality</p>	<ul style="list-style-type: none"> • Conceptually and programmatically anchor the strategic goals of engagement and transformation within and beyond the University. • Position engagement and transformation as an institutional orientation that supports the aspiration of excellence in learning, teaching and research. • Lead creative and pioneering engagement and transformation projects that differentiate Mandela University within the national and global higher education sector. • Cultivate a vibrant intellectual culture that promotes critical consciousness and creates spaces for the open sharing of diverse knowledge paradigms and ideas. • Develop and implement institutional policies, systems and processes to promote social inclusion and decisively eliminate all forms of discrimination, micro-aggressions and gender-based violence. • Embed engagement and transformation across all University portfolios for broad socio-economic impact and in the interest of the public good. • Cultivate a culture of scholarship as an intellectual resource base that buttresses the engagement and transformation approaches, praxes and programmes of the University. • Develop platforms for co-creating sustainable, innovative solutions to societal challenges through equalising partnerships with diverse publics.

Vision 2030 strategic focus areas	Goals
<p>SFA 4: Catalyse dynamic, student centric approaches and practices that provide life-changing student experiences within and beyond the classroom</p>	<ul style="list-style-type: none"> • Conceptualise, develop and co-create an African-purposed, integrated suite of thriving student life and support services that deliver evidence-based interventions to support student success. • Stimulate vibrant, inclusive living and learning student communities on- and off-campus through diverse intellectual, cultural, sport and recreational activities and programmes. • Provide curricular and co-curricular experiential learning opportunities that cultivate innovative, entrepreneurial mindsets and enhance the readiness of graduates for life and work. • Enact institutional communities of practice, collaborative programmes and campaigns to promote holistic student well-being, health and safety. • Transform the culture of dialogue and student engagement to nurture the leadership capabilities of young African leaders and intellectuals who contribute meaningfully to society. • Facilitate the continued involvement of alumni in the activities and initiatives of the University to enhance global visibility and reach through value adding collaborative networks.

The success of Nelson Mandela University in pursuing our core academic missions is dependent upon various strategic enablers that create the conditions for excellence. As a result, institutional strategies, systems, processes and practices need to continuously adapt to ensure that strategic continuity and change are held in delicate balance. Such an enabling environment will also ensure that Mandela University is a destination of choice for students, employees, alumni, funders, and partners.

The following strategic enablers were identified as foundational pillars for the realisation of the strategic aspirations underpinning the University's Vision 2030 Strategy.

Ethical governance and leadership

The University embraces the legacy and leadership ethos of its iconic namesake, Nelson Mandela and aims to enhance organisational effectiveness through ethical governance and leadership. We strive to nurture current and future leaders who consistently promote service before self for the greater good of the University and society. Mandela University fosters an ethos of care as the cornerstone of academic and service excellence

Values-driven institutional culture and empowered employees

In embracing the legacy of our iconic namesake, Nelson Mandela University encourages students and employees to consistently live the values of excellence, ubuntu, integrity, social justice and equality, environmental and resource stewardship, and respect for diversity. We aim to attract, retain and nurture talented, diverse and high-performing employees by cultivating a values-driven, transformative institutional culture that promotes social inclusion, a sense of belonging and holistic well-being. The University invests in continuing professional development and lifelong learning opportunities for employees to unlock talent and create pathways for development and growth.

Enabling innovation

Mandela University aspires to be a vibrant innovation hub that convenes diverse stakeholders to co-create transformative solutions to address perennial societal and planetary challenges. In so doing, the University seeks to foster a culture of innovation where our students, employees and partners can collaboratively engage in scientific, technological and creative discovery that advances the frontiers of knowledge and promotes the public good.

Digitalisation and modernised infrastructure

The University strives for efficient service delivery, sustained value creation and agile decision making through the digitalisation of systems and processes, including investing in integrated information technology, networks, applications and business intelligence platforms. Modernised physical infrastructure is flexibly designed and optimally utilised to foster a vibrant living, learning and working experience for all students and employees across all campuses.

Sustainability and responsible resource stewardship

Innovative resource mobilisation and diversification is especially crucial in a context of ever-increasing costs and a shrinking national fiscus. The University recognises the need for responsible resource stewardship and cost-effectiveness to promote long-term financial sustainability. We furthermore strive to deepen our commitment to reducing our carbon footprint through harnessing the potential of renewable energies, waste reduction and recycling, and guardianship of our unique campus ecosystems and biodiversity.

The Vision 2030 goals associated with each of these strategic enablers are outlined below.

Vision 2030 strategic enablers	Goals
<p>SE 1: Embrace ethical governance and leadership approaches and practices that embody the values of the University and seek to promote service before self</p>	<ul style="list-style-type: none"> • Uphold ethical governance and leadership practices at all levels of the University to promote trust and maintain the highest standards of integrity. • Develop and implement leadership enhancement and capacity development programmes to sustain a pipeline of future leaders and trailblazers across all domains of the University. • Nurture constructive, mutually respectful engagement with key internal and external stakeholders to inform policies, strategies and decisions. • Embed a culture of transparency and accountability to ensure that leaders, employees and students align their conduct with the values of the University. • Design and implement integrated, strategy-aligned institutional performance monitoring, evaluation and reporting systems to enhance the accountability of the University to its multiple publics.
<p>SE 2: Foster an inclusive, values-driven institutional culture to position the University as an employer of choice for talented and empowered employees</p>	<ul style="list-style-type: none"> • Foster a values-driven, affirming institutional culture that promotes inclusion, holistic employee well-being and a sense of belonging. • Position the University as an employer of first choice for talented, high-performing employees through an enabling work environment and progressive remuneration, recognition and reward systems. • Accelerate the diversification of the demographic profile of employees in all occupational categories through the attraction, retention and promotion of employees from under-represented groups. • Develop and implement integrated, dynamic talent management strategies that empower employees with the self-learning skills and flexible, adaptive mindsets required to thrive within the changing world of work.

Vision 2030 strategic enablers	Goals
<p>SE 3: Create and sustain an enabling innovation ecosystem where students and employees can collaboratively engage with external partners to co-create pioneering discoveries that advance the frontiers of knowledge and promote the public good</p>	<ul style="list-style-type: none"> • Establish hubs of innovation to facilitate the convergence of students, employees and relevant external partners in spaces conducive to co-creating and leveraging innovations to drive the inclusive economic growth and transformation. • Raise the profile of the University and extend our influence, both nationally and internationally, through targeted innovation forums for key stakeholders in government, industry, the non-profit sector and broader society. • Embed innovation within undergraduate and taught postgraduate curricula wherever appropriate and develop channels for student participation in innovation projects. • Provide support at all stages of the innovation journey along with access to networks of accelerators, investors, incubation space, and an enterprise development educational programme to encourage students, academics and PASS employees to translate innovative ideas into scalable solutions and sustainable enterprises. • Support knowledge exchange and commercialisation activities that ensure innovations are readily translated for the economic, cultural and social benefit of users worldwide.

Vision 2030 strategic enablers	Goals
<p>SE 4: Improve efficiencies and value creation through digitalisation, integrated systems, agile service delivery, and modernised infrastructure</p>	<ul style="list-style-type: none"> • Integrate and digitalise institutional systems and processes to promote responsive decision-making, agile service delivery and improved efficiencies in support of academic excellence. • Progressively invest in upgraded ICT infrastructure and technologies, WiFi densification and cybersecurity enhancements to facilitate the migration towards digital transformation and cloud computing. • Strengthen the University's capacity to support hybrid and fully online educational delivery through widening access to mobile devices and data connectivity for students and employees. • Repurpose and modernise flexibly designed physical and virtual spaces in support of learning, research, engagement and creativity in a multi-campus context. <p>Transform campuses into centres of excellence through distinctive academic programme offerings and research niches, efficient service delivery, modernised infrastructure and vibrant campus life.</p>
<p>SE 5: Promote long-term sustainability through strategy-aligned resource mobilisation and responsible stewardship</p>	<ul style="list-style-type: none"> • Develop and implement a multi-year resourcing plan informed by financial modelling to fund the progressive, future focused strategic aspirations of the University. • Optimise the academic programme and qualification portfolio, graduate and research outputs of each faculty to promote financial viability and maximise subsidy yield. • Increase and diversify revenue streams through integrated resource mobilisation, enterprise development, commercialisation and investment strategies. • Mobilise funding for bursaries and scholarships to widen access for academically deserving and financially needy under- and postgraduate students.

	<ul style="list-style-type: none">• Develop and implement budgeting and resource allocation models that advance strategic alignment, transversal collaboration and sustainable growth.• Pursue responsible resource stewardship and greening strategies to enhance long-term financial and environmental sustainability.• Promote collective ownership of transformative procurement and supply chain management to improve the University's contribution to broad-based black economic empowerment (BBBEE).
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

The Vision 2030 strategic focus areas, enablers and goals outlined above inform the academic size and shape indicators and targets for Nelson Mandela University. The targets for these 2022 indicators are outlined in the next section with accompanying narrative to elaborate on the historical data trends and other contextual factors informing these targets.

SECTION C: ANNUAL PERFORMANCE PLAN 2022 KEY PERFORMANCE INDICATORS

Nelson Mandela University's academic size and shape targets constitute the basis for monitoring and evaluating progress at institutional level as it pertains to key performance indicators such as student enrolments, student success, instructional staff headcounts and qualification profile, as well as research outputs. The University carefully monitors enrolment and other key performance indicators against the six-year enrolment plan approved by the Department of Higher Education and Training (DHET).

The University pursues a sustainable growth strategy in terms of student enrolments, staff capacity, financial resources, and infrastructural facilities. As a comprehensive university, the balance between undergraduate diploma and degree enrolments, as well as between under- and postgraduate enrolments is closely monitored. Furthermore, enrolment targets are informed by various strategic considerations, such as the distinctive academic character of the University; current and emerging research capabilities, qualifications profile and research outputs of academic staff; the student intake profile; as well as academic planning and curriculum renewal across all faculties.

The majority of students (88%) at Nelson Mandela University continue to be enrolled at undergraduate level, but efforts are underway to progressively increase the proportion of postgraduate enrolments given the demand for high-level skills, knowledge generation and innovation, and the development of a new generation of demographically diverse academics. Postgraduate enrolment growth will be managed responsibly with due consideration of the postgraduate supervisory capacity and qualification profile of permanent academic staff.

Student enrolment and success rate trends, especially those observed in 2020 and 2021, were significantly impacted upon by the COVID-19 pandemic. As a result, while Nelson Mandela University remains committed to achieving the indicators and targets outlined in the DHET-approved Enrolment Plan (2020-2025), the targets in the Annual Performance Plan 2022 are informed by recent data trends. As a result, the APP 2022 targets have been adjusted based on a careful analysis of the anticipated impacts of the pandemic on student enrolments and achievements.

Key performance indicator	Target year n-3	Target year n-2	Target year n-1	Target year n	Mid-year performance targets
			2021	2022	2022
	Hemis 2019 Audited	Hemis 2020 Audited	Based on preliminary 2021 data for A as well as APP 2021 targets for B & D	Reviewed targets based on the latest data trends	
A. Access					
Headcount totals					
First-time entering undergraduates	6 355	5 295	5 910	6 580	6 580
Headcount enrolments	29 490	29 286	30 081	30 736	30 334
Headcount enrolments (Foundation Provisioning)	1 840	2 088	2 388	2 698	2 698
Headcount enrolments total UG	25 044	25 367	26 478	26 908	26 580
Headcount enrolments total PG	4 076	3 731	3 446	3 668	3 594
Occasional Students	370	188	157	160	160
Enrolments by major field of study					
Science, Engineering, Technology	11 251	10 358	10 526	10 998	10 855
Business/management	9 036	9 495	9 593	9 713	9 586
Education	2 053	2 314	2 284	2 297	2 267
Other humanities	7 147	7 119	7 678	7 728	7 626
Distance education enrolments	12	13	15	17	17

Key performance indicator	Target year n-3	Target year n-2	Target year n-1	Target year n	Mid-year performance targets
			2021	2022	2022
	Hemis 2019 Audited	Hemis 2020 Audited	Based on preliminary 2021 data for A as well as APP 2021 targets for B & D	Reviewed targets based on the latest data trends	
B. Success (APP 2021 targets for 2021)					
Graduates UG	5 520	5 921	5 743	6 093	6 093
Graduates PG	1 431	1 421	1 490	1 476	1 476
Success rate	79%	85%	80%	82%	82%
<u>Undergraduate output by scarce skills</u>					
Engineering	433	387	452	399	399
Life and physical sciences	200	215	225	222	222
Animal and human health	506	408	535	420	420
Teacher education (including PGCE)	408	451	432	465	465
Scarce skills success rate	86%	90%	87%	88%	88%

Key performance indicator	Target year n-3	Target year n-2	Target year n-1	Target year n	Mid-year performance targets
	Hemis 2019 Audited	Hemis 2020 Audited	2021	2022	2022
			Based on preliminary 2021 data for A as well as APP 2021 targets for B & D	Reviewed targets based on the latest data trends	
Teacher Education					
<i>B Ed</i>	308	321	325	331	331
<i>PGCE</i>	100	130	107	134	134
<i>Total</i>	408	451	432	465	465
C. Staff profile					
% staff with doctoral degrees	45%	45%	45%	46%	46%
Number of NGAP staff	12	14	14	16	16
Ratio of FTE students to FTE instructional/ research staff	27:1	28:1	29:1	28:1	28:1
D. Research output (APP 2021 targets for 2021)					
Publication units per FTE staff	0.6	0.7*	0.8	0.8	0.8
Research Masters graduates	262	249	275	265	265
Doctoral graduates	97	80	102	85	85
Publication units	473	576*	480	565	565

*This data is preliminary. Final data will only be available by the end of 2021 once DHET has reviewed the publication output units for books, chapters in books and conference proceedings.

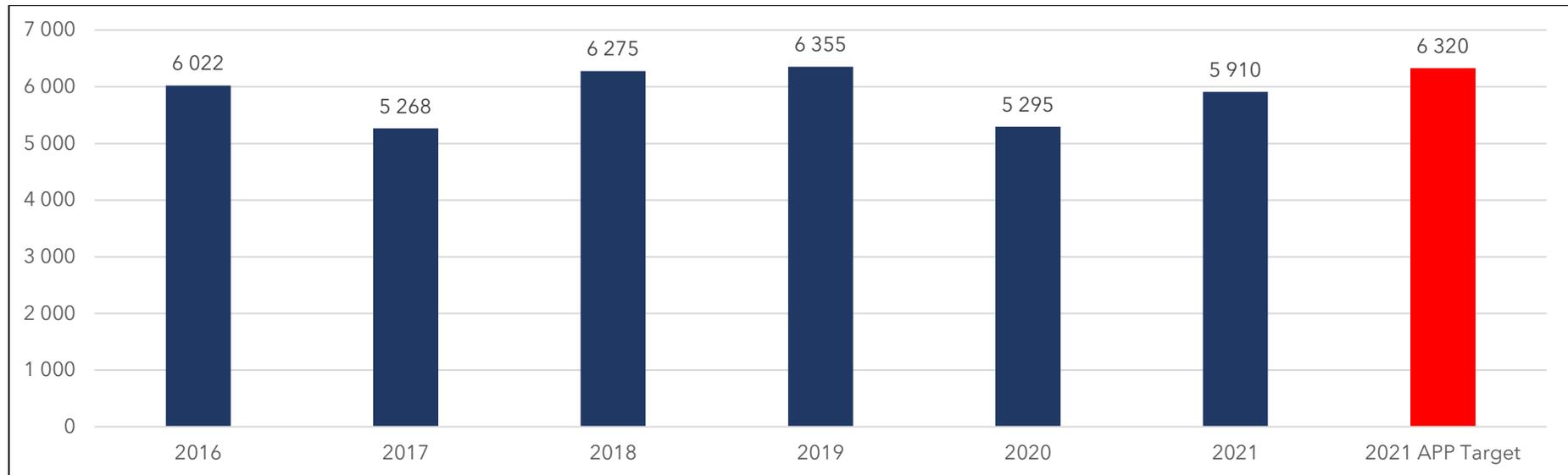
1. Student access

In line with its vision and mission, Mandela University has been systematically increasing access to higher education for first generation students from socio-economically disadvantaged backgrounds, particularly those from schools in quintiles one to three, which are the most deprived. Various interventions have been designed and implemented by the University to promote student access for success.

First-time entering undergraduate students

First-time entering undergraduate students increased from 6 022 in 2016 to 6 355 in 2019, which was a 6% increase, but then declined sharply to 5 295 in 2020 which was a 17% decrease but increased to 5 910 in 2021 (11.6% increase). The first-time entering student undergraduate intake for the period 2016 to 2021 is shown in Figure 1 below.

Figure 1: First-time entering students 2016 to 2021



Looking at the trend over the period, the first-time entering undergraduate intakes appear to be very erratic, with the highest intake in 2019. This can be attributed to the expanded financial aid provided by national government, which enabled more students from poorer backgrounds to access higher education. In 2021, 5 910 first-time entering students registered, which was an improvement of 615 registrations. This was 410 below the 2021 APP target of 6 320. The enrolment plan target for first-time entering students was 6 820 which we are clearly not achieving, and therefore the University lowered the first-time entering target in the annual performance plan.

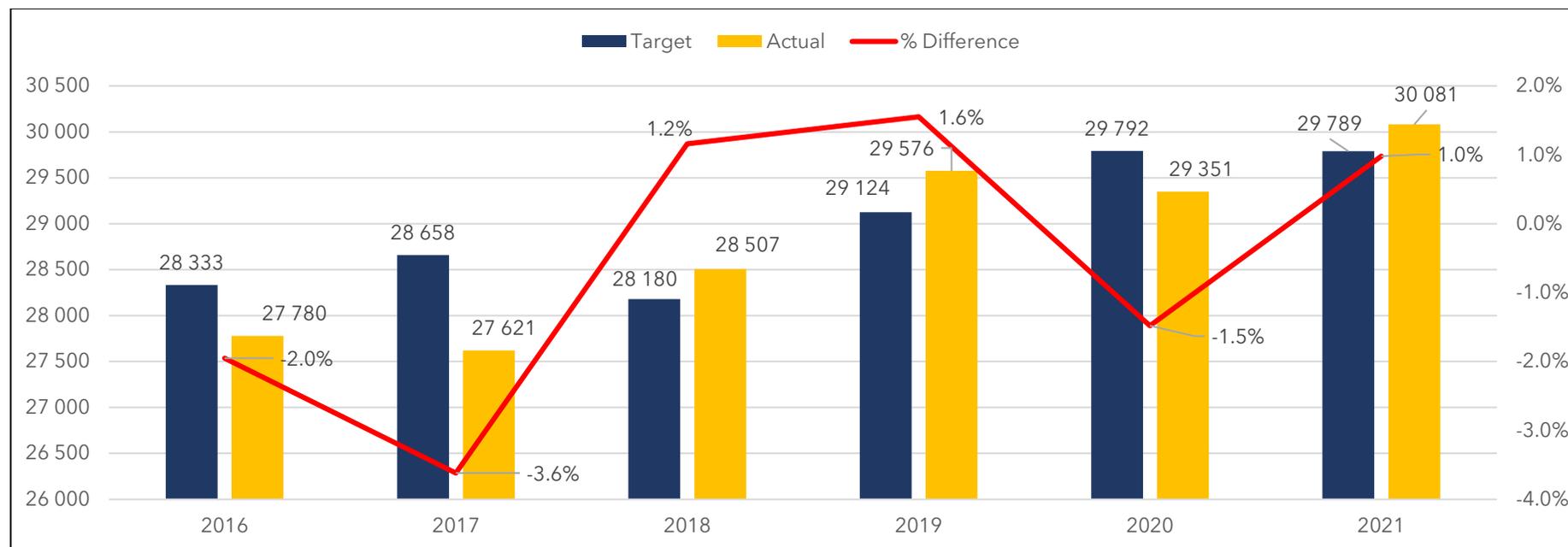
If this trend continues, the University will need to scale down future projections of first-time entering students as part of the mid-term enrolment planning review in 2022. The University will probably not achieve the original first-time entering target of 7 000 for 2022 as projected in the Enrolment Plan for 2020 – 2025 and is projecting a first-time entering target of 6 580 for 2022. The University expects a much higher intake in 2022 in view of the sharp increase in first-time entering admissions which is currently standing at 16 583 compared to 14 894 at the same time last year, which is an 11% increase. The uptake of offers was 40% in 2021 and, if the same uptake is applied to the current admissions for 2022, the University is projecting a first-time entering enrolment of 6 580 students in 2022. This represents an 11% increase from 2021 to 2022.

Student headcount enrolments

Total enrolments for the University grew at 2.0% on average per annum from 27 780 in 2016 to 29 576 in 2019, but then declined to 29 351 (0.8% decline) in 2020. From 2020 to 2021, the enrolments increased to 30 081 (2.5% increase). The average annual growth rate over the period from 2016 to 2021 was 1.6%.

Figure 2 below shows the deviations of Nelson Mandela University's headcount enrolments from the enrolment targets, which were adjusted in the recent annual performance plans from the targets in the original enrolment plans based on the trends observed. It is difficult to achieve the exact headcount enrolment targets due to the volatility of the context within which higher education institutions are currently operating. An example of this is the deviation in 2017 (-3.6% below the target of 28 658) which can be attributed to the impact of the protracted #FeesMustFall 2016 campaign. In 2018 and 2019, the headcount enrolments surpassed the Annual Performance Plan target by 1.2% and 1.6% respectively, due to the significantly expanded financial assistance allocated by DHET to financially needy students, as well as the introduction of new programmes. Most of the increases were experienced in returning senior students who would previously have dropped out due to financial reasons.

Figure 2 - Deviations of Nelson Mandela University actual headcount enrolments from targets: 2016 - 2021



The University is working progressively towards more integrated, digitalised and responsive enrolment management systems and processes to ensure that the large number of offers made to applicants translates into actual enrolments. In 2018, headcount enrolments increased to 28 507 compared to 27 621 in 2017, which represents an increase of 3.2%. An even higher growth was experienced in 2018 to 2019, when headcount enrolments increased from 29 351 to 29 576, which is an increase of 3.8%. As a result of the decline in 2020, the actual headcount enrolment of 29 351 was -1.5% below the target headcount of 29 792. Enrolment growth improved again from 2020 to 2021 with an enrolment of 30 081 in 2021, which was 1% above the 2021 APP target headcount.

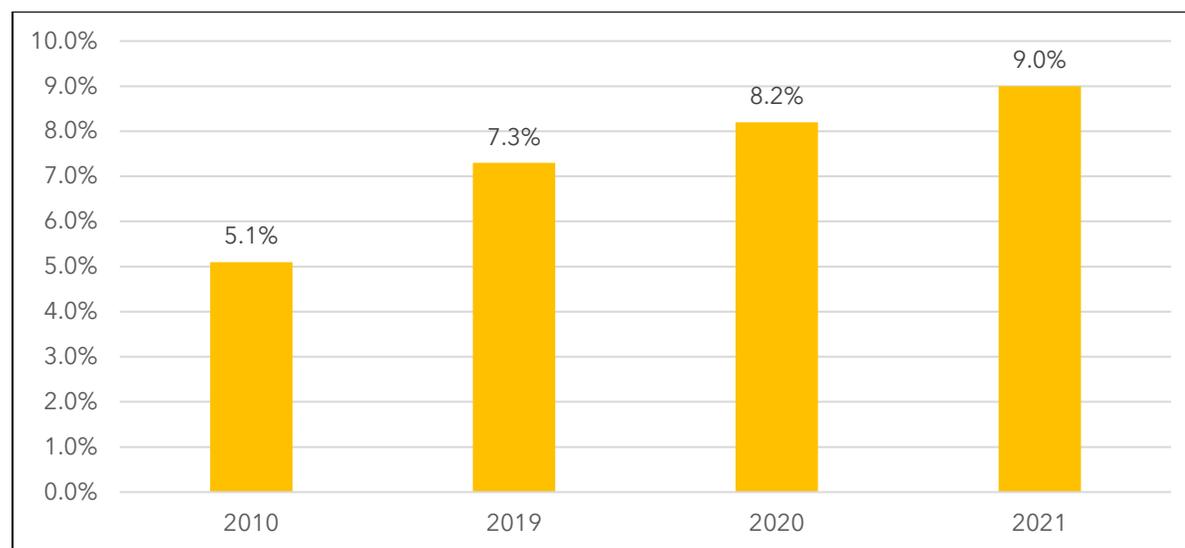
Despite the encouraging upward trend for the period 2017 to 2019, the University has set more conservative enrolment growth targets than was originally planned for in the Enrolment Plan (2020 - 2025). It is anticipated that the COVID-19 pandemic will continue to have a significant impact on international student enrolments, of which a substantial number were historically enrolled at postgraduate level. Furthermore, a moderate headcount enrolment growth is proposed to enable the University to ensure that it promotes student access for success through a range of support interventions within and beyond the classroom.

It is estimated that the total headcount enrolments will increase from the current 30 081 in 2021 to 30 736 in 2022, which is an increase of 2.2%. The total headcount enrolments increased by 2.6% from 2020 to 2021, and enrolments at undergraduate level increased by 4.4% from 25 367 in 2020 to 26 478 in 2021. In view of this trend, the University proposes a 1.6% growth in undergraduate enrolments from 26 478 in 2021 to 26 908 in 2022. This is higher than the 2022 undergraduate enrolment plan target of 26 061. Although we experienced a good growth rate at undergraduate level from 2020 to 2021, the University is of the opinion that it is not sustainable to maintain a 4.4% annual growth rate at undergraduate level given the negative impact this would have on student: staff ratios and ultimately on student success.

Foundation provisioning

In recent years, the University has been enrolling much higher percentages of students from quintiles 1 to 3 schools. This has led to increases in foundational provision offered in the form of extended programmes. Drawing a higher percentage of students from more disadvantaged backgrounds has resulted in a rapid increase in extended programme enrolments, which basically doubled from 1 149 in 2010 to 2 388 in 2021.

Figure 3 - Percentage undergraduate students enrolled in extended programmes



As indicated in Figure 3, the percentage undergraduate students in extended programmes increased from 5.1% in 2010 to 7.3% in 2019 and further increased to 8.2% in 2020 (see Figure 3 below). In 2021, 9.0% of undergraduate students were enrolled in extended programmes. The enrolments in DHET-approved extended programmes increased from 2 088 in 2020 to 2 388 in 2021, which represent a 14.4% annual growth. Given these trends, the University proposes a target of 2 698 for foundation programme enrolments for 2022, which represents an increase of 13%.

Occasional student enrolments

Occasional student enrolments are difficult to predict. Enrolments increased from 352 in 2018 to 370 in 2019 and then dropped substantially to 208 in 2020 and to 157 in 2021. In view of these significant declines in 2020 and 2021, the University projects an enrolment of only 160 in 2022. Many occasional students are international students and the decline in enrolments of these students is also reflected in our occasional student enrolments. The 2021 APP targets and the mid-year actuals are indicated in the table below:

Table 1 - Mid-year actual headcount enrolments compared to the targets in the APP 2021

	2021 APP targets	Mid-year actual for 2021
First-time entering undergraduates	6 320	5 910
Headcount enrolments Total	29 786	30 081
Headcount enrolments UG	25 746	26 478
Headcount enrolments PG	3 791	3 446
Occasional students	249	157
Distance education enrolments	18	15

Postgraduate enrolments

In view of recent data trends at postgraduate level, the University recognises that the targets set for postgraduate enrolments in the Enrolment Plan (2020 to 2025) were too high and has therefore set more realistic targets for the APP 2022. The postgraduate headcount enrolments of 3 446 for 2021 were much lower than the APP 2021 target of 3 791, as shown in Table 1 above.

The University has not achieved its enrolment targets at postgraduate level, particularly in Master's programmes. Master's enrolments increased from 1 767 in 2010 to 2 076 in 2013, but have been declining since, resulting in 1 539 enrolments in 2021, which was lower than the enrolments in 2010 (1 741). Doctoral enrolments increased from 446 in 2010 to 632 in 2019, but then declined to 582 in 2020. There was a slight increase in PhD enrolments to 600 in 2021.

The enrolment declines at M&D levels will have an adverse impact on the expansion of the available pool of researchers, innovators and the next generation of socially diverse academic staff. Such declines will furthermore have a particularly negative impact on the subsidy generation of the University, since postgraduate enrolments and graduate outputs are funded at much higher levels than undergraduate students. Funding support for postgraduate students and restricted postgraduate supervisory capacity remain the most significant impediments to increase postgraduate enrolments and graduate outputs.

Declines in international student enrolments also contributed to the decline in postgraduate enrolments. Over the period 2010 to 2021, international postgraduate enrolments declined by 2.1% on average per annum, from 436 in 2010 to 344 in 2021. The University proposes a postgraduate headcount enrolment of 3 668 which is an increase of 6.4% from the 3 446 postgraduate enrolments in 2021. The University is currently putting an immense amount of effort into improving postgraduate enrolments through a range of interventions designed and implemented under the auspices of the cross-functional Enrolment Management Committee. Despite this, the University does not anticipate that it will be able to achieve the postgraduate enrolment planning targets outlined in its Enrolment Plan for 2020-2025 in the short term, given the prevailing circumstances and the limitations on postgraduate supervisory capacity.

Teaching input units (TIUs)

Over the period 2015 to 2017, Nelson Mandela University has grown more in contact enrolments, in the SET fields and at postgraduate level, resulting in the University remaining close to the expected increase in teaching input units for the years 2015 to 2017. For the years 2018 and 2019, the University deviated more than the allowable 2%, based on the targets that were initially set in the approved enrolment plan for 2018 and 2019. The deviation for 2020 was -9.6% and, based on the preliminary data for 2021 a deviation of -8.3% is expected. This is a direct result of decreases in SET and postgraduate enrolments. As indicated above, the University has since lowered the targets in the APP for 2022, since the original targets for postgraduate enrolments were not achieved. The deviations from the approved and actual TIUs are outlined in Table 2.

Table 2 - Deviations of actual TIUs from approved TIUs, 2015 to 2021

	2015	2016	2017	2018	2019	2020	2021
Approved TIUs	47 719	49 730	51 064	52 978	54 265	54 194	55 594
Actual TIUs	46 918	49 985	51 014	50 669	50 937	49 435	*51 350
Deviation	-1.7%	0.5%	-0.1%	-4.4%	-6.0%	-9.6%	-8.3%

* 2021 is preliminary

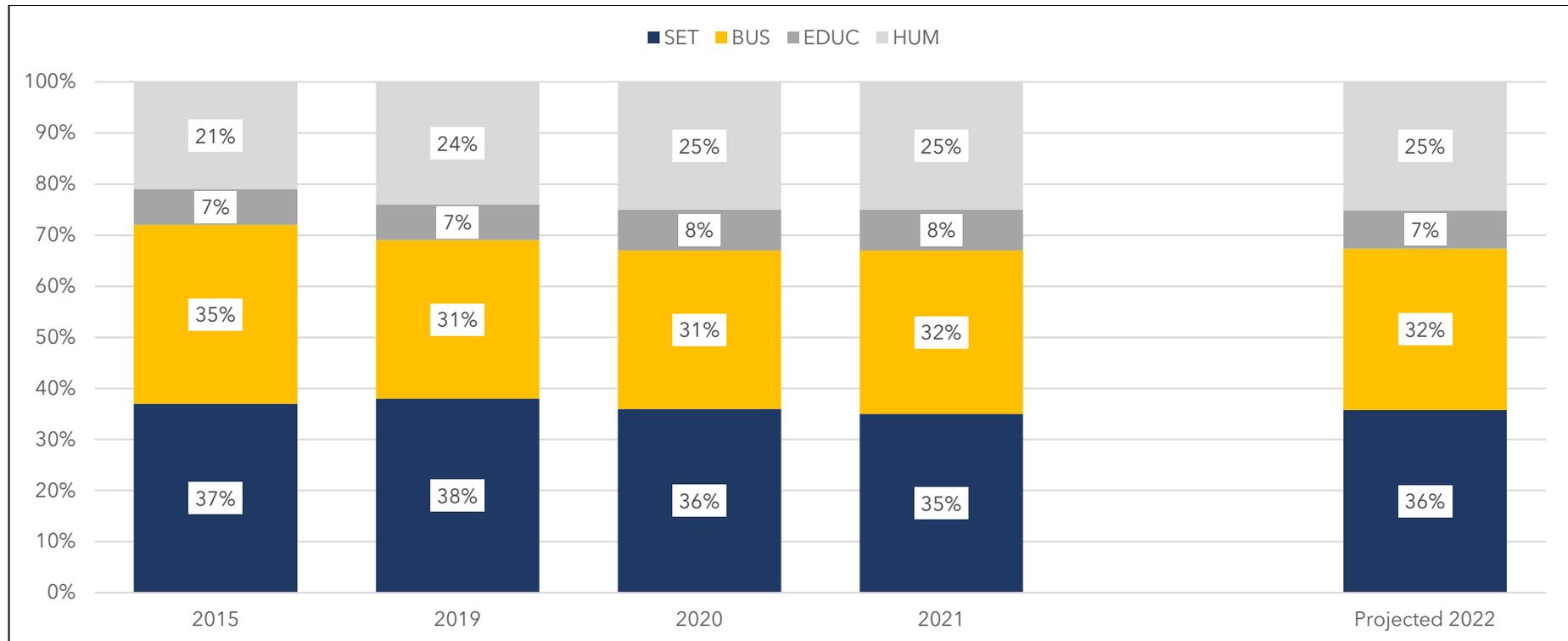
The actual teaching input units in 2015 were 46 918 compared to the approved funded teaching input units of 47 719, which is -1.7% less than the approved target, but still falls within the acceptable range of 2%. Similarly, the audited actual teaching input units for 2016, which determined the 2018 subsidy, were 49 985 compared to the approved funded teaching inputs of 49 730, which is a small deviation of 0.5%. The 2017 teaching input units were 51 014 compared to the preliminary approved teaching input units of 51 064, which was -0.1% below the approved target. Due to the non-achievement of SET and postgraduate enrolment targets, the 2018 deviation was - 4.4%, while the data for 2020 shows a -9.6% deviation from the 54 194 approved teaching input units. This will have a negative impact on the teaching input subsidy allocation to the University.

In 2021, the preliminary teaching input units of 51 350 deviated by -8.3% from the 55 594 approved teaching input units, again mainly due to the non-achievement of our postgraduate enrolment targets. The University has now under-enrolled for the last four years at postgraduate level and will have to substantially adjust its headcount enrolment and enrolled full-time equivalent targets as part of the mid-term review in 2022 for the period 2023 to 2025. The University will continue to implement wide-ranging strategies to reverse these concerning trends.

Student enrolments by major field of study

Figure 4 below shows that the Nelson Mandela University student enrolments according to major field of study have changed considerably over the period 2015 to 2021.

Figure 4 - Percentage distribution of student headcount enrolments by major field of study- 2015-2021 and projected 2022



Enrolments in SET increased from 37% to 38% of enrolments from 2015 to 2019, declined to 36% in 2020 and further declined to 35% in 2021. Human and social sciences enrolments changed from 21% to 24% over the period 2015 to 2019 and increased further to 25% in 2021. Enrolments in business and management sciences declined from 35% to 32% from 2015 to 2021, largely due to increases in admission requirements for diploma programmes. Enrolments in education increased slightly from 7% (for the years 2015 to 2019) to 8% of total enrolments in 2021.

Average annual growth rates in the three sub-fields of SET over the 2015 to 2021 period were as follows: 3.3% in natural sciences; 2.0% in engineering and technology; and -2.1% in health sciences. Enrolments in business, economic and management sciences increased slightly by 0.4% on average per annum over the 2015 to 2021 period. Enrolments in education and the humanities and social sciences increased on

average per annum by 5.7% and 6.8% respectively from 2015 to 2021. After a decline in the share of business, economic and management sciences enrolments from 35% in 2015 to 31% in 2020, these enrolments began to increase again to represent a share of 32% in 2021. As reflected in the average annual growth rates, enrolments in the humanities and social sciences have increased steeply as a result of large numbers of these students not meeting the increased admission criteria for initial teacher education programmes, as well as for business and management sciences diploma qualifications.

Although differential growth rates are projected for the various major fields of study, the shape of enrolments in the various major fields of study are projected to change slightly as follows from 2021 to 2022:

- Science, engineering and technology increasing from 10 526 to 10 998 (36% of total enrolments)
- Business and management sciences from 9 593 to 9 713 (32% of total enrolments)
- Education from 2 284 to 2 297 (7% of total enrolments)
- Human and social sciences increasing from 7 678 to 7 728 (25% of total enrolments).

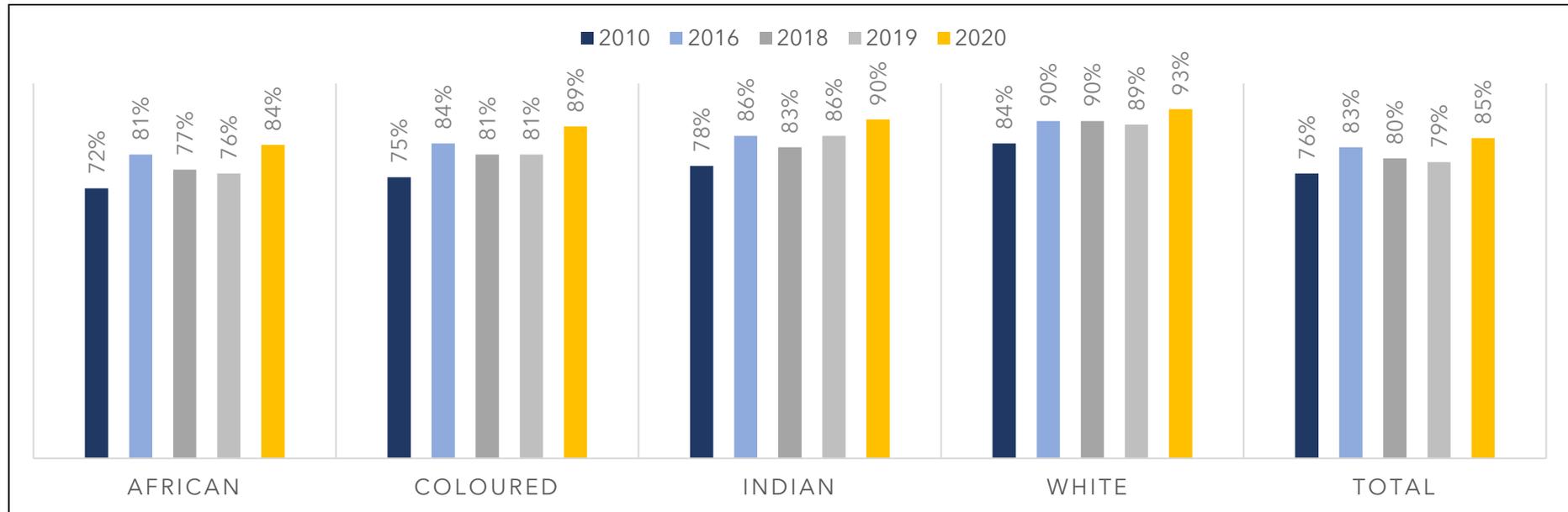
2. Student success

The University makes a considerable investment in student development and support, both within and beyond the classroom, which yielded a remarkable improvement in success rates from 76% in 2010 to 83% in 2016. Unfortunately, this pleasing trend did not continue into 2017 largely due to the rolling impact of the prolonged Fees Must Fall student protests and shutdown in 2016. However, a student data analytics programme called Siyaphumelela (together we succeed), supported by grant funding from the Kresge Foundation, made it possible for the University to develop an integrated early-warning, data tracking system to monitor student academic performance to identify and support students who are academically vulnerable. This early-warning data tracking system was also found to be very useful during 2020, when students followed different learning pathways with various combinations of online and face-to-face learning. The system was used to track the students on the different learning pathways and to identify students that were inactive to ensure that they were encouraged to persist with their studies. This has significantly boosted our capacity at institutional and faculty levels for using cohort analyses to better understand underlying causes of high student attrition, throughout the academic cycle of a student, and to use this information to structure targeted student support strategies.

The student success rate is defined as the percentage of enrolled credits that were successfully completed. Figure 5 shows that the University has improved the success rate of students with an increase from 76% in 2010 to 85% in 2021. This is quite a remarkable achievement within the context of the complex learning and teaching challenges posed by the COVID-19 pandemic in 2020. The reason for this can potentially

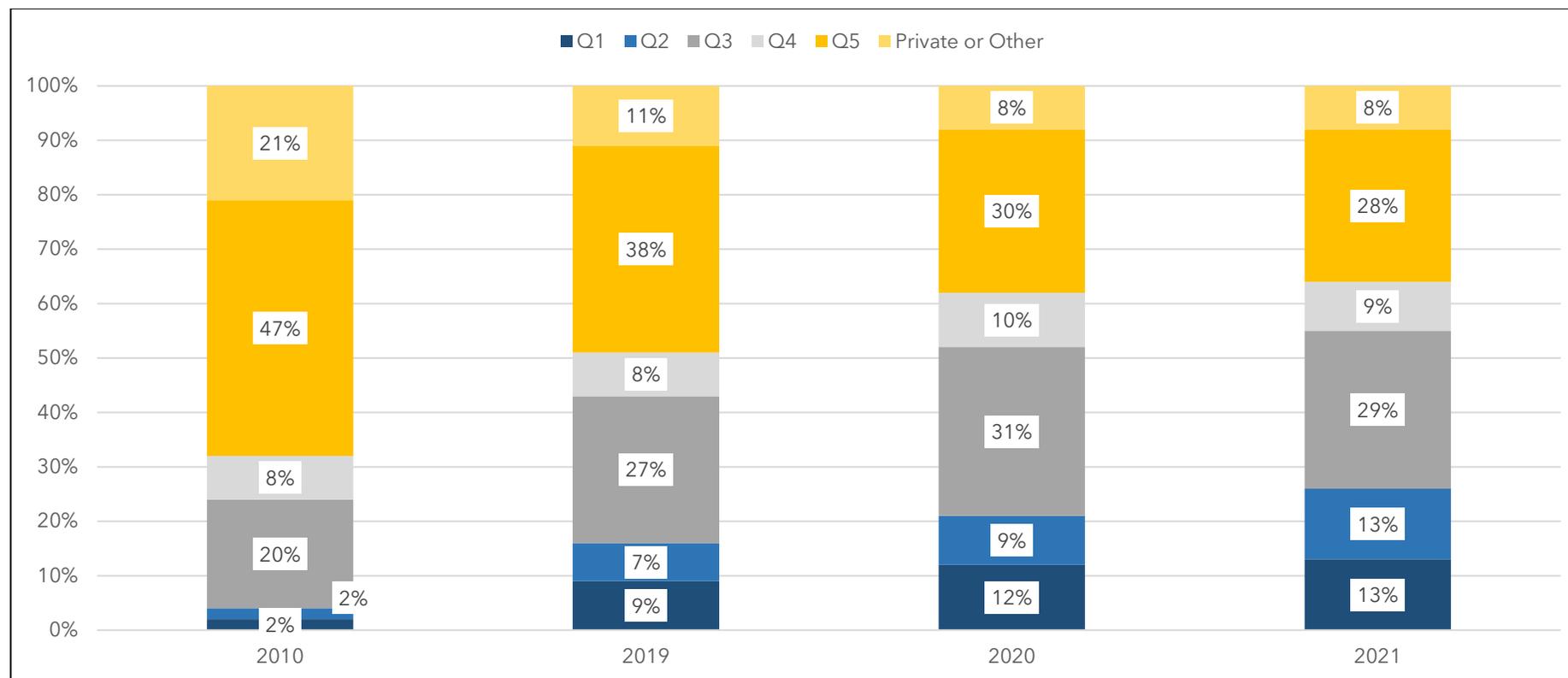
be attributed to the fact that continuous assessment was widely implemented by most faculties, with students being awarded multiple opportunities to be assessed due to the challenges emerging from the rapid transition to emergency remote learning, as well as the impact of repeated disruptions to the academic year caused by multiple lockdowns to curb the spread of the coronavirus.

Figure 5: Nelson Mandela University success rates by population group, 2010 - 2021



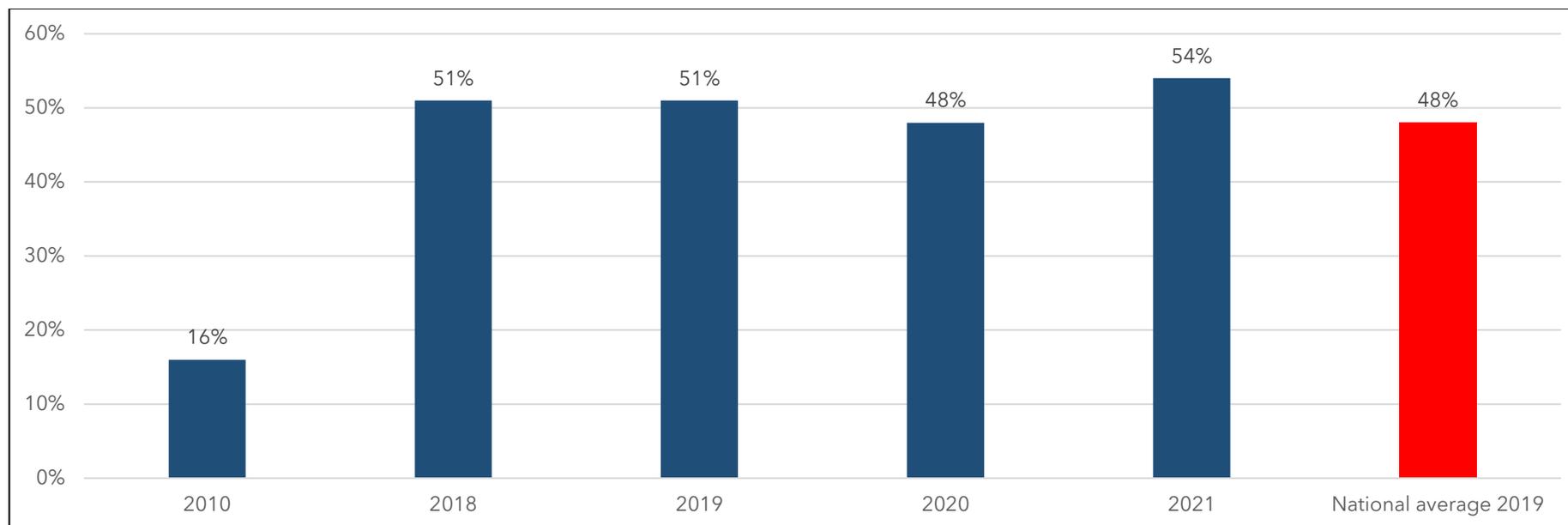
Other factors that impact on student success include the dramatic shift in the student demographic profile of the University in recent years with a much larger percentage of school-leaving, first-time entering students hailing from Quintile 1 to 3 schools. Furthermore, 63% of our students are from the Eastern Cape and a significant proportion are from disadvantaged socio-economic and schooling backgrounds. This significantly increases the demand for academic and other forms of student support to ensure that academically vulnerable students are given the best chances for success. Figure 6 below shows that first-time entering students from quintiles 1, 2 and 3 schools increased from 24% in 2010 to 55% in 2021. Concomitantly, the percentage of these students from quintiles 4 and 5 schools declined from 55% to 37%, while students from private and other schools also declined from 21% to 8%.

Figure 6: New matric first-time entering students by quintile school, 2010 and 2020



The changing profile of the incoming student population is also reflected in the increased percentage of NSFAS-funded undergraduate students. At Mandela University, the percentage of NSFAS-funded students increased from 48% in 2020 to 54% in 2021, compared to the national average of 48% in 2019 (see Figure 7).

Figure 7: Percentage undergraduate students that are NSFAS-funded: 2010 - 2021



Against this background, it is unclear whether the 85% success rate in 2020 will be maintained by the University for 2021 and 2022. In the APP for 2021, the success rate target for 2021 was set at 80%, but the success rate will hopefully be higher than this. The University estimates that the total success rate (coursework and research modules) will be 82% in 2022.

A very important indicator of student success is throughput (completion) rates. The throughput rates of the 2014 and 2015 cohorts for the three main undergraduate qualification types namely, three-year undergraduate diplomas and Bachelor's degrees and four-year undergraduate Bachelor's-degrees are indicated below in Tables 3 to 5 respectively.

The throughput rates for all three qualification types for the 2015 first-time entering cohort improved compared to the 2014 cohort. The overall throughput rate for three-year undergraduate diplomas increased from 49% to 54%, for three-year undergraduate degrees from 51% to 54%, and for four-year undergraduate degrees from 61% to 66%.

Table 3: Throughput rate for 3-year undergraduate diplomas

	2014				2015			
	Headcount of first-time entering students = 2754				Headcount of first-time entering students = 2334			
	Graduated in Minimum Time		Graduated in Minimum Time Plus 2 Years		Graduated in Minimum Time		Graduated in Minimum Time Plus 2 Years	
	Number	% Graduated	Number	% Graduated	Number	% Graduated	Number	% Graduated
Overall	686	25%	1347	49%	648	28%	1272	54%
Female	355	28%	710	56%	332	33%	621	62%
Male	331	23%	637	43%	316	24%	651	49%
African	432	23%	925	49%	428	26%	909	55%
Coloured	80	20%	173	44%	69	23%	151	51%
Indian	7	25%	9	32%	5	19%	11	42%
White	167	37%	240	53%	146	42%	201	57%

Table 4: Throughput rate for 3-year undergraduate B-degrees

	2014				2015			
	Headcount of first-time entering students = 1761				Headcount of first-time entering students = 1718			
	Graduated in Minimum Time		Graduated in Minimum Time Plus 2 Years		Graduated in Minimum Time		Graduated in Minimum Time Plus 2 Years	
	Number	% Graduated	Number	% Graduated	Number	% Graduated	Number	% Graduated
Overall	448	25%	894	51%	479	28%	920	54%
Female	285	29%	539	55%	340	34%	603	61%
Male	163	21%	355	46%	139	19%	317	44%
African	184	18%	468	45%	221	23%	487	50%
Coloured	58	28%	109	52%	52	24%	112	51%
Indian	8	21%	18	47%	4	17%	9	39%
White	198	41%	299	63%	202	40%	312	62%

Table 5: Throughput rate for 4-year undergraduate B-degrees

	2014				2015			
	Headcount of first-time entering students = 1046				Headcount of first-time entering students = 1120			
	Graduated in Minimum Time		Graduated in Minimum Time Plus 2 Years		Graduated in Minimum Time		Graduated in Minimum Time Plus 2 Years	
	Number	% Graduated	Number	% Graduated	Number	% Graduated	Number	% Graduated
Overall	431	41%	641	61%	513	46%	735	66%
Female	299	49%	432	70%	372	54%	508	73%
Male	132	31%	209	49%	141	33%	227	53%
African	155	29%	282	53%	204	34%	360	60%
Coloured	82	49%	117	70%	108	52%	147	71%
Indian	6	27%	11	50%	8	33%	12	50%
White	188	58%	231	71%	193	66%	216	74%

For both the 2014 and 2015 cohorts and for all three qualification types, female students had higher throughput rates than males. For the 2015 cohort of the three-year undergraduate diplomas, 62% females graduated in minimum time plus two years compared to 49% of males, which translates to a 13% difference. Females in the 2015 cohort enrolled in three-year B degrees had a throughput rate of 61% after minimum time plus two years compared to males who had a throughput rate of 44%. This is a difference of 13% in throughput rate between females and males. The throughput rate of females enrolled in the 2015 cohort for four-year undergraduate degrees was 73% after minimum time plus two years, compared to 53% for males, which is a 20% difference in throughput rates. The much lower throughput rates for male students at the University is concerning and needs further attention.

The cohort studies show that White students had higher throughput rates than Coloured and African students for all three qualification types. It must be noted that the number of Indian students in these cohorts are very small, which makes it difficult to compare the performance of this population group with that of the other three population groups. White students enrolled in the 2015 cohort of three-year undergraduate diplomas had a throughput rate of 57% after minimum time plus two years, compared to 55% for African and 51% for Coloured students. White students enrolled in the 2015 cohort of three-year undergraduate degrees had a 62% throughput rate compared to 50% and 51% for African and Coloured students respectively. The differences in throughput rates after minimum time plus two years for students enrolled in the 2015 cohort for four-year degrees were 74% for White students, 60% for African students and 71% for Coloured students.

Graduate outputs

The total graduates for undergraduate programmes increased by 7.3% from 5 520 in 2019 to 5 921 in 2020. The 6% increase in success rate from 2019 to 2020 contributed to more students completing their programmes successfully which led to the increase in undergraduate graduates.

The total graduates for postgraduate programmes declined by 10.8% from 1 605 to 1 431, from 2018 to 2019 and this trend continued in 2020 with a decline of 0,7% in postgraduate graduate outputs. The graduates at postgraduate level declined from 1 431 in 2019 to 1 421 in 2020, which is a direct result of the decline in postgraduate enrolments in recent years. In view of the observed declines at postgraduate level and the fact that huge increases of graduates at undergraduate level will most probably not continue at such a high rate, the University projects 6 093 graduates at undergraduate level and 1 476 graduates at postgraduate level. Even if the University succeeds in improving the growth in enrolments at postgraduate level, it will take a few years before any growth will be reflected in graduate outputs at postgraduate level. As a result, the University will most probably not achieve the enrolment plan targets of 6 323 graduates at undergraduate level and 1 677 graduates at postgraduate level in 2022.

Nelson Mandela University has been successful in producing more graduates in 2020 than the targets in the scarce skills field of initial teacher education. The University was, however, not able to reach the original targets set for engineering, life and physical sciences graduates, and animal and human health sciences (see Table 6). The actual outputs in these three fields were much lower than the targets.

Table 6: Nelson Mandela University undergraduate output by scarce skills, 2020

Undergraduate output by scarce skills	APP 2020 Target	Actual 2020 Output
Engineering	462	387
Life and physical sciences	278	215
Animal and human health	642	408
Teacher education	420	451
B Ed	301	321
PGCE	120	130

In 2020, the University had 387 engineering graduates, which is 75 below than the target of 421. This is 46 fewer engineering graduates than the 433 in 2019. The University continues to find it difficult to substantially increase enrolments in engineering due to the poor mathematics and physical science results of applicants, especially those coming from Quintile 1 to 3 schools in the Eastern Cape. The number of graduates in life and physical sciences was 215, which was 63 below the target of 278. One of the main contributing factors is that various B Tech degrees were phased out and have not yet been replaced by advanced diplomas.

The enrolments and graduation trends in initial teacher training are improving. The enrolments in initial teacher training are highly correlated with the number of available *Funza Lushaka* bursaries. The University had ten more PGCE graduates (130) than the 2020 target of 120, and twenty more B Ed graduates (321) in 2020 than the target of 301.

The Faculty of Health Sciences has historically produced more graduates than the targets, although in recent years the number of graduates in Human Health Sciences has been declining sharply. In 2020, there were only 408 graduates compared to the target of 642, which is 36% below the target. The new MBChB programme will only produce the first graduates in 2026 which will improve the situation.

In view of these trends over recent years, the following graduate output targets are set for 2022:

- Engineering - 399
- Life and physical sciences - 222
- Animal and human health - 420
- Teacher education - 465 (B Ed - 331; PGCE - 134)

3. Academic staff profile

In analysing the highest formal qualification of the permanently appointed academic staff at Nelson Mandela University, it is apparent that the percentage of staff with Doctoral qualifications has decreased from 46% in 2018 to 45% in 2019, and has remained at 45% in 2020. This was largely due to retirements and resignations of highly qualified, senior academic staff members, as well as challenges in filling vacancies that arise in faculties, particularly in scarce skills fields of study. This has had a detrimental impact on postgraduate supervisory capacity over time with concomitant declines in postgraduate enrolments.

The intention is to reverse these trends through investing in developing the next generation of early career academic staff to obtain their Doctoral qualifications so that they are equipped to supervise Master's and Doctoral candidates and produce quality research publications. Furthermore, the University has been prioritising the filling of academic vacancies across all faculties particularly those with the highest student: staff ratios. This has been made possible through significant investments in research capacity development interventions such as the Teaching Replacement Grant (TRG) and the Research Development Fund (RDF). These grants are specifically targeted at improving the University's accredited and subsidisable research outputs by funding teaching replacements for academic staff who wish to spend dedicated time to improve their qualifications or to write for publication in DHET-accredited publications.

The estimated target for staff with doctorates has been set at 46% for 2022. This target will be achieved through the filling of vacancies with highly qualified academic staff, wherever possible, and encouraging existing staff to obtain Doctoral qualifications. This is especially crucial given the high correlation between academic staff with a Doctoral qualification and research outputs, as well as the need to enhance the capacity of academic staff to supervise higher proportions of M&D enrolments.

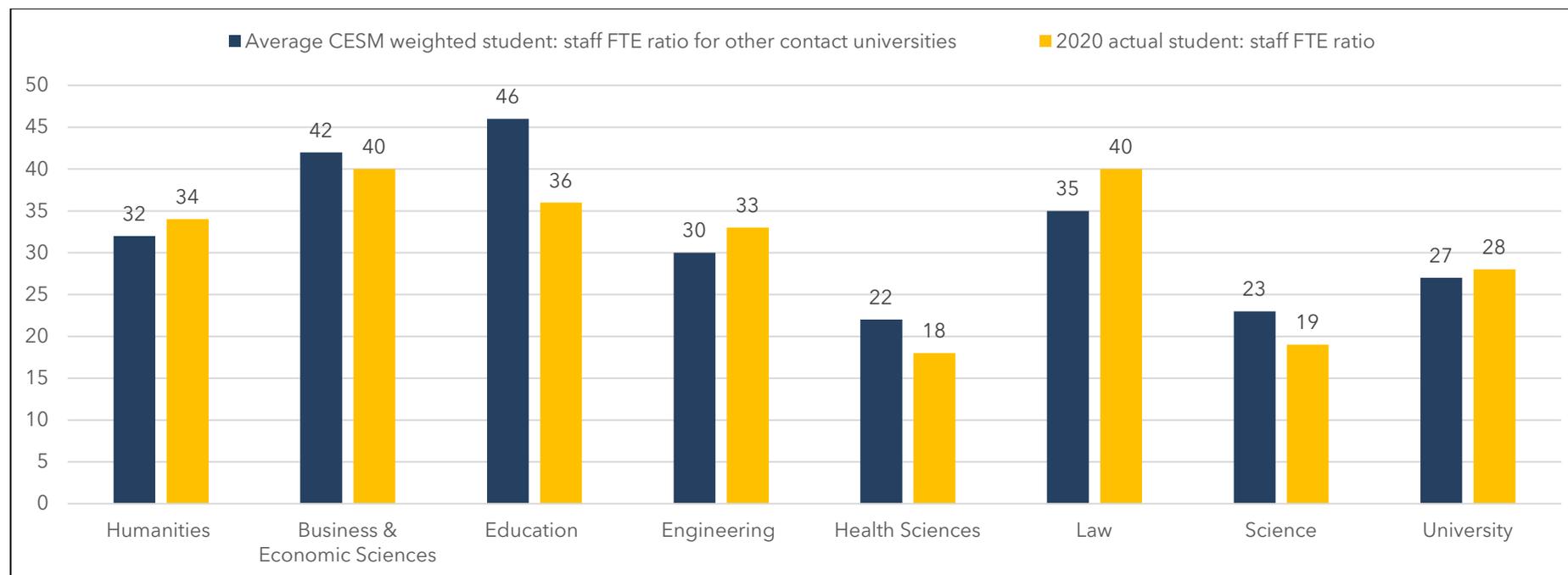
6. Student: staff full-time equivalent (FTE) ratios

The student: staff FTE ratio for the University decreased from 31: 1 in 2010 to 27: 1 in 2019. It then started increasing again to 28: 1 in 2020 and 29:1 in 2021. This is higher than the national average of 27: 1 for all contact public universities in 2019.

Figure 8 shows a comparison of the 2020 faculty student: staff FTE ratio compared to the average CESM weighted student: staff FTE ratio for other contact universities. The student: staff FTE ratio in the Faculties of Humanities, EBET and Law are higher than the averages for other contact universities in the system.

The University has been addressing this by making changes to the resource allocation model, which determines the budgets for funding academic staff posts in faculties. A percentage of budgets for academic posts allocated to faculties is now based on their variances from national averages for student: staff FTE ratios for contact universities, whilst the rest of the budget is based on their subsidy and fee income. This has brought about a more equitable allocation of funding for the appointment of academic staff in faculties with high student: staff FTE ratios. The University proposes a target of 28: 1 in respect of its student: staff FTE ratio for 2022 but will strive to further reduce the ratio in faculties where the ratios remain unacceptably high.

Figure 8: Comparison of the 2020 student: staff FTE ratio with the average CESM weighted student: staff FTE ratio for contact universities



7. Research outputs

The University's research agenda is driven by the Vision 2030 strategic priority to pursue impactful, pioneering research, innovation and internationalisation to address grand societal challenges and promote sustainable futures. As a comprehensive university, Mandela University seeks to promote the convergence of inter- and transdisciplinary "blue sky" and applied research, including concerted efforts to revitalise the humanities whilst consolidating our strengths in science and engineering to foreground the scholarly contributions of all disciplines and fields of study.

The audited HEMIS data shows that the University experienced a decrease in Master's research output units from 262 in 2019 to 249 in 2020. This trend has continued the last number of years which is a direct result of the declines in Master's enrolments. The highest Master's

enrolments were in 2013 with 2 076 enrolments. This number has since declined at an average decline of 3.7% per annum to 1 539 in 2021. The University needs to devote specific attention to improving the Master’s research outputs back to former levels by reversing the trend of declining Master’s and international student enrolments. The enrolment plan target of 326 for 2022 is now deemed too optimistic and the University has adjusted its target in the APP for 2022 to increase the research Master’s outputs to 265 in 2022.

The University currently has 297 academic staff members with PhDs. The current ratio of Master’s student enrolments to academic staff with doctorates is 5.1: 1 and the ratio of doctoral student enrolments to academic staff with doctorates is 2: 1. It is important to increase the number of academic staff members with PhDs to ensure that the postgraduate supervisory capacity keeps pace with the demand for Master’s and doctoral supervision.

The highest doctoral enrolments in recent years were achieved in 2016 when 641 doctoral students were enrolled. This number has since declined at an average annual rate of 1.3% to 600 in 2021. The doctoral graduates declined from 97 in 2019 to 80 in 2020 due to the decline in doctoral enrolments. The target for doctoral graduates for 2022 has been set at 85 which is lower than the enrolment plan target of 113.

The breakdown of the various publication unit types for 2019 and 2020 are indicated in Table 7 below.

Table 7 - Nelson Mandela University research publication outputs 2019 and 2020

Type	2019	2020	% change
Journal articles	389	473	21.6%
Books/chapters	27	72	166.7%
Conference proceedings	57	31	-45.6%
TOTAL	473	*576	21.8%

*The publication units for 2020 are preliminary and must still be evaluated by the DHET

Despite heavy teaching loads (full time equivalent staff: student ratio of 1:28 in 2020), and the fact that only about 30% of academic staff published in recent years, the research trajectory of the University with regards to research publications showed an upward trend. The University has been doing very well with regard to increases in research publications, which increased from 256 in 2010 to 442 (73% increase) in 2018 with a further increase of 7% to 473 in 2019.

Table 7 shows that journal articles increased from 389 in 2019 to 473 in 2020, which is a 21.6% increase. Books and chapters in books increased by 166.7% from 27 in 2019 to 72 in 2020, while conference proceedings declined by 45.6% from 57 in 2019 to 31 in 2020, probably as a result of the COVID-19 pandemic. The research publication units increased in total by 21.8% from 2019 to 2020. It must be kept in mind that such a significant increase could have been as a result of the finalisation of a large number of publications in a particular year that have been worked on for a while and such an increase might not necessarily be sustained. The University has therefore set a target of 565 for 2022.

SECTION D: EARMARKED GRANTS: 2021/22

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
Clinical Training Grant Awaiting DHET award letter for 2021/2022 allocation	Awaiting allocation letter from DHET	Awaiting allocation letter from DHET	Pharmacy	Project plan already submitted to DHET - History shows 100% performance on projects.	
			Nursing Sciences		
			Biomedical technology		
			Emergency Medical Care		
			Radiography		
			Dietetics		
			Biokinetics		
Infrastructure & Efficiency Grants (2017/2018)	R61 801 582 Efficiency 4	R6 736 365	University Projects - ICT	Increased / upgraded university infrastructure	Complete
		R29 565 217	Maintenance CSIR	Increased / upgraded university infrastructure	100% of budget to be spent by June 2022
		R25 500 000	Ocean Sciences Building	Increased / upgraded university infrastructure	50% of budget to be spent by June 2022
	R50 000 000 <i>Efficiency 6</i>	R50 000 000	Student Housing	Increased / upgraded university infrastructure	Complete
Infrastructure & Efficiency Grants (2018/2019)	R155 550 561 <i>Efficiency 7</i>	R155 550 561	Various	Increased / upgraded university infrastructure	50% of budget to be spent by June 2022
Infrastructure & Efficiency Grants	R53 130 179 <i>Efficiency 7</i>	R53 130 179	Various	Increased / upgraded university infrastructure	50% of budget to be spent by June 2022

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
(2019/2020)					
Infrastructure & Efficiency Grants (2020/2021)	R37 744 345 <i>Efficiency 7</i>	R37 744 345	Various	Increased / upgraded university infrastructure	50% of budget to be spent by June 2022
	R35 855 925 <i>Interest utilised</i>	R4 855 925	Felsted building re-purposes - Bird street	Increased / upgraded university infrastructure	100% of budget to be spent by June 2022
		R6 000 000	Water reservoir - George	Increased / upgraded university infrastructure	Complete
		R8 000 000	Furntech building - George	Increased / upgraded university infrastructure	Complete
		R10 000 000	Law faculty additions - Embizweni		100% of budget to be spent by June 2022
		R7 000 000	Reclaimed water scheme - South		Project to be completed by June 2022
Infrastructure & Efficiency Grants (2018/2019)	R11 000 000 <i>Efficiency 7</i>	R11 000 000	University Projects - ICT	Increased / upgraded university infrastructure	N/A - 100% of budget spend by 30 June 2021
Infrastructure & Efficiency Grants (2019/2020)	R6 600 000 <i>Efficiency 7</i>	R6 600 000	University Projects - ICT	Increased / upgraded university infrastructure	N/A 100% of budget spend by 30 June 2021
Infrastructure & Efficiency Grants (2020/2021)	R4 750 000 <i>Efficiency 7</i>	R4 750 000	University Projects - ICT	Increased / upgraded university infrastructure	52% of budget spend by 30 June 2021 48% spend by end of 2021
Budget Facility for Infrastructure (BFI Funding) for Student Housing 2018/19	R33 500 000 <i>Efficiency 8</i>	R33 500 000	Student Housing	Increased / upgraded university infrastructure	N/A - 100% of budget already spent in 2020

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
Budget Facility for Infrastructure (BFI Funding) for Student Housing 2019/20	R33 500 000 <i>Efficiency 9</i>	R33 500 000	Student Housing	Increased / upgraded university infrastructure	N/A - 100% of budget already spent in 2021
University Capacity Development Grant	R23 284 291 (please note: this is a provisional amount that is subject to change when the Ministerial Statement is released)	R4 421 170	Project 1: Learning Development to enhance Student Success	<i>The project is improving students' academic performance at Nelson Mandela University.</i> Some examples of progress: -78% of FYS participants are making use of student support programmes (T: baseline year) -All student satisfaction surveys report 79%+ good/excellent rating of programme offerings (T:80%) -567 Peer facilitated SI Sessions held (T:1000) -24 Writing assistant workshops held (T:15)	50% by 30 June 2022
		R812 720	Project 2: Student Employability and Entrepreneurship Development (SEED)	<i>The project is equipping Nelson Mandela University students with the necessary skills to develop an entrepreneurial mindset.</i> Some examples of progress: -Near 100% satisfaction rating for all offerings to students (96% average)	50% by 30 June 2022

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
				(T:80%) -100% improved entrepreneurial capacity rating for students who attend Entrepreneurship mentoring (T:70%) -5 Entrepreneurship training workshops held (T:10) - 10 Leadership and social awareness workshops held (T:12)	
		R2 052 164	Project 3: Enhancing Postgraduate Student Research Development	<i>The project is increasing postgraduate students' research skills.</i> Some examples of progress: -100% good/excellent rating for all PG support workshops (T:80%) -10 Data Collection and Analyses workshops held (T:12) -8 Proposal development workshops (T:12) -5 Research Methods and Design workshops (T:6)	50% by 30 June 2022
		R2 805 000	Project 4: Teaching development for transformative teaching practices and learning	<i>The project is enhancing the quality of teaching and learning and advance reflective teaching practice at the University.</i> Due to nature of programme	50% by 30 June 2022

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
			experiences	<p>most monitoring data to be collected by end of year.</p> <p>Some examples of progress:</p> <ul style="list-style-type: none"> -80% of HP teaching enhancement attendees participants who continue engagement with HP online using Moodle (T:80%) -80% HP workshop satisfaction rating (T:80%)- 1 HP Webinar held (T:1) -1x1.5 hours (online) HP seminar (T:2) 	
		R4 712 273	Project 5: Digital transformation of Learning and Teaching	<p><i>The project is capacitating staff and students to effectively utilize online technology platforms within the university context.</i></p> <p>Some examples of progress:</p> <ul style="list-style-type: none"> - 70% Staff evaluation staff (clients) rating for quality of service of the faculty designer (T:70%) -50% increase in the number of online activities developed by assisted staff (T:50%) - 10 Curated collection of courses (T:1) -7 Learning experience designers employed (T:7) 	50% by 30 June 2022

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
		R5 845 242	Project 6: Supporting and Strengthening Staff Research Development	<p><i>The project is improving the effectiveness of research endeavours of currently employed staff.</i></p> <p>Some examples of progress:</p> <ul style="list-style-type: none"> -91% approval rating (contributes value) for Staff Postgraduate Proposal Development Workshops (T:80%) -99% good/excellent rating of all staff/PG support offerings (T:80%) -2 MSP programmes complete (T:4) -2 DSP programmes complete (T:4) 	50% by 30 June 2022
		R1 509 500	Project 7: Curriculum Development and Mapping	<p><i>The project is ensuring that the teaching programmes of the University are of high quality and relevance to meet the needs and expectations of its students.</i></p> <p>Some examples of progress:</p> <ul style="list-style-type: none"> -75% of programme changes that are submitted to APC are not being referred back to faculty for curriculum revisions (T:80%) -87% Staff awareness of the policies and framework 	50% by 30 June 2022

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
				requirements for Curriculum development and renewal practices (T:100%)- Mapping and alignment of clinical communication and assessment data on LOOOP completed for 119 out of 391 modules (T:391) -100% LOOOP training approval by staff (T:80%)	
		R1 126 222	Project 8: UCDG programme management, monitoring and evaluation	<i>The project is ensuring efficient and effective implementation, monitoring and evaluation of the Nelson Mandela University UCDG plan.</i> Some examples of progress: -35 meetings between evaluation office and project leaders (T:42) -100% of projects collecting all relevant monitoring data (T:100%) -1 M&E UCDG Manager appointed (T:1) -4 M&E Assistants recruited for M&E skills development (T:2)	50% by 30 June 2022
Foundation Provision Grant	Earmarked Grant Comprises	R 762 960	Humanities	75% success rate	50% of budget spent by 30 June 2022

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
	NMU Allocation & DHET Allocation (please note this is an estimated amount based on the 2021/22 grant amount as the allocation is announced annually) Total allocation estimate R11 698 720				
		R4 704 920	Business & Economic Sciences	75% success rate	50% of budget spent by 30 June 2022
		R 890 120	Engineering, Built Environment & IT	75% success rate	50% of budget spent by 30 June 2022
		R1 398 760	Law	75% success rate	50% of budget spent by 30 June 2022
		R3 941 960	Science	75% success rate	50% of budget spent by 30 June 2022
COVID - 19 Responsiveness Grant (CRG1)	R9 312 257	R9 312 257	Academic Recovery and Campus	To recover and complete the 2020 Academic year and ensure readiness of campus	N/A - 100% of budget already spent in 2020

Grant	Earmarked allocation	Breakdown of allocation		Linkage to performance indicators	Mid-year performance indicator
		Budget	Projects		
(Existing interest approved by DHET for use)			Readiness Plans	in light of COVID-19	
COVID - 19 Responsiveness Grant (CRG2)	R15 431 000	R15 431 000	Academic Recovery and Campus Readiness Plans	To recover and complete the 2020 Academic year and ensure readiness of campus in light of COVID-19	100% of budget spent by June 2022

SECTION E: LONG-TERM CAPITAL EXPENDITURE PLAN AND PROPOSED LONG-TERM BORROWINGS

Description	Project value	Source of funds			2021	2022	2023	2024
		DHET	Own funding	Borrowings				
Student residences: Development of 2000 beds	R596.6m	R66,6m R75m R50m R33.5m R44.6m Note 1 R33.5m	R17.1m	R302.9m Note 2	R186m	R194m	R30m	
Development of the initial phase of a Life Rights Retirement Village	R25.7m		R25.7m Note 3			R 25.7m		
Infrastructure damaged due to #fees must fall (insurance claim)	R5.8m		R5.8m			R5.8 m		
Re-integration of previously outsourced contracts infrastructure as per new business model	R10m		R10m		R 5 m	R 5 m		

Capital maintenance as per 5-year plan	R59.15m				R 8.24m	R 15.82m	R 15m	R 15m
Residence capital maintenance projects	R523.94m				R 40m	R 52.25m	R 50m	R 50m
General capital maintenance projects								
Transportation Hub	R5.9m		R5.9m		R 2.8m	R 3.1m		
Missionvale Campus Security	R12.9m		R12.9m		R 12.9m			

Note - Long-term capital expenditure plan and proposed long term borrowings excludes efficiency funded capital projects except for Student Residences.

Note 1 - Interest earned on DHET allocated I&E Funding. Ministerial approval granted.

Note 2 - Ministerial approval granted.

Note 3 - Seed funding of R 25.7 million budgeted to be recouped by sale of units. Ministerial approval to be obtained. Project located in Investment Company.

SECTION F: 2022 BUDGET AND THREE-YEAR FINANCIAL PROJECTIONS (2022-2024)

Budget process and overview

The advent of the COVID-19 pandemic has fundamentally shifted the global higher education landscape nationally and globally and universities are increasingly being called upon to contribute to the public good, particularly within a context of deepening poverty and persistent inequality. Efforts to rebuild towards an inclusive, accessible and prosperous future in the wake of the pandemic will largely depend on supportive regulatory measures, skilled workforces, and a redirection of government policies to stimulate job creation, self-employment and entrepreneurship.

Until such time that national economic recovery and reconstruction interventions bear fruit and the government fiscus remains under pressure, the financial sustainability of the South African higher education sector will remain a critical priority. Universities are confronted with the challenge of declining government subsidy and tuition fee income, coupled with escalating costs and ever-increasing demands for access to fee-free higher education for the poor. This calls for bold responses that draw on the collective creativity of all stakeholders to design forward-looking strategies that promote long-term sustainability.

The University's Vision 2030 Strategy acknowledges the significance of transversal endeavours to advance responsible resource mobilisation and stewardship as critical enablers in support of the pursuit of excellence. This includes critically reflecting on the effectiveness of current operating models, systems and processes and exploring strategies to promote sustainability through our core academic missions, as well as campus operations and service delivery.

To this end, the University is embarking on various transversal and wide-ranging sustainability interventions to provide a consistent foundation for making difficult resourcing and investment choices and assessing opportunities for improved efficiencies and cost effectiveness. Against this background, the 2022 budget directives provide a guiding framework to inform the annual budgeting process and provide the parameters for sustainable and strategy-aligned institutional, operational, capital, salary and strategic budgeting at the University.

Through budget directives, the University strives to optimally resource its Strategic Programmes, Strategic Projects, Operations and Overheads, Infrastructure and Support Services at optimal levels while driving strategic initiatives and growth areas in a sustainable manner. A surplus from council controlled recurrent operations, before finance income, is budgeted. Finance income is utilised to grow reserves, seed new initiatives and strategy. The university's budget is based on an Institutional Resource Allocation Model that allocates high level block allocations of resources to the Academic Project and its Strategic Programmes, Professional and Administrative Support, Strategic Projects, CAPEX, Bursaries, Overheads and Earmarked Accounts and Other Expenses that are further distributed via budgetary processes and allocation models. These processes are performed by various committees that are representative of directorates within the university to ensure inclusivity of stakeholders. These committees allocate funds based on models and processes informed by the Vision, Strategic Plans

and Council's performance objectives. A three-year Annual Performance Plan (APP), cash flow and reserves accumulation plan support's the budget as to monitor and evaluate future sustainability.

The 2022 Budget and three-year financial projection has taken into the impact of COVID-19. As the resourcing envelope is largely dependent on subsidy and fees, any material variances on the current assumptions will have a significant impact on the financial projections. The university was required to implement significant interventions as to balance the 2022 budget, reprioritising and re-setting baseline budgets while prioritising the academic project.

An institutional **Resource Allocation Model (RAM)** informs the total budget and allocation of funding. Within this framework more definitive funding models and processes are employed to distribute block funds across the University.

The institutional RAM process is summarised as follows:

- Estimate revenue resources
- Top-slice for institutional overheads and strategic allocations
- Allocate earmarked income (all earmarked income identified is allocated according to the applicable business plan, contract or agreement i.e. student accommodation, earmarked funding, facilities etc.)
- Allocate salary block funding
 - The salary budget (Council Funded) benchmark will be revised during the 2020 budget cycle, taking into account the organisational redesign, remuneration harmonisation process, revised baseline of the academic block allocation and change in operational subsidy funding in the medium term
 - The resource allocation model and budget directives will determine the block amount available for the salary budget allocation.
 - Academic staff budget
 - An Academic RAM is utilized to allocate funding to faculties
 - Professional Administrative Support Staff (PASS) budget
 - Management Committee of Council (MANCO) members are given a block allocation based on the budget directives
 - Provision is made for a remuneration contingency to fund adjustments of the staffing costs including annual increase costs

- Allocate operating block funding
 - Operating block allocations are split between Academic block funding and Professional Administrative Support Staff (PASS) block funding.
 - The Academic Block allocation is determined based on the current budget allocation as the baseline adjusted with the inflationary increase and growth in student FTE's prescribed in the budget directives
 - The Academic RAM model is then applied and allocated to faculties who are required to distribute their allocations per school & department
 - The Professional Administrative Support Staff (PASS) operating block allocations are informed by the budget directives for the applicable budgeting cycle. MANCO members will receive operating budget for their core business in two block allocations where applicable:
 - Corporate Overheads/ earmarked allocations as per budget directive and allocated from a zero base
 - MANCO member's operational allocation as per budget directive.

MANCO members will be requested to distribute operating budget within their directorates

Assumptions used in preparing the budget (2022 - 2024)

- Inflation rate used in estimates: 2022(4.5%), 2023 (4.5%) and 2025 (4.5%)

1. Subsidy

- The latest MTEF, Medium Term Budget Policy Statement and correspondence from DHET was used as a basis to inform the calculations
- Net Block Grant Subsidy for operations in 2022 is an estimated baseline equal to 2021 adjusted allocation; 3 % 2023 & 3.5 % 2024
- Other subsidy sources that are earmarked allocations from the DHET, reflected in central budget are for Foundation Programmes and Interest & Redemption. Other DHET earmarked grants i.e. Clinical Training Grant and University Capacity Development Grant are managed as a ring-fenced funds. Budgets are based on latest MTEF.

2. Fees

- Tuition
 - 0.5 % growth in 2022 according to adjusted estimate; 1% for 2023 to 2024
 - 4.23% = fee increase scenario (2022); 4.5% (2023 - 2024)
 - Bad debt provision of 8% provided for 2022 - 2024
- Residences
 - Fee increase scenario of 6.23% for 2022; 6.5% (2023 - 2024)
 - Bad debt provision of 3% provided for 2022 - 2024
 - Increase in beds as per roll out of additional 2000 beds in a phased approach
 - Off Campus - agency fund therefore only commissions receivable budgeted for. Net position reflected.

3. Other Income

The following activities fall under other income which have their own assumptions

- International Office
 - 2022 budget assumptions on an adjusted baseline + growth of 1 % applied for 2023 & 2024
 - Levy increase in line with tuition fee increase of 4.23% (2022) and 4.5% for 2023 to 2024
- Facilities
 - Revenue estimated on all facilities for 2022 (reduced baseline based on current experience) increased to 90% of original baseline for 2023, increasing by 10% for 2024
- Sundry Income
 - Forecasts use 2022 adjusted budget as baseline
 - Average increase of 10% for 2023 & 2024
- Trust / Strategic Resource Mobilisation and Advancement Office (SRMA)
 - Bursaries received from Trust - no allocations for 2022 - 2024
 - SRMA operational expenses recouped - the corresponding salary & operating budgets are reflected under the expenditure line items

4. Strategic Allocations

- 2021 baseline used for 2022 to 2024. This is non-recurrent key institutional projects and includes funding shortfall on new Medical School financial model for which resources are being mobilised

5. Salaries

- The academic salary block is calculated using the 2021 salary Block allocation, adjusted with the effect of the 2021 general salary increase and the 2022 planned enrolment target % adjusted down to 0.50%. This is increased by average CPI % for 2023 and 2024, taking student growth of 1% into account
- The PASS salary budget including the International Office is calculated using the 2021 salary budget as a baseline, adjusted with 2021 MANCO approved recurrent additions and adjusted with the effect of the 2021 general salary increase. Where departments/units/sections have moved, in relation to the VC and MANCO members, the relevant baseline salary budgets were moved based on the principle of funding to follow function. A budget adjustment of average CP% (2023 & 2024) applied to the baseline
- The Medical School, Residences, Foundation Programme, SRMA, and Facilities budget within their applicable business models and applying the agreed salary increases as resolved. The impact of re-integration of approved previously outsourced service workers has increased the Residences and Facilities baselines. The full earmarked grant for the Foundation Programme is ring fenced and applied. The effect of phased in new student accommodation is included in the assumptions.
- Council has approved staffing structures through the Organisational Redesign process. The implementation of these structures is dependent on affordability within the 65% benchmark of Council, increased to 66% in the medium term (2022 - 2024) as to fund mission critical posts and advance Vision 2030

6. Supplies & Services

The following activities fall under supplies & services which have their own assumptions:

- SRMA - 2022 budget zero based with inflation adjustments for 2023 & 2024
- Operations & Overheads - Controllable Operating costs were considered within the context of the developing a "new normal". MANCO members had the flexibility to nuance the impact between cost line items to achieve the overall required resources for their portfolio. 2022 budget used as baseline (overheads - zero base, academic project (increased by inflation + planned enrolment growth adjusted to 0.50%, operations - baselines increased by CPI. Average increase of inflation +1% for 2023 & 2024 on adjusted baseline.
- Building Maintenance Projects -funded from earmarked reserves for 2022 to 2024
- International Office - same directives as central budget
- Facilities - 2022 zero based budget used as baseline taking the experience of 2021 into account, increasing to 90% of pre-COVID 19 baseline for 2023, increasing by 10% thereon for 2024

- Residences – zero based budget 2022 increase by 5.5% 2023 to 2024 taking cost of operations increase for phased in new beds as well as cost abandonment factor due to new support business models
- Foundation Programme – total earmarked allocation (DHET earmarked grant) + central allocation (Council) minus salary budget
- Bursaries and financial aid allocation increased baseline in 2022 excluding GAP funding phase out managed by institutions. Baseline increased in 2023 – 2024 at same rate as tuition fee increase plus growth

7. Provisions

- Depreciation – 2022 to 2024 budget based on current fixed asset register adjusted for CAPEX movement
- Accumulated leave – 2022 to 2024 budget based on leave balance estimates per staff adjusted by the estimated salary adjustments

8. Finance Costs

- Forecasts made according to existing and forecast amortization tables taking into account new student accommodation loan funding

9. Other operations

- Post-retirement benefits – 2022 budget based on latest actuary evaluations. 2023 & 2024 adjusted down by 4% to make provision for a phase out

10. Investment Income

- Investment income based on cash flow / investment forecasts and estimates

11. Specific Provisions

- Efficiency funding escalation provision – based on latest estimates available
- Transfer to reserves are budgeted for to build up earmarked reserve funds

12. Non-recurrent income & expenditure represent earmarked funding for capital projects. This budget is based on approved allocations by the DHET (revenue) and the cash flow projections on how the funds will be spent during 2022 and the following years (expenditure). As funds will not necessarily be spent in the year received/ funded/ budgeted, there needs to be transfers from previous years. This budget also includes other non-recurrent project expenditure on deferred maintenance and new capital projects funded from reserves.

13. Transfer from reserves reflect the funding of projects from reserves. For 2022 it includes a COVID-19 Contingency Reserve

(R10 m)

- 14. Non-council funded income and expenditure** represent activities that include research, engagement, projects etc. that are controlled via funds. It is assumed that all revenue generated is expensed

SECTION G: BUDGET 2022

NELSON MANDELA UNIVERSITY CONSOLIDATED INCOME STATEMENT

	2021	2022	2023	2024
	Forecast	Forecasted Budget	Forecasted Budget	Forecasted Budget
INCOME	2 283 621 898	2 392 751 634	2 569 206 368	2 701 656 028
SUBSIDY	1 299 686 840	1 299 688 839	1 341 639 659	1 393 366 859
FEES	928 311 298	1 036 267 202	1 139 729 517	1 212 573 135
Teaching	821 918 972	884 210 905	938 974 065	998 686 807
Residences	106 392 326	152 056 297	200 755 452	213 886 328
OTHER INCOME	55 623 759	56 795 592	87 837 192	95 716 035
EXPENDITURE	2 294 116 701	2 415 753 762	2 576 029 532	2 708 149 850
STRATEGIC ALLOCATIONS	78 136 262	70 901 030	70 901 030	70 901 030
SALARIES	1 445 019 279	1 536 407 316	1 616 855 743	1 704 395 667
SUPPLIES AND SERVICES	642 344 779	658 283 508	722 726 037	765 625 909
PROVISIONS	103 207 808	107 459 133	109 936 287	112 434 913
Depreciation	93 574 551	96 855 704	98 855 704	100 855 704
Accumulative Leave	9 633 257	10 603 429	11 080 583	11 579 209
FINANCE COSTS	8 078 573	26 328 526	39 891 155	39 701 822
OTHER OPERATIONS	17 330 000	16 374 250	15 719 280	15 090 509
Post-retirement benefits	17 330 000	16 374 250	15 719 280	15 090 509
SURPLUS/(DEFICIT) from OPERATIONS	(10 494 804)	(23 002 128)	(6 823 164)	(6 493 822)

SECTION G: BUDGET 2022 - 2024

NELSON MANDELA UNIVERSITY CONSOLIDATED INCOME STATEMENT

	2021	2022	2023	2024
	Forecast	Forecasted Budget	Forecasted Budget	Forecasted Budget
SURPLUS/(DEFICIT) from OPERATIONS C/F	(10 494 804)	(23 002 128)	(6 823 164)	(6 493 822)
INVESTMENT INCOME	130 989 904	138 438 998	182 972 494	187 404 729
LESS : SPECIFIC PROVISIONS	82 886 288	72 919 292	101 381 166	100 738 254
Escalation - Efficiency Funded Projects	17 886 288	7 919 292	6 381 166	5 738 254
Transfer to reserves	65 000 000	65 000 000	95 000 000	95 000 000
SURPLUS/(DEFICIT) from OPERATIONS & INVESTMENT INCOME	37 608 812	42 517 578	74 768 164	80 172 653
NON RECURRENT INCOME	7 727 870	-	-	-
DHET / Donor Grants - Efficiency funding	7 727 870	-	-	-
NON RECURRENT EXPENDITURE	770 460 341	347 713 699	95 000 000	85 000 000
Deferred maintenance / projects funded from reserves	410 817 924	151 213 699	95 000 000	85 000 000
Efficiency Funding	359 642 417	196 500 000	-	-
TRANSFER FROM EFFICIENCY FUNDED RESERVES	356 658 825	196 500 000	65 000 000	65 000 000
TRANSFER FROM RESERVES	406 073 646	151 213 699	30 000 000	20 000 000
		-		
SURPLUS/(DEFICIT) (COUNCIL FUNDS)	37 608 812	42 517 578	74 768 164	80 172 653
NON COUNCIL FUNDED SURPLUS / (DEFICIT)	-	-	-	-
Income	380 721 789	450 076 420	472 580 241	496 209 253
Expenditure	380 721 789	450 076 420	472 580 241	496 209 253
		-		
SURPLUS/(DEFICIT) (ALL FUNDS)	37 608 812	42 517 578	74 768 164	80 172 653

SECTION H: CASH FLOW PROJECTIONS 2022 - 2024

Cash Flow projections of revenue and expenditure for year 2022 - 2024 (3 years)

	2022	2023	2024
Opening Bank balance	90 306 078	90 000 000	90 000 000
Income (A)	3 760 697 971	3 867 093 067	3 988 586 958
Subsidy	1 318 082 000	1 318 082 000	1 318 082 000
Tuition & residence fees	1 476 969 230	1 506 508 614	1 581 834 045
Fee shortfall subsidy			
Earmarked grants			
Investment Income	138 438 998	182 972 494	187 404 729
Other Income	827 207 743	859 529 959	901 266 184
Expenses (B)	3 654 397 422	3 764 547 359	3 887 775 641
Staff Costs	1 571 099 704	1 649 654 689	1 732 137 423
Other Expenses (operational & capital)	2 083 297 719	2 114 892 670	2 155 638 218
Inflow/(Outflow) (A-B)	106 300 549	102 545 708	100 811 317
Bank Balance before transfer from earmarked investments	196 606 627	192 545 708	190 811 316
Transfer from/(to) earmarked investments	-106 606 627	-102 545 708	-100 811 316
Closing Bank balance	90 000 000	90 000 000	90 000 000

SECTION I: INSTITUTIONAL RISKS AND MITIGATING STRATEGIES

The Vision 2030 strategic framework has been used as a point of departure in identifying the key institutional risks for the University.

Theme (Vision 2030 strategic focus areas and enablers)	Risk	Mitigation strategies
Pursue impactful research and innovation to promote sustainable futures	Major disruptions leading to an inability to conduct academic activities e.g.: infectious diseases hindering research activities (Access to laboratories and campus, access to campus facilities 24/7)	<ul style="list-style-type: none"> • Infrastructure plan to address access to buildings for learning, teaching and research activities. • Student Device Initiative Project. • Student connectivity to enable participation in learning, teaching and research through monthly data allocation. • Integrated Digital Strategy.
	Declining postgraduate and international student enrolments	<ul style="list-style-type: none"> • Establishment of an Enrolment Management Committee to monitor progress of student admissions and registrations. • A year-long postgraduate recruitment campaign has been developed as well as a recruitment strategy.
	Research funding and infrastructure for postgraduate support. Sub: Risk: <ul style="list-style-type: none"> • Continuity of funding from existing funders. • Funding for postgraduate students • PG scholarships and bursaries for financially needy, academically deserving students • Tracking of postgraduate students in system - from application to graduation 	<ul style="list-style-type: none"> • Increased drive to attract external grants and increase postgraduate scholarship funding. • Ongoing data analytics to monitor the academic progress, performance, and throughput of postgraduate students. • Research infrastructure and posts to be reviewed. • Employment of professors who can supervise postgraduate studies.

Theme (Vision 2030 strategic focus areas and enablers)	Risk	Mitigation strategies
	Funding for postgraduate students Sub risks: <ul style="list-style-type: none"> Funding for NSFAS students to transition from Undergraduate to Postgraduate studies 	<ul style="list-style-type: none"> Development and operationalisation of Research and Innovation Strategy and Internationalisation Strategy Increase budgetary allocation for Council-funded postgraduate bursaries. Investigate funding options for NSFAS students to transition from under- to postgraduate studies. Increase SETA funding for undergraduate and post graduate students. Revised policy on the Postgraduate Research Scholarship.
Promote long-term sustainability through responsible resource mobilisation and stewardship	Impact of underperforming economy leading to funding constraints in government subsidies, grants, donations, and investments: Sub risks: <ul style="list-style-type: none"> Uncoordinated approach to external donors and resultant mixed messaging Negative impact on ability of “missing middle” students to pay fees 	<ul style="list-style-type: none"> Establishment of a Sustainability and Institutional Viability Task Team. Operationalisation of Strategic Resource Mobilisation Strategy. Annual Budget process and approval of V2030. Optimise subsidy funding through attractive Programme and Qualification Mix (PQM) and short learning programmes, flexible modes of delivery and improved graduate and research outputs.
Agile, digitalised systems, processes and infrastructure	Information security risks and cybersecurity. Sub risk: <ul style="list-style-type: none"> Disruption on infrastructure and operations 	<ul style="list-style-type: none"> University follows the direction of the DHET in respect of recommended fee increases for annual increases which are published in Nov/Dec of each year. Continuous monitoring of controls in order to safeguard against types of known attacks which will inform changes to the Cybersecurity roadmap and the Annual IT Strategy. Implementation of an EDR (Endpoint Detection and

Theme (Vision 2030 strategic focus areas and enablers)	Risk	Mitigation strategies
		<p>Response) solution on all servers.</p> <ul style="list-style-type: none"> • Review of firewall and related rules on an annual basis hardware and firmware updated will form part of the patch management strategy. • Vulnerability checker for in house developed applications. • Server Baseline Standard. • Additional Cyber Security specialist employed. • Cyber Security Budget for incident handling. • Review the BCP for system restoration order. • Investigation and implementation of a Multi Factor Authentication system. • A Patch and Vulnerability policy framework. • Vulnerability and abandonware monthly scans. • Creation of a service account catalogue. • Implementation of password controls on all service accounts with administrator privileges. • Investigate Security Operation Centre (SOC) service to monitor and respond to Cyber Security events that occur on University platforms. • Phishing-as-a-Service (Phishing campaign for awareness) with training. • Reviewal of code within our environment and implement parameterised queries to reduce the risk of SQL injections into our applications. • Procurement of 3rd Party Patch Management.

Theme (Vision 2030 strategic focus areas and enablers)	Risk	Mitigation strategies
Agile, digitalised systems, processes and infrastructure	Academic integrity and reputational risks due to student dishonesty.	<ul style="list-style-type: none"> • Assessment Policy • Revision of Academic Integrity Policy. • Protocols for conducting online assessments. • Training on alternative assessment activities where it is less likely that students can be dishonest. • Online invigilation's for some assessments and consideration of an Invigilator app. • University Code of Ethical Behaviour. • Focused session with academic leadership on integrity in assessment. • Research into these types of incidents is being conducted and a range of interventions will be considered and implemented.
	Water scarcity and the looming Day Zero for the Nelson Mandela Metro. Sub risk: <ul style="list-style-type: none"> • Impact on university activity. • Fire • Water infrastructure • Reputational risks 	<ul style="list-style-type: none"> • Water Emergency Task Team established to liaise internally and with external stakeholders. • Various Day Zero Scenarios and associated plans have been developed to minimise impact on university activities.
High-performing, diverse, and talented staff	Deficiencies in deliberate and structured workforce strategies	Draft Integrated Talent Management strategy has been developed and is in the process of consultation prior to final approval.
	Reputational risks and/or the ability to sustain operations due to a loss of key individuals arising from poor management of staff and student wellness issues.	<ul style="list-style-type: none"> • An Employee assistance programme has been implemented which is managed through an outsourced service provider. • Campus Occupational Health Office.

Theme (Vision 2030 strategic focus areas and enablers)	Risk	Mitigation strategies
		<ul style="list-style-type: none"> • Sexual Harassment Policy to address cases of sexual harassment. • Student Counselling and Wellness Programmes. • Higher Health Call Line. • A reference group has been established to address growing trends relating to student and staff wellness. • Draft Remote working policy and charter. • The Human Resources division, in collaboration with the University's Engagement and Transformation portfolio, have developed a burnout and resilience survey. The results of the survey will be used to inform key health and wellness interventions and lead an overall productive workforce.

CONCLUSION

It is increasingly clear that the global COVID-19 pandemic is far from over, placing immense pressure not only on our students, staff and external communities. The University cannot ignore the devastation visited on those who are most vulnerable and least equipped to survive the impact of the pandemic and this makes our Vision 2030 strategic intentions even more pressing as we seek to contribute to the co-creation of a more socially equitable and sustainable future for all. The University will strive to ensure that its core missions of learning, teaching, research, innovation and engagement promote social justice, equality, inclusive economic growth and sustainability. To achieve this, wide-ranging and multi-dimensional strategic interventions will be implemented to fulfil this mandate by devoting attention to enhancing student access to a broad range of life-changing educational opportunities in alignment with our mission as a comprehensive university. Mandela University will also devote attention to generating pioneering research and innovation and deepening transformative engagement in the service of society. We continue to be inspired by the creativity, agility and grit shown by our staff and students under very trying circumstances and we also express our gratitude to the Nelson Mandela University Council members for their judicious stewardship and unwavering support as we collectively transition towards 2022.