



National  
Research  
Foundation

# VISION 2030

**NRF VISION 2030:**  
**Research for a better society**  
COMPLETE DOCUMENT



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# I. ACRONYMS

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DHET	Department of Higher Education and Training
DSI	Department of Science and Innovation
FAIR	Findable, Accessible, Interoperable, and Reusable
NDP	National Development Plan, Vision 2030
NRF	National Research Foundation
OECD	Organisation for Economic Co-operation and Development
SDG	Sustainable Development Goals
STISA	Science, Technology and Innovation Strategy for Africa, 2024
UN	United Nations

# II. EXECUTIVE SUMMARY

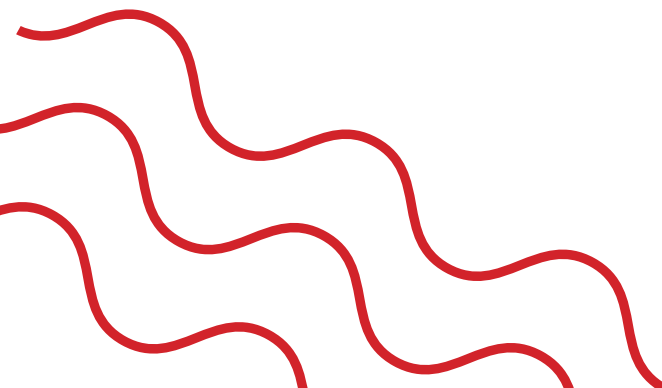
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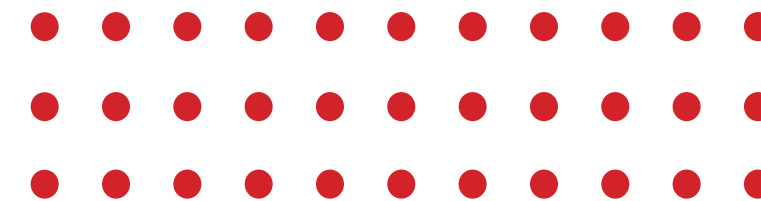
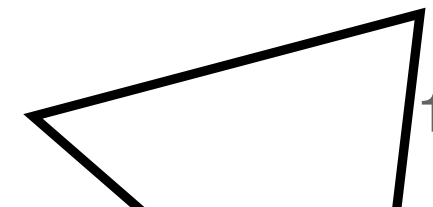
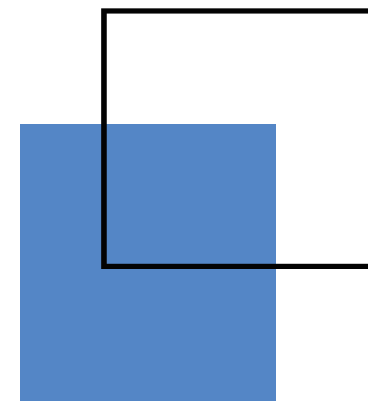
NRF Vision 2030 articulates the type of organisation that the National Research Foundation (NRF) will strive to be within the next ten years, together with the contribution it plans to make to national development and the knowledge enterprise.

The aim of the NRF over the next decade is to enable, initiate, facilitate and perform excellent research with direct and indirect impact, whether immediate or long-term, that extends the frontiers of knowledge and addresses national challenges; to have a transformative effect on the national research enterprise and the relationship between science and society; to shape, influence and impact the national research system; and to establish itself as a thought leader and source of knowledge within the science sector.

Vision 2030 emphasises the organisation’s support across all knowledge fields and disciplines of science, with an understanding that science is interpreted as inclusive of ‘any system of knowledge attained by verifiable means and the organised body of knowledge humans have gained by research’. Vision 2030 thus advances a balanced approach towards support for both curiosity-driven and mission-led research, both of which have potential for societal and knowledge impact. With regard to the national and international context, Vision 2030 provides a conceptual and organising framework for the organisation. The conceptual framework is developed around four key inseparable and inter-dependent guiding lights:



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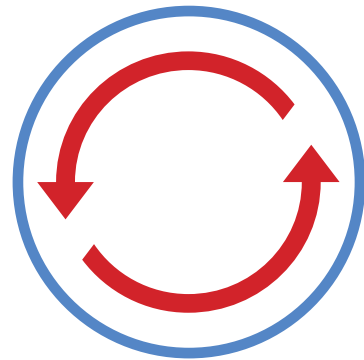
**Transformation**



**Excellence**



**Impact**



**Sustainability**

The focus on transformation of the knowledge enterprise is retained as a key priority. The NRF recognises the need to accelerate the transformation of the knowledge enterprise in order to serve South Africa. Transformation of the NRF itself is also a key priority.

Impact, in its various dimensions, is about effecting change. For the NRF it is about the positive impact that research has on society, the economy, the environment, and on knowledge advancement. Impact can

be direct or indirect, immediate or long-term. Through recognising and advancing impact, the NRF will demonstrate its contribution to national development, which is the key focus of its mandate.

Research excellence encompasses scientific merit, ethics, originality, relevance, purposivity, methodological rigour and impact in all its dimensions. As the primary national funder of research, researchers and postgraduate students, the NRF uses excellence as a principle to enhance the global competitiveness of the South African science system. The NRF also strives to provide excellent service to all its stakeholders, with the aim of enhancing the national knowledge enterprise.

Sustainability relates to meeting current needs without compromising the future, and is applied to the economic, the social and the environmental contexts. Sustainability is key for the NRF in terms of its operations, resources, and the future of the South African knowledge enterprise. The NRF subscribes to the principles of sustainable development and promotes environmental security.

The four guiding lights underlie and inform our organising framework, which is structured in terms of six pillars of the knowledge enterprise:

- ✓ People
- ✓ The research enterprise
- ✓ Research infrastructure
- ✓ The relationship between science and society
- ✓ The organisation we want to be
- ✓ Resourcing our mandate

Given the mandate of the NRF, the knowledge enterprise is at the centre of the organising framework. Everything the NRF does, whether in the area of people, research, infrastructure or engaged science, is done in order to advance the knowledge enterprise for the benefit of society. Therefore, the NRF has determined key ambitions in each area of the knowledge enterprise for the next decade that will support, promote and advance the South African knowledge enterprise.



In terms of people or human capacity development, the NRF aims to ensure an excellent, transformed and sustainable South African cohort of researchers and technical expertise. The organisation will strategically invest its resources across the researcher pipeline and will partner and collaborate with relevant organisations nationally and internationally. Our ambitions are to develop a transformed knowledge workforce with a greater diversity of people and ideas to lead the knowledge enterprise; to develop a transformed, excellent cohort of instrumentation scientists and technicians; and to focus on excellence and societal impact to advance the international competitiveness of the knowledge workforce.

In the research enterprise, the NRF aspires towards a transformed research system that advances national development in a global context. The organisation is committed to the democratisation of knowledge through the transparent sharing of information across social boundaries, and will sustainably invest in strategic areas of national relevance, priority or advantage. The key intentions over the next decade are to enhance the impact of the research enterprise through an NRF Research Agenda; and to establish the NRF as a trusted source of knowledge and a thought leader within the research enterprise.

The NRF provides access to a range of research infrastructure platforms, both locally and internationally, and hosts a number of National Research Facilities. It plays a central role in ensuring that researchers have access to unique research equipment, infrastructure, materials, capabilities, locations and information to conduct their research and in making decisions about national infrastructure needs. Our priorities for the next decade are to advance the adoption of a national lens approach to research infrastructure support and platform provision, consistent with the research agenda; to ensure knowledge domain-balance in research infrastructure provision; and to advance a platform approach to research infrastructure provision.

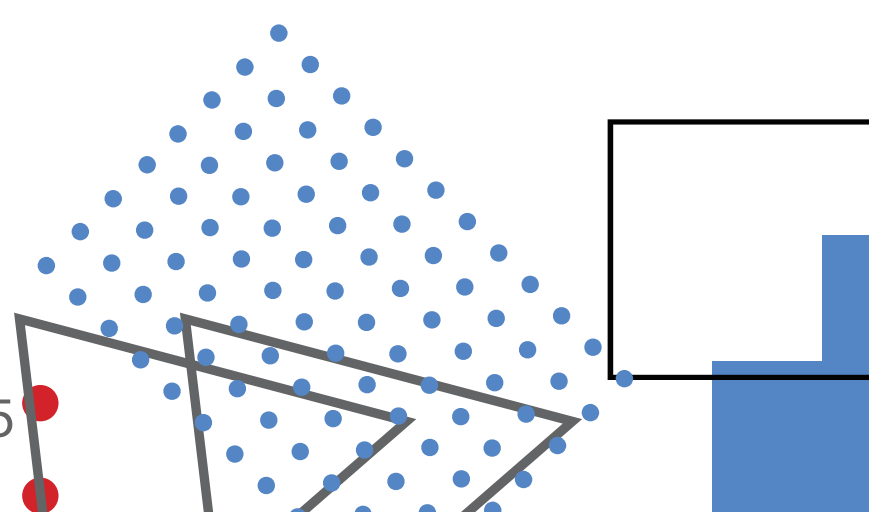
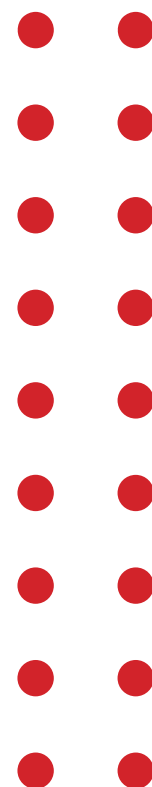
The NRF recognises the importance of a scientifically literate and critically engaged society as an essential requirement of the transition towards a knowledge economy. We aim to transform the relationship between science and society over the next decade by creating a fit-for-purpose organisation that leads the science engagement mandate across the science sector; by embedding engaged research within the knowledge enterprise; and by ensuring that we are networked as a significant player in the international science engagement and impact discourse.

No organisational strategy, however well-crafted, can be delivered to true effect without employees who understand it, own it, believe in it, and are motivated and capacitated to deliver on it. For this reason,



organisational culture is key. To ensure that the NRF operates efficiently and optimally, increasingly using technology to enhance business processes and excellent service delivery, the NRF will advance a transformed, coherent, learning organisation that strives for excellence through its lived organisational culture, referred to as ONE NRF; position itself to impact, shape and influence all aspects of the research and knowledge enterprise; and will make maximum use of new and emerging technologies to enhance its capacity to deliver on its mandate.

Financial resources, for the NRF and for the knowledge enterprise, are essential for the realisation of Vision 2030. For this reason, the organisation will work towards a predictable and flexible resourcing model to ensure better strategic planning and resource allocation; and will ensure that funds are invested for maximum impact. The organisation will leverage additionality through strategic partnerships. In addition, the NRF will continue to practice good governance and efficiency, report on and show accountability for resource utilisation, and demonstrate the societal and knowledge impact of its investment.



# 1. INTRODUCTION: Positioning the NRF for 2030

The National Research Foundation is at a critical juncture in its history, with 2019 marking twenty years of the organisation's existence and twenty-five years of South Africa's democracy. During the year, amendments to the NRF Act and mandate came into effect, and a new Ministry of Higher Education, Science and Technology was established. These milestones, and local and international developments, offer an opportune time to reflect and reimagine the future of the NRF.

Vision 2030 positions the NRF to advance societal and knowledge impact in order to contribute to national development and to fundamental societal transformation. Central to this transformation agenda is the creation of a knowledge economy where the knowledge enterprise is responsive to societal needs and challenges; is aligned to the needs of the economy; and is engaged with society. In order to achieve its Vision, the NRF will direct funding towards areas of priority and advantage, based on the principles of equity (race, gender, disability, age and social class) and excellence.

The NRF is situated within global and national contexts which influence the organisation's priorities and activities. Globally, it is connected to a network of science granting councils and knowledge organisations. The NRF is thus aware of international developments in the science sector, and embraces the developments regarding research excellence and impact for societal development. This global context includes the science and technology strategic frameworks and priorities identified and being pursued on the African continent. The NRF's understanding of research and science as a global enterprise means that internationalisation of the South African knowledge enterprise is an essential strategic intent.

Nationally, the NRF is a vital component of the knowledge and research enterprise. It has the unique

position of being the only public entity mandated to advance, support and promote research in all areas of science, including indigenous knowledge. Its mandate is complementary to that of other public entities and government departments, and as a result partnerships and cooperation underpin an effective delivery model. It is the principal organisation responsible for promoting the national research enterprise and it is the primary public funder of postgraduate students and researchers and the primary provider of research infrastructure in the country.

The NRF intends to continue investing in scientific research in support of the government's priorities as reflected in the National Development Plan: Vision 2030 (NDP) and a number of white papers, policies and strategies that shape the strategic direction for the national science and research system. In the international environment, it advances the African Union's Vision 2063 and Science, Technology and Innovation Strategy for Africa (STISA) 2024 as well as the United Nations (UN) Sustainable Development Goals (SDGs). The NRF responds to and operates under its recently-amended mandate.

There is general consensus among policy makers that a well-resourced, robust and competitive science system is a fundamental prerequisite for long-term, sustainable, social, economic, and cultural development. Vision 2030 is founded on this understanding and on the NRF's desire to contribute to national development through engaged research with impact produced by a transformed research workforce. Without a sustainable and well-resourced knowledge enterprise, it will not be able to continue to bring about benefits for society, the economy and the environment. Vision 2030 positions the NRF as an enabler, facilitator, initiator, performer and strategic partner to influence policy directions that maximise the ability of the science sector to address South Africa's socio-economic challenges.

The digital revolution has introduced new concepts with respect to the acquisition, storage and communication of data, information and knowledge. Rapidly evolving technologies have had an unprecedented impact on human interactions. In the research environment, data-intensive science, supported by emerging technologies like artificial intelligence and machine learning, have provided new opportunities. Open Science, which aims to democratise knowledge and enhance the impact of and investment in research through collaboration, sharing and transparency at all stages of the research value chain, is based on a social compact. In this regard, the technology-enabled sharing of research data and information with fellow researchers, governments, policy makers and ordinary citizens as knowledge partners, increases the effectiveness, societal legitimacy, and thus potential impact, of research.

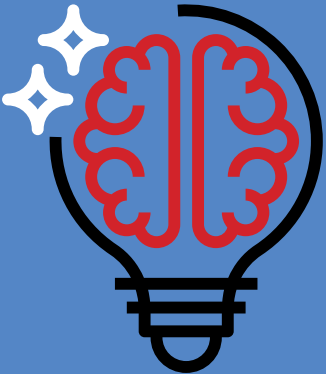


- Vision 2030 recognises the central role of open collaboration through multi-, inter- and intra-disciplinary research as well as through public participation in research through science engagement. These new paradigms will play a pivotal role in responding to complex problems in an ever increasing complex world. In light of the above, the NRF will, over the next decade, position itself as:

A transformed and agile knowledge organisation that shapes and influences all aspects of the knowledge enterprise with unwavering commitment to

**TRANSFORMATION,  
IMPACT,  
EXCELLENCE  
AND SUSTAINABILITY.**

## 2. CONCEPTUAL FRAMEWORK



In line with the NRF’s position within the knowledge enterprise and its amended mandate, Vision 2030 is based on four guiding lights, namely:



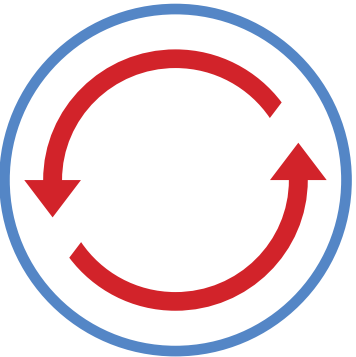
Transformation



Excellence



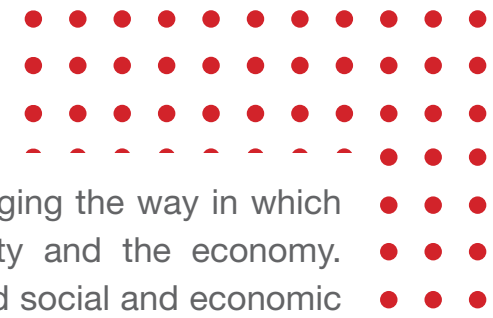
Impact



Sustainability

These four concepts are inseparable and inter-dependent. They serve as lenses to inform the organisation's decisions and priorities over the next decade. Together they form a coherent conceptual framework for Vision 2030, envisaging a mutually beneficial relationship between the knowledge enterprise and society.

A focus on the societal and knowledge impact of research will create a knowledge enterprise that is responsive to national development. Using excellent scientific research to address societal challenges, and engaging society with science, will transform the nature of the relationship between science and society. This is coupled with the ongoing focus on a holistic approach to transformation and sustainability to enhance the ability of the NRF and the science system as a whole to contribute to the realisation of the goals of the National Development Plan (NDP).



Part of transforming the knowledge enterprise is changing the way in which research and knowledge production relate to society and the economy. Knowledge and research can be used to support broad social and economic development, encourage critical discourse, and develop responsible and critically engaged citizens. Developing a knowledge economy, where societal development is based on knowledge production, is part of the national transformation agenda.

The transformation agenda has been a key priority for the NRF over the last twenty years, and remains a priority for the next decade. The organisation recognises the need to accelerate the transformation of the knowledge enterprise. Ongoing challenges include equity of access and success for postgraduate students; the demography of the researcher cohort (race, gender, disability and social class); alignment between the knowledge enterprise and the needs of the economy; responsiveness to societal needs and challenges; and the development of a critically engaged civil society. For this reason, and recognising the strides made and the stubborn persistence of historical disadvantage, the NRF recently adopted a new Transformation Framework.

According to this framework, a transformed and transforming NRF is an inclusive and diverse organisation that supports and promotes the simultaneous eradication of all aspects of unfair discrimination recognises and respects diverse cultures and knowledge systems and supports a research and higher education sector that gives full expression to opportunities for all, in line with the ambitions of national education, science and technology policy. The NRF will, therefore, actively drive transformation in four main areas: the equity profiles of the South African research workforce; the knowledge enterprise; the relationship between science and society; and the building of a diverse and fully inclusive learning organisation.

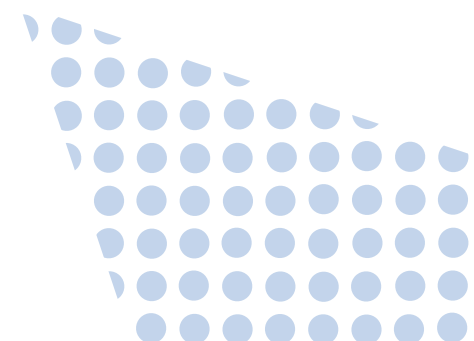
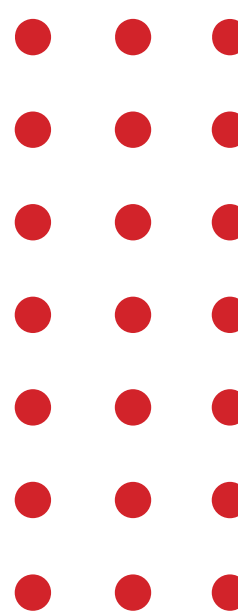


## 2.1 Transformation: The imperative for a better future

### Transformation

Transformation is essentially about fundamental change in form, nature or function. It is about structural or internal change that modifies the nature of a system or being. In the modern South African context, transformation is understood to be a process of transition from the legacies of the apartheid past, with its ideologies and discriminatory practices, into a new democratic era with new or modified practices, institutions, values and beliefs, which have societal legitimacy.

The higher education sub-sector, and science, technology and innovation sector play a key role in the social, cultural and economic development of our country, and therefore, a key role in transforming the foundations of society. Education White Paper 3 states that 'the challenge is to redress past inequalities and to transform the higher education system to serve a new social order, to meet pressing national needs, and to respond to new realities and opportunities. It must lay the foundations for the development of a learning society which can stimulate, direct and mobilise the creative and intellectual energies of all the people towards meeting the challenge of reconstruction and development'.







## Impact

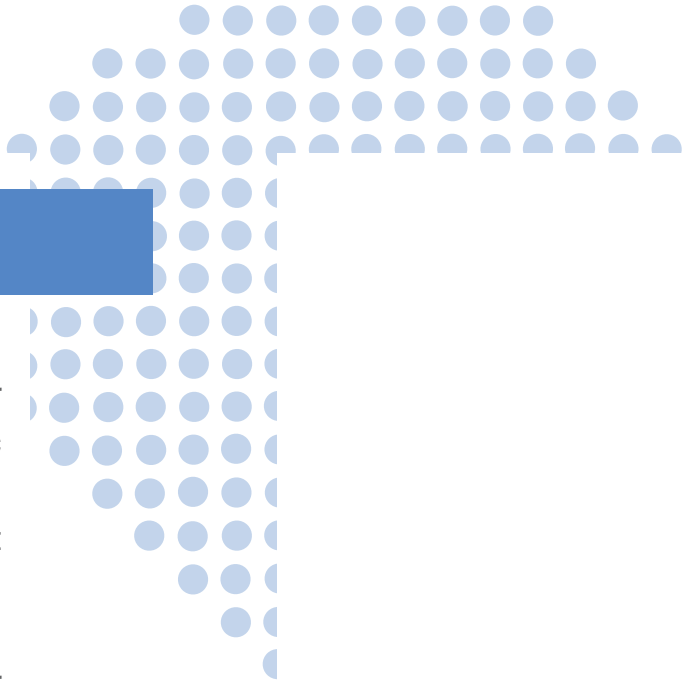
### 2.2 Impact: A better society through knowledge

Impact, in its various dimensions, is about having influence or effect for change. The NRF subscribes to the views of the Organisation for Economic Co-operation and Development (OECD), which defines impact as ‘Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended’.

Within the knowledge enterprise, impact has come to be defined as either ‘knowledge or academic impact’ or ‘research impact’. Knowledge impact, which is a well-established marker for research evaluation, is about the ‘demonstrable contribution that excellent research makes to academic advances, across and within disciplines, including significant advances in understanding, methods, theory and application’.

Research impact, also called societal impact, which has been added to the evaluation of research more recently, is about the ‘demonstrable contribution that excellent research makes to society and the economy. Economic and societal impacts embrace all the extremely diverse ways in which research-related knowledge and skills benefit individuals, organisations and nations’. The societal impact of research includes impact in the economic, social and environmental realms. Examples include environmental security, impact on policy development, technological advancements and innovations. In brief, it is about the impact of research outside of academia and about the direct or indirect causal relationship between knowledge production and improvement in the quality of people’s lives.

The inclusion of research impact as an additional key parameter of research evaluation emerged out of the expectation of a positive return on government’s investment in research. Research impact has been adopted in national



research evaluation exercises in a number of countries. The NRF, through Vision 2030, will strengthen policies, instruments and practices to identify and support research that generates societal impact to maximise the contribution of research to society and the economy, while maintaining a broad knowledge base through a balanced approach in support of different types of research.

The transformative effect of promoting and rewarding research with impact is clear. First, investment in excellent research that advances the frontiers of knowledge across and within disciplines has revolutionised the life-patterns of humanity over the centuries. There are many examples where the research, at the time of being undertaken, did not have direct applicability but led to significant impact on society in later years. Secondly, excellent mission-led research, with more immediate societal impact, also has the benefit of it being more likely to be reflective of the needs of society and the economy. In addition, mission-led research projects are often collaborative endeavours, with the potential to include civil society, policy-makers and the private sector, leading to the added benefit of transforming the relationship between science and society.



## Excellence

### 2.3 Excellence: The foundation that sets the standard

Excellence is generally understood as a comparative judgement of an endeavour, rather than a substantive one. To be excellent means ‘to excel’, in other words to be judged better than others in terms of predefined criteria. In general, excellence can be ascribed to a person, an organisation, a product, or the performance of an activity. In the global knowledge and science system, the judgement of excellence is often done in terms of either a comparative evaluation or rating against benchmarks, process norms, criteria, and goals, or a sector-wide ranking.

For the NRF, excellence is a highly relevant and extremely important concept.

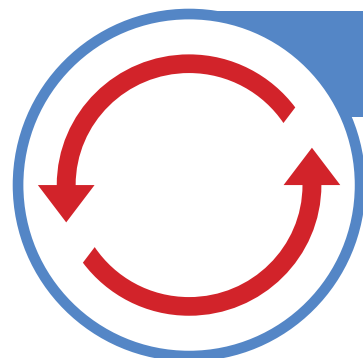




As the primary national funder of research, researchers and postgraduate students, the organisation uses excellence as a principle to enhance the global competitiveness of the South African science system. This excellence is also expressed through investing in quality research, capable researchers and postgraduate students. Excellence and excellent service are also values of the NRF.

The concept of research excellence is open to a number of interpretations and context-specific definitions. It is internationally acknowledged that there is no fixed definition for 'research excellence', with continued debates around methods and discipline-specific criteria. More recently, the debate has extended beyond methodological quality to include 'fitness for purpose'. Emerging research excellence conceptual elements and criteria, which the NRF subscribes to, are scientific merit, ethics, originality, relevance, purposivity, methodological rigour and impact.

The NRF has well-developed and long-standing processes in place for evaluating researchers and research proposals (*ex-ante*) for funding purposes. In line with international best practice, the NRF makes use of peer-review based assessment and appraisals according to agreed criteria.

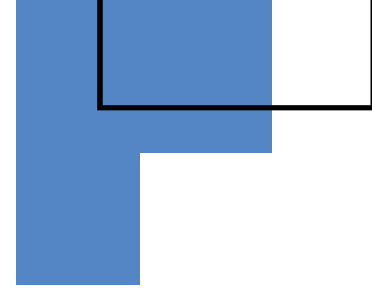


## Sustainability

### **Sustainability: Building a better tomorrow today**

The concept of sustainability is interpreted as meeting current needs without compromising the future. It can be applied to the economic, the social and the environmental. For the NRF, it is about ensuring the sustainability of internal operations, the external knowledge enterprise, and the national and global environment.

Internally, the NRF must ensure financial and operational sustainability. This



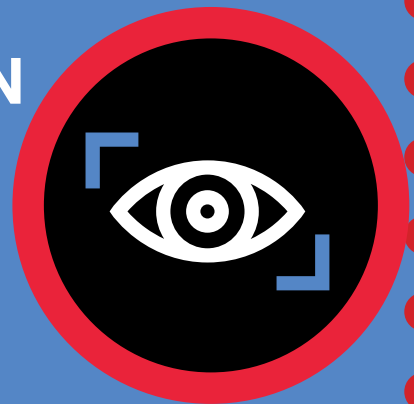
requires a predictable and suitable resourcing model that allows for autonomous decision-making regarding strategic investments to maximise impact. The organisation must ensure the sustainability of its various human capacity development interventions and that research infrastructure is maintained and renewed sustainably. In addition, the future of the NRF must be safeguarded through transformative succession planning; ongoing workforce planning and staff development; and retention initiatives that ensure a future cohort of highly capable and committed staff members. Finally, information and business systems and technology development appropriate for the twenty-first century are required to ensure the sustainability of the business of the organisation.

Externally, within the knowledge enterprise, growth must be balanced with the available operational and financial resources. For instance, growth in postgraduate enrolment must be balanced with undergraduate enrolment and must take cognisance of the available supervisory capacity and institutional infrastructure. Also, growth in the researcher cohort must be commensurate with the expectations of the country to become a knowledge-led economy.

Within the national and global context, sustainable development is about development that takes into account social, economic and environmental impact, recognising the importance of each and their inter-related nature. The South African NDP and the UN's SDGs focus on optimising social justice, economic development and environmental sustainability. They identify key challenges relating to the societal context, such as those of poverty, climate change, education and health. These require national or global action. The NRF subscribes to the pursuit of responsible knowledge production aimed at sustainable development for South Africa.

Effective implementation of Vision 2030 requires the financial and operational sustainability of the NRF to support the delivery on its mandate. Without sustainability and adequate resources, the sector will not be able to grow and continue to bring about benefits for society, the economy and the environment.

### 3. OUR VISION AND MISSION



Vision 2030 is centred on the organisation's ambition to shape, influence and impact the national research system; to create a clear causal relationship between research and national development; and to have a transformative effect on the national research enterprise and the relationship between science and society.

**The NRF's Vision 2030 is:**  
Research for a better society

The NRF's raison d'être is to enable and facilitate the contribution of knowledge and scientific research to national development.

**The NRF's mission is:**  
To enable and facilitate the contribution of knowledge and scientific research to national development.

### 4. VALUES



The NRF's shared values reflect the organisation's core ethics and principles. They are lived values that inspire employees and articulate the NRF's aspirations regarding workplace behaviour and institutional culture. The NRF's values reflect Vision 2030, the concepts of transformation, impact, excellence and the centrality of people in the knowledge enterprise.

- **People-centred:** People are our greatest asset and are thus nurtured. We invest in current and future researchers in order to create a transformed, excellent and sustainable research enterprise with impact. We invest in our employees in order to create a transformed, empowering, inclusive and diverse working environment, and to advance health and wellness in the work environment.
- **Ethics and integrity:** Integrity forms the basis of our business principles. As an organisation and individually we act with honesty and probity. We are consistent, fair and transparent in our actions and decisions.
- **Accountability:** We are accountable for the way in which we utilise public resources in pursuit of national development. We make commitments and are prepared to be judged against them. We are responsible for our actions.
- **Passion for excellence:** We recognise our obligation to society and to the research enterprise to deliver the highest standards in all areas of our mandate and to seek out and support excellence.
- **World-class service:** We are concerned about our stakeholders, their needs and their perceptions. We aspire to and are committed to provide exceptional service at all levels.
- **Respect:** We recognise the inherent worth of every human being, embrace our diversity, and treat everybody we encounter with dignity and respect. We respect the environment and all living creatures in our care, and promote sustainable development.

## 5. OUR VALUE PROPOSITION

### Our value proposition is as an:

Enabler, Facilitator, Initiator, and Performer

The value proposition of the NRF is that it enables, initiates, facilitates and performs excellent research with impact that seeks to extend the frontiers of knowledge and address national challenges. The organisation enables transformation, research, science engagement and human capacity development across the research system through its role as funder and promoter of research and provider of access to research infrastructures. The NRF facilitates research collaboration, knowledge sharing and engagement across and between society, government, business and research institutions. It initiates strategies, policies, advice and partnerships to achieve greater leverage to promote and develop the science sector and enhance its capacity to have a beneficial impact on society. The organisation invests in and performs cutting-edge, excellent research that is both curiosity-driven and mission-led. The NRF provides scientific and technical services to, and develops technology for, the knowledge enterprise and related industries and sectors of society.

## 6. SIX PILLARS of the Knowledge Enterprise

The conceptual framework is complemented by an organising framework that articulates the six areas in which the NRF aspires to make key changes in the knowledge enterprise over the next decade. The six pillars are discussed independently, but feed into the organisation's overarching mandate to support, develop and promote the national knowledge enterprise in order to contribute to national development. The knowledge enterprise is a complex configuration of interacting role-players working together to advance knowledge through verifiable means, and is inclusive of the organised body of knowledge and methodologies that humans have gained through previous research endeavours.

### The knowledge enterprise consists of four key components.

**First** is the people who undertake and support the research endeavour. These include postgraduate students, researchers and research support professionals.

**Second** is the research enterprise, referring to the complex configuration of interacting role-players, policies and strategies that work together to create, adapt and adopt knowledge in order to shift knowledge boundaries, and to positively impact society, the economy and the natural environment.

**Third** is the provision of research infrastructure, the tools researchers require to conduct their research.

**Fourth** is the relationship between science and society, which refers to society engaging with knowledge and to researchers and society interacting with each other during the research process.

To support the knowledge enterprise, the six pillars includes two key enablers – resourcing and an enabling and fit-for-purpose NRF. The knowledge enterprise cannot function effectively without the provision of resources and the NRF cannot function optimally, or support the knowledge enterprise effectively, if it is not appropriately structured and organised to be fit-for-purpose.

## 6.1 PEOPLE: Our greatest asset

People lie at the core of the research eco-system, as researchers or future researchers, as supervisors, as peer reviewers and as technical expertise to enable research and maintain research infrastructure. Without a transformed and excellent knowledge workforce, the knowledge enterprise will not be sustainable.

The NRF's ambition over the next decade is to ensure an excellent, transformed and sustainable South African cohort of researchers and technical expertise. The research workforce includes postgraduate students (the future researchers), early career researchers and established researchers. A shortage in any one of these categories will negatively affect the future academic pipeline and the sustainability of the knowledge enterprise. For this reason, the organisation will strategically invest its resources across the researcher pipeline, with a focus on excellence, transformation and retention within the knowledge enterprise. In order to achieve its human capacity development ambitions, the NRF will partner and collaborate with relevant organisations nationally and internationally, through a focused approach to strategic alliances and partnerships. Over the next decade, the NRF will focus on three key areas, namely:

### *Develop a transformed knowledge workforce, with a greater diversity of people and ideas to lead the knowledge enterprise*

The NRF recognises that in order to transform the South African research workforce, deliberate interventions are required to ensure a more diverse and expanded academic workforce. To address these challenges, and given the need to invest scarce resources in a directed manner to deliver the desired impact, NRF funding will target postgraduate students and postdoctoral fellows who intend to pursue an academic or research career and will develop and implement targeted interventions for early career researchers to develop into a future cohort of leading scholars.

Postgraduate funding allocations will focus on enhanced access, success and throughput and will be underpinned by the principles of equity, excellence, and prioritisation. Race, gender, disability, nationality and financial need will be considered in the allocation of postgraduate student funding. Bursary values will be competitive in order to attract and retain the best students, while promoting continuity and certainty of support for academically achieving students.

Together with current programmes that support early career and established researchers, the NRF will introduce a highly competitive, merit-based programme that offers long-term support to accelerate the development of exceptional early career researchers into leading researchers and scholars. In order to grow and diversify the national researcher base, the programme will focus on black or women early career researchers. The programme will increase international research exposure and embed engaged research.

Through strategic partnerships (national and international) the NRF will leverage opportunities to enhance retention within the academy; to increase the number of postdoctoral fellowship positions; and to enhance the opportunities for international exposure.

### *Develop a transformed excellent cohort of instrumentation scientists and technicians*

Specialised technical skills are required by the national knowledge enterprise to ensure optimal research capability and maximum utilisation of research infrastructure platforms. The organisation recognises the need for different technical skills and competencies in different disciplines. Highly-skilled technical professionals, such as instrumentation scientists, uniquely trained technicians, engineers, and data and information scientists are required to support research endeavours in different knowledge domains. The NRF will invest in developing a cohort of such skills.

### *Focus on excellence and societal impact to advance the international competitiveness of the knowledge workforce*

The NRF has developed a national system of evaluating research and researchers to promote excellence and international competitiveness. This has been effective in entrenching an excellence paradigm. The NRF is of the view that a transformed knowledge enterprise will deliver increased excellence, and will support the organisation's new focus on research with societal benefit. In implementing an impact agenda, the NRF will develop processes to promote and reward research with societal impact.

## 6.2 THE RESEARCH ENTERPRISE: Impacting society

In South Africa, there are differential levels of scientific excellence and research capacity, and potential across the sector that has not been fully developed. In this regard, the organisation recognises the disparity of access that has led to historical inequality. The NRF's ambition is to be positioned at the heart of the research enterprise to steer it towards responding to societal challenges and the need for systemic transformation. In this regard, the NRF aspires to a transformed research system that advances national development in a global context.

The NRF is committed to the democratisation of knowledge through the transparent sharing of information across disciplinary, domain and social boundaries and it will sustainably invest in strategic areas of national relevance, priority or advantage. In order to achieve its goals over the next decade, the NRF will focus on three strategic ambitions, namely:

### *The impact of the research enterprise will be enhanced through an NRF Research Agenda*

The NRF is responsible for shaping the national research enterprise across all domains of science. It is positioned to enable knowledge generation (through funding and policy) while safeguarding the foundations of the national science system. NRF Vision 2030 positions the organisation to make strategic decisions to ensure that funding is sustainable and is directed towards excellence, impact and transformation. For this reason, the organisation is developing a Research Agenda.

The Research Agenda of the NRF will integrate the organisation's investment in research support, research advancement, research promotion, and research capacity development. It will support the deliberate planning and directing of resources to create the necessary context to balance supply and demand research drivers.

The Research Agenda has a thematic approach and is anchored on the NDP and the SDGs, and takes cognisance of the African Union's Agenda 2063 and Science, Technology and Innovation Strategy for Africa, (STISA) 2024. When implementing the Research Agenda, the NRF will ensure continued support for the foundational disciplines and domains and a balance between mission-led and foundational, curiosity-driven research. Diversity, inclusion and excellence are fundamental principles which will be upheld.

### *The principles of Open Science will be advanced*

The world is currently in the midst of a digital revolution of critical significance. Technological transformation is permeating every facet of society, boosting productivity and efficiencies across boundaries, thus reshaping the world as we know it. This global transformation is being referred to as the Fourth Industrial Revolution. However, the phenomenon has breached the confines of industry and permeates general-purpose technologies.

A powerful new paradigm has emerged over the past decade. Open Science is supported by digital technologies and encompasses many movements including open data and open access to the data and information as a product of the research value chain. Open Science advocates for transparent and accessible knowledge that is shared and developed through new and collaborative approaches to the scientific process, based on cooperative work and the diffusing of knowledge through digital technologies.

In line with the philosophy of Open Science, the NRF will continue to honour the social compact to democratise knowledge and will encourage collaborative research that cuts across disciplinary, institutional and social boundaries.

### *The NRF will establish itself as a trusted source of knowledge and a thought leader within the research enterprise*

The NRF has at its disposal data and information on the science system. It is the ambition of the organisation to fully utilise this information to inform decision-making, both within the NRF and nationally. The organisation will establish itself as a trusted source of system intelligence, i.e. information and analysis on the national science system, and will ensure the availability of such information as necessary. In this way, the NRF will inform national debates and policy decisions.

The amended mandate enables the organisation to advise the Minister on all matters relating to our mandate. Over the next decade, the NRF will embrace this new role and seek to establish itself as a thought leader within the science sector. Through effective partnerships across the national landscape, and representing South Africa on international science bodies, the NRF will be well placed to inform and guide national science sector decision making and contribute to relevant global discourse.

### 6.3 RESEARCH INFRASTRUCTURE: Enabling excellent science

National research infrastructure platforms are multi-user physical or virtual research infrastructures used by researchers to conduct advanced scientific and technological research. They are strategic national resources, used to drive scientific excellence, discovery science, and international research collaboration, and to develop new technology and offer technical services. National research infrastructure platforms form the foundational building blocks for research development and innovation activities and facilitate collaboration and networking. They are centres for researcher training; for the translation of science for societal benefit; and for science engagement and engaged research.

The NRF currently provides access to a range of research infrastructure platforms locally and internationally, including hosting a number of National Research Facilities, which act as national platforms, and plays a central role in ensuring that researchers have access to unique research equipment, infrastructure, capabilities, materials, locations and information to conduct their research, whether within South Africa or through global partnerships. Within the context of the Research Agenda, the NRF will engage in strategic decision-making regarding what knowledge areas to support and what national research infrastructure platforms to establish. To realise this strategic role, the organisation has three aims for the next decade, namely:

#### ***Advance the adoption of a national lens approach for research infrastructure and platform provision consistent with the Research Agenda***

The South African Research Infrastructure Roadmap presents an opportunity for the NRF to work in partnership with the Department of Science and Innovation (DSI) and other knowledge sector partners to drive the adoption of a national lens for the conceptualisation, establishment and sustaining of national research infrastructure platforms. In this regard, the NRF will initiate a Strategic Advisory Committee to provide systemic analysis on the state of national research infrastructure provision.

#### ***Ensure knowledge domain balance in research infrastructure provision***

The NRF is aware that the current set of national research infrastructure platforms lack disciplinary and domain diversity. Over the next decade, the organisation will further develop the notion of national research infrastructure platforms to reflect the various infrastructural architectures – namely knowledge, physical, process and social infrastructures. This will extend the current conceptualisation from physical platforms to include, among others, data sets, repositories and archives, including inculcating the notion of museums and galleries and similar entities as research platforms. Different research fields require different types of research equipment and infrastructure. Given the historical focus on national research infrastructure platforms in the natural science, engineering and technology fields, the NRF will pursue the identification of strategic platforms in the humanities, social sciences and the arts. This will play a key role in transforming the role of infrastructure platforms and in enhancing the societal impact of research.

The NRF will partner with the government departments currently responsible for a range of institutions that could become national research infrastructure platforms, and through these partnerships, it will seek to enhance the role of these institutions within the knowledge enterprise.

#### ***Advance a platform approach to research infrastructure provision***

Over the next decade, the organisation will focus on a platform approach to infrastructure provision, meaning one that encourages and supports integration of, and connectivity between, the physical, process, systems, data and intellectual ‘capacities’ in cognate knowledge areas to underpin excellence and the sustainability of the South African knowledge enterprise. Central to this approach is the role of intellectual content and capacity, which is what gives substance and life to research infrastructure, in a manner that recognises nuances of scientific domains.

## 6.4 THE RELATIONSHIP BETWEEN SCIENCE AND SOCIETY: Building a better society

The NRF recognises the importance of a scientifically literate and critically engaged society as an essential requirement of the transition towards a knowledge economy. The organisation has played a pivotal role in fostering this relationship through an ever expanding and increasingly significant portfolio of science engagement activities and programmes. Recent policy developments emphasise the importance of a dynamic relationship between science and society for South Africa, and the NRF aims to bring about a paradigm shift in the way that research is created and used for the benefit of society.

The organisation's amended mandate embeds broader societal engagements with science in its core mission. NRF Vision 2030's inclusion of societal impact and mission-led research requires a closer alignment of knowledge production with the needs and demands of society. In the face of a growing global disbelief in science, political suspicion towards evidence-based policy making and growing concern with inequitable societies, it is no longer just a matter of science engagement in the sense of information flowing from knowledge producers to society. Instead, it is engaged research where there is interaction, for mutual benefit, and where society participates in knowledge production to identify societal challenges or policy needs, evaluate impact case studies, or gather data for research projects.

The NRF's vision is of a society in which knowledge is created, used, challenged, valued and shared by all, in the interest of addressing the needs and demands of society. It is a multifaceted model for the co-creation of knowledge, rather than a linear model of information flow. Realising such a vision will require an NRF-wide portfolio of science engagement that enhances research and promotes a positive contribution to society. This will be assisted by a deliberate strategic focus on positioning engaged research as a valued and esteemed practice; facilitating access to research and science engagement infrastructure; supporting the development of Science, Technology, Engineering and Mathematics education; building excellence in science engagement capacity and capability; and facilitating public-private partnerships in advancing science engagement.

In order to support the development of a scientifically literate and engaged society, the NRF aspires to three key developments over the next decade, namely:

### *Create a fit-for-purpose organisation that leads the science engagement mandate across the science sector*

The organisation is committed to a science engagement leadership and coordination role across the national science system. This function will include establishing and maintaining an innovative and cohesive portfolio of programmes (across the identified partners); managing the deployment and training of the necessary human resources and capabilities; and enabling more coordinated and cohesive systemic programme performance measurement, including the hosting of appropriate system-wide information and data on science engagement to inform evidence-based policy decision-making across the science and technology sector.

In order to fulfil this leadership and coordinating role effectively, the NRF will need to be fit-for-purpose and fully capacitated, with appropriate skills, knowledge and competencies, and appropriately funded.

### *Embed engaged research within the knowledge enterprise*

The NRF aims to entrench science engagement within its mandate of supporting, advancing and promoting new knowledge and knowledge workers. This will require an ongoing process of mainstreaming science engagement within the knowledge enterprise and enabling engaged scholarship to produce co-created, self-reflective knowledge and new formations of community.

Embedding science engagement will be enabled by the formulation of an NRF engaged research design and the identification of new and innovative public engagement research programmes to drive systemic change. The organisation, in collaboration with relevant academic partners, will establish a portfolio of science engagement training and skills development programmes to deliver quality engaged research. It will develop evaluation approaches that include the use of qualitative information and case studies.

Internally, the aim is a fully embedded science engagement culture within the NRF. Externally, the aim is to drive a clear, well-articulated national science engagement agenda in recognition of public engagement as a valuable and valued activity of research organisations and universities.



***The NRF will be networked as a significant player in the international engagement and impact discourse***

The impact of knowledge production on societal development through the pursuit of Responsible Research and Innovation practices, such as access to information, the democratisation of knowledge, engaging with citizens, and Open Science, remains a global endeavour. In order to contribute to the development of the science engagement discourse in South Africa and internationally, South Africa must become a significant participant in global initiatives. This is a role that the NRF aspires to fulfil for the nation. Through strategic partnerships it will ensure that it becomes a leader within the engagement community and one that implements best practice and influences and informs global discussions.

**6.5 THE ORGANISATION we want to be**

A supportive and high-performing organisational culture is essential to strategic delivery. Fit-for-purpose structure, business processes and technology systems are required to ensure that the NRF operates efficiently and optimally, and delivers excellent service. To achieve this, it will focus on three strategic areas, namely:

***Advance a transformed, coherent, learning organisation that strives for excellence through its lived organisational culture, referred to as ONE NRF***

In our ongoing quest to be an employer of choice, the NRF will continue to ensure that its staff complement is representative of the demographics of the country. In this regard, particular attention will be paid to the profile of the leadership cohort and professional staff with regard to race, gender and people living with disabilities. The organisation has identified this matter as being instrumental to its own sustainability and to ensuring that there is equity of opportunity for all.

Over the next decade, the NRF will enhance the organisation's high performance, service and institutional culture in which employees are capacitated, valued, motivated, engaged and productive. A co-created institutional culture is one of the key interventions of Vision 2030. The organisational values, which embody our aspirations, will inform this initiative, as will the ambition to be an environmentally sustainable organisation. The organisation will ensure a people management approach that is underpinned by best-practice and policies aimed at attracting and retaining diverse, excellent, engaged and productive employees.

The organisation aspires to be a learning organisation. In this regard, it will continuously assess the workplace skills required and will provide lifelong learning interventions to develop its employees, given the changing nature of work, in part due to the rapid introduction of technology. Succession planning and accelerated employee development will take into consideration equity targets and will ensure a level playing field for employee success.

An optimal operational structure is required to deliver NRF Vision 2030 and excellent service to diverse stakeholders. The organisation will conduct a comprehensive review of its structure, taking into account

strategic changes in Vision 2030, the rapidly changing world of work, and technology developments. Processes will be put in place to ensure optimal use of knowledge, expertise and capabilities across the organisation, irrespective of where such expertise lie within the organisation. The NRF will explore the most beneficial employee structure based on organisational needs, and will review and audit business processes for efficiency and optimal technological integration.

***Position itself to impact, shape and influence all aspects of the research and knowledge enterprise***

Externally, the NRF will position itself as a knowledge intense, agile organisation that shapes, influences and stimulates the national knowledge enterprise. As an organisation, it will show commitment to its values, transformation, impact, excellence and sustainability. The NRF will fulfil the role of critical influencer through coordinating, leading and collaborating with other knowledge entities. The organisation will undertake investigations to improve the understanding of the national science system, *inter alia* its resource requirements, the development of new knowledge fields, and how best to translate knowledge into immediate and long-term societal benefit.

***It will make maximum use of new and emerging technologies***

The NRF recognises Information Communications Technology as a business accelerator and as pivotal in the development of new methods of support, engagement and interaction internally and within stakeholder communities. The organisation embraces the need for foundational shifts in the Information Communications Technology strategy, processes, skills requirements and execution.

As a vibrant and innovative learning organisation, the NRF will continue to invest and build capacity and capability within the Information Communications Technology domain and support the adoption and adaption of innovative technologies across the technology spectrum. In this regard, the organisation will adopt innovative technologies to integrate business functions to improve efficiencies, data quality and service delivery and to fundamentally reduce the transactional costs of doing business. On the other end of the spectrum, big data and the need for openness and sharing of Findable, Accessible, Interoperable, and Reusable (referred to as FAIR) data requires that the NRF provide ‘best of breed’ data platforms and skills to manage and share data by leveraging emerging technologies such as artificial intelligence and machine learning.

**6.6 RESOURCING for impact**

NRF Vision 2030 can only be effectively implemented with the necessary financial resources, both for the NRF and for the knowledge enterprise as a whole. Implicit in this perspective is the notion that sustainable, predictable and dependable resourcing is required for a thriving knowledge enterprise.

It is critical that the NRF receives adequate resources that are provided with sufficient predictability to allow for long-term planning and sufficient flexibility to enable strategic decision-making for maximum impact. The organisation will continue to practice good governance and efficiency; report on and show accountability for resource utilisation; and demonstrate the societal and knowledge impact of its investment. To achieve this, the NRF will focus on three areas, namely:

***It will work towards a predictable and flexible resourcing model to ensure better strategic planning and resource allocation***

The NRF must ensure financial and operational sustainability, through a suitable resourcing model, to support its mandate and strategic outcomes. The reality is that the majority of the funding allocated to the organisation from government is already earmarked.

The NRF will, in consultation with the Ministry of Higher Education, Science and Technology, determine how the current resource allocation model can be transformed in order to enable increased strategic decision making within the organisation. The current model inhibits the NRF from determining where funding would best serve the knowledge enterprise and national development.

***Ensure that funds are invested for maximum impact***

The organisation will make strategic choices to ensure that funds are invested in such a way as to enhance the knowledge enterprise and bring about societal benefit. All investment decisions for the next decade, whether about people, the research enterprise, infrastructure, science engagement or in support of the organisation itself, will factor in impact – whether knowledge, social, economic or environmental.

Investment in areas of current low return will be revisited and reprioritised to areas of greater impact. The objective is to maximise the return on investment, which in turn will result in a multiplier effect in terms of societal and knowledge impact. This includes maximising efficiencies by effectively managing key cost drivers within strategic interventions as well as within the organisation itself.

#### ***Leveraging additionality through strategic partnerships***

The NRF is aware that national resources are limited, and that other sources of funding the science system must be explored. For this reason, it is developing a strategic partnerships strategy. The strategy will allow the organisation to strengthen its resource base by actively pursuing productive partnerships with relevant organisations, government departments, the private sector and international organisations to garner support in key priority areas. The central characteristic of all these partnerships is that they must align with the NRF's strategic objectives within the science sector and must provide mutual benefit. A key approach is to find partners to assist with specific, long-term interventions where both partners find value.

Finally, through highlighting and advancing the causal link between research and societal benefit, the NRF aims to secure the position of the knowledge enterprise in South Africa. The NRF will periodically publish impact case studies on the research either funded or performed by the organisation. This will emphasise the positive effect and impact of the knowledge enterprise on national development.

### **III. GLOSSARY OF TERMS**

**Early Career Researchers:** Young researchers in knowledge institutions (normally younger than 35 years of age), with a doctorate completed within the previous five years, who, on the basis of potential, are considered likely to become future established researchers in their field.

**Established Researchers:** Individuals who have established themselves as independent researchers and have an active research track record.

**Innovation:** The implementation of a new or significantly improved product (goods or service) or process, or a new method, or a new organisational model in business practice, workplace organisation or external relations.

**Knowledge Enterprise:** A complex configuration of interacting role-players (people and institutions), including universities, research facilities, science councils, industry, government and civil society, working together to advance knowledge through verifiable means. The knowledge enterprise includes the organised body of knowledge and methodologies that humans have gained through previous research endeavours.

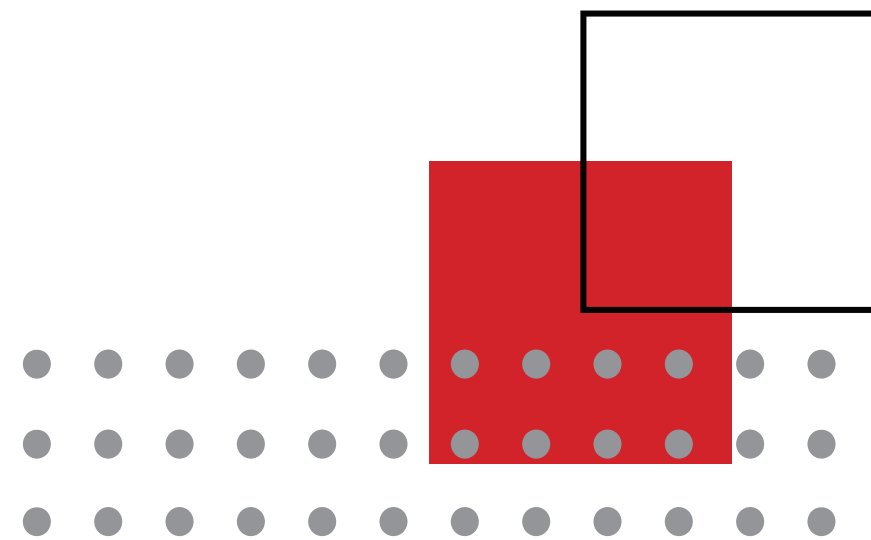
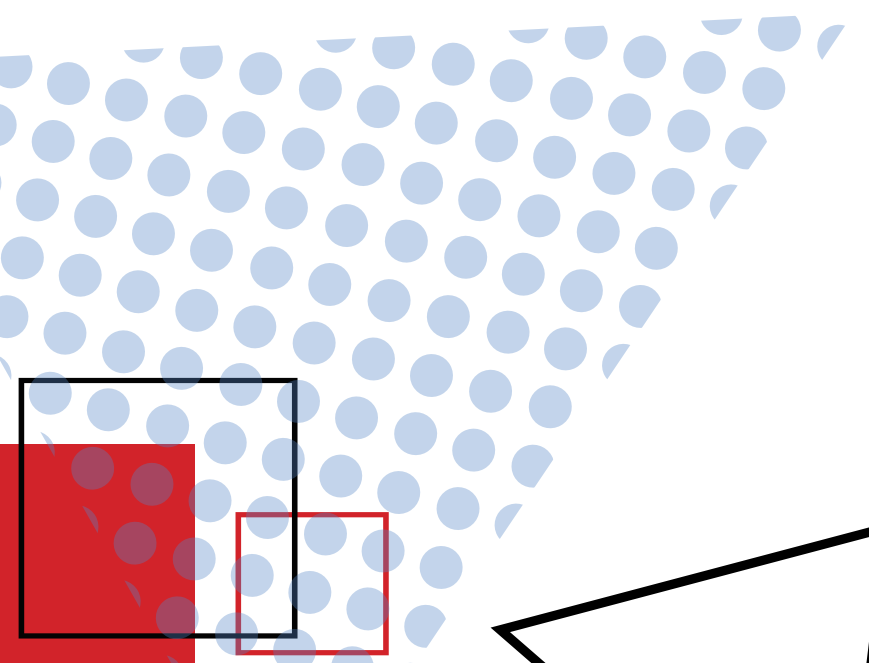
**National Development Plan:** A long-term South African development plan. Its broad objectives are to eliminate poverty; reduce inequality; and ensure a decent standard of living for all South Africans by 2030.  
**National Research Facilities:** Institutions managed by the NRF which provide unique and substantial research infrastructure platforms, capabilities and services for competitive research, innovation and human capacity development.

**National System of Innovation:** A set of functioning institutions, organisations and policies which interact constructively in the pursuit of a common set of social and economic goals and objectives.

**Science:** Science includes any system of knowledge attained by verifiable means and the organised body of knowledge humans have gained by research, and is, therefore, inclusive of all fields of science and technology, including human and social sciences, and indigenous knowledge.



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