



**Infrastructure Funding Instrument:
National Equipment Programme (NEP)**

Framework and Funding Guide

Directorate : Human and Infrastructure Capacity Development

Date : April 2018

Call Closing Date : 17 May 2018

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List of acronyms

CEO	Chief Executive Officer
DST	Department of Science and Technology
HICD	Human and Infrastructure Capacity Development
ISI	Institute for Scientific Information
NEP	National Equipment Programme
NNEP	National Nanotechnology Equipment Programme
NNS	National Nanotechnology Strategy
NRF	National Research Foundation
R&D	Research and Development
RE	Reviews and Evaluations
RSA	Republic of South Africa
SAASTA	South African Agency for Science and Technology Advancement

Part A: Strategic Framework

1. Contextual Background

South Africa's mission to create wealth through the creation of jobs and the eradication of poverty hinges largely on the nation's ability to develop new products, technologies and services through research and innovation. This can only be achieved in a highly competitive world if the nation has at its disposal the required human capital capable of generating new knowledge and technologies through research in an environment with quality research infrastructure.

Infrastructure for world-class research and innovation involves major items of equipment for multi- and/or inter-disciplinary research that requires substantial financial investment for its acquisition and operational costs and is therefore usually too costly to be acquired by institutions individually or collectively. World class research equipment can also constitute large or specialised pieces of equipment that are needed to catapult research and student training to new levels of achievement.

The development and retention of high-end scientific and technological skills and competencies is essential for South Africa to transform into a knowledge-based economy. The generation of new knowledge as well as scientific and technological innovations can bring about economic development, job creation and an improvement in the quality of life of its citizens. State-of-the-art research infrastructure, linked to the development of highly skilled knowledge-workers, is a pre-requisite for the generation of globally competitive new knowledge and technologies for the twenty first century.

It is for this reason that the Department of Science and Technology (DST) has allocated funds in its annual budget vote, through the National Key Research and Technology Infrastructure Strategy¹ in support of research equipment. The National Equipment Programme (NEP) and National Nanotechnology Equipment Programme (NNEP) were founded on the basis of equipping South African research institutions with state-of-the-art research equipment that are enablers for advancing the national Research and Development (R&D) agenda.

The 2015/16 financial year marked the closure of the NNEP funding instrument, after a ten-year investment. Since 2015/16 all nanotechnology related applications have and will continue to be submitted to the NEP funding instrument.

¹ NRF (2004). *A National Key Research and Technology Infrastructure Strategy*. Pretoria, RSA

The strategic context for the NEP arises from the National Key Research and Technology Infrastructure Strategy² of the NRF, which is based on two pillars of intervention namely the:

- **Well-founded Laboratory**

This involves minimum levels of basic and/or entry level analytical equipment and facilities that are required for postgraduate training and research. The concept of a well-founded laboratory embraces the equipment, infrastructure and utilities needed to operate a scientific laboratory. This is the base case and is expected to be funded by *the Department of Higher Education and Training (DHET)*.

- **Infrastructure for world-class research and innovation**

This involves major items of equipment for multi- and/or inter-disciplinary research that requires substantial financial investment for its acquisition and operational costs and is therefore usually too costly to be acquired by institutions individually or collectively. World class research equipment can also constitute large or specialised pieces of equipment that are needed to catapult research and student training to new levels of achievement. This research infrastructure for world-class research is to be funded by the DST, through the NRF, with co-investment from the applicant's institution.

Funding for the NEP funding instrument is contractually attained from the DST under the Research and Development Infrastructure Platforms budget. The opening of NEP calls for applications will be subject to the Medium Term Expenditure Framework (MTEF) budget allocations.

2. Scope

The NEP, through a competitive peer review process, makes funds available to support the acquisition, upgrade or development of state-of-the-art research equipment. This involves major items of equipment that support multi-disciplinary and inter-disciplinary research and usually requires significant capital investment. In addition specialised operators and dedicated personnel are required to operate and maintain such instrumentation. The primary objectives of the NEP are to:

² National Research Foundation, 2004, *A National Key Research and Technology Infrastructure Strategy*. NRF, Pretoria.

- Support the acquisition, upgrade or development of state-of-the-art instrumentation for South African public research institutions to undertake world class research;
- Promote, through the placement of research equipment, the development of research collaborations; and
- Support and strengthen the objectives of the DST's Ten-Year Innovation Plan³, the National Development Plan⁴ and the National Key Research and Technology Infrastructure Strategy.

3. Areas of Support

The NEP aims to support the acquisition, upgrade or development of state-of-the-art research equipment in the broad fields of Science, Engineering and Technology in order to improve research infrastructure to enable internationally competitive research to be conducted in South Africa.

4. Objectives

The NEP, through a competitive peer review process, makes funds available to support the acquisition, upgrade or development of state-of-the-art research equipment. This involves major items of equipment that support multi-disciplinary and inter-disciplinary research and usually requires significant capital investment. In addition specialised operators and dedicated personnel are required to operate and maintain such instrumentation. The primary objectives of the NEP are to:

- Improving research infrastructure to enable internationally competitive research to be conducted in South Africa;
- Expanding institutional capacity for research, innovation and training at public universities and publicly funded research councils;
- Developing human resource capacity mainly post-graduate student training and staff development that focuses on historically disadvantaged institutions, women and people with disabilities;
- Support the acquisition, upgrade or development of state-of-the-art instrumentation for South African public research institutions to undertake world class research;

³ DST, *Ten-Year Innovation plan for Science and Technology*: <http://eqdb.nrf.ac.za/resources>

⁴ *National Development Plan: Vision for 2030*: <http://www.npconline.co.za/medialib/downloads/home/NPC%20National%20Development%20Plan%20Vision%202030%20-lo-res.pdf>

- Promote, through the placement of research equipment, the development of research collaborations; and
- Support and strengthen the objectives of the DST's *Ten-Year Innovation Plan*⁵, the National Development Plan⁶ and the National Key Research and Technology Infrastructure Strategy.

5. Monitoring and Evaluation of Grantees

The NRF will continuously monitor and evaluate the progress of the grantees funded under NEP as follows:

- All grantees must submit Annual Progress Reports (APRs) from the date of grant award to a period of five (5) years post the year of commissioning of the research equipment to the NRF in a format provided by the NRF, against deliverables as outlined in the funding guide and the signed Conditions of Grant;
- The NRF will undertake institutional visits on an ongoing basis, to ensure that the equipment is being properly maintained, well-utilised and that postgraduate students and staff members are being trained to utilise and operate the equipment; and

5.1 APR Requirements for NEP

5.1.1 Research Outputs:

The expected return on investment from the NEP grant awards, through the usage of the research equipment, is measured in terms of the publications produced. Publications are defined as:

- Books
- Book chapters
- Articles (peer-reviewed)
- Articles (non-peer-reviewed)
- Peer-reviewed conference outputs
- Technical reports

5.1.2 Human Capital Development:

The NEP grant awarded must contribute towards the development of human capital in terms of staff trained to use the equipment and postgraduate students trained and/or

⁵ DST, *Ten-Year Innovation plan for Science and Technology*: <http://eqdb.nrf.ac.za/resources>

⁶ *National Development Plan: Vision for 2030*: <http://www.npconline.co.za/medialib/downloads/home/NPC%20National%20Development%20Plan%20Vision%202030%20-lo-res.pdf>

obtain a postgraduate degree through the use of the equipment. Users of the equipment are defined as:

- Postgraduate student
- Postdoctoral fellow
- Technician
- Private sector
- Researcher
- Collaborator
- Grantholder
- Staff
- Other Users

For each user listed above, the following information must be provided depending on the type of user selected:

- Full names
- Race and gender
- ID number / Student number / Staff number
- Citizenship
- Institution and country
- Department

5.1.3 Use of Infrastructure:

The expected return on investment from the NEP grant awards, through the usage of the equipment, is measured in terms of a financial model for the maintenance, upgrade and other related operational costs for the sustainable management of the equipment. In addition, the following indicators will be measured:

- Researchers and students that have used the equipment; and
- Collaborators and general users that accessed the equipment.

5.1.4 Intellectual Property:

The NEP funding instrument is expected to contribute to South Africa's knowledge base in fields of research related to the objectives of the *National Key Research and Technology Infrastructure Strategy*, *NNS*, the *10-Year Innovation Plan*, the *R&D Strategy* amongst others. As such, all grantholders are required to publish their findings in peer reviewed journals. The research work published should not compromise the protection of intellectual property emanating from the research and should further not infringe the

relevant intellectual property legislations in South Africa “*Intellectual Property Rights from Publicly Financed Research and Development Act No. 51 of 2008*”.

5.1.5 Impact and Outcomes:

The NEP applicants must demonstrate the expected impacts in terms of:

- Societal/economic impact of the proposed equipment towards improving the quality of life of South Africans;
- Advancement of the objectives of the national priorities as defined in the National R&D Strategy, the Ten-Year Innovation Plan, as well as other South African R&D based policies;
- Expanding institutional capacity for research, innovation and training at public universities and research institutions to enable South African research to be nationally relevant and globally competitive; and
- Access to equipment for research and training by postgraduate students.

5.1.6 Public Awareness:

The NEP grantholders are expected to participate in public awareness and science communication programmes including those that are managed by the South African Agency for Science and Technology Advancement (SASTA).

6. Funding

The funding decisions are made by taking into consideration the expert panel recommendations as well as the DST/NRF strategic objectives and targets. Once a NEP grant award has been made, the DST-NRF will not be liable for any additional costs that may be incurred including those resulting from the devaluation of the ZAR.

The host institution must provide funding towards the purchase of each piece of equipment at a ratio of 2:1, NRF: Applying Institution. That is, the NRF will contribute 2/3 of the total cost of acquisition (cost of equipment including VAT and a three year maintenance service plan) to a minimum of R1 million and to a maximum of R10 million. The institution must make a 1/3 contribution towards the cost of the equipment.

The institution must in addition ensure that:

- The appropriate building infrastructure to house the state-of-the-art equipment is/will be in place to ensure that the equipment will be fully commissioned within two years of the award having been made;
- Resources are made available for the appropriate building infrastructure to house the state-of-the-art equipment; and
- Training programmes are regularly hosted on a regional and national basis for the optimal utilisation of the equipment.

7. Monitoring and Evaluation of Funding Instrument

The NEP funding instrument will be periodically evaluated by independent reviewers as agreed to by the DST and the NRF.

Part B: Funding Guide

8. Scope of Application

Proposals submitted to the NRF may be for a single instrument or multiple complimentary instruments that collectively constitute a single analytical research system.

The NRF encourages local design and development of the next generation of research equipment in South Africa. Therefore, institutions are encouraged to apply for support for the design, procurement, construction, testing and certification of novel research equipment.

9. Funding Scope and Duration

The NRF grant awards will not exceed R10 million. The NRF will cover two thirds (2/3) of the total cost of acquisition. The cost of the equipment applied for (excluding service contract) must not be less than R1 million and, the **total cost** of acquisition must include a three (3)-year maintenance plan.

The NRF **will not** cover the operational costs associated with the installation and functioning of the equipment. This funding may only be utilised for the purchase, upgrade or development of research equipment as set out in the application and according to the recommendations of the review panel. Funding decisions are made by the NRF taking into consideration the recommendations of the review panel, the availability of funds and the objectives of the funding instruments.

Following the institutional procurement process, the grantholder must submit a pro-forma invoice within the approved grant amount. Should there be a change of specifications for the approved instrument(s), the grantholder must communicate the reasons to the NRF, providing a clear motivation for the change. This submission must be endorsed by the Research Administration of the employing institution.

This is a once-off grant spanning a **maximum period of two (2) years** post receipt of the grant award letter. If the acquisition of the equipment has not been completed within two (2) years of the grant award, the NRF reserves the right to recall the grant.

The minimum and maximum grant size of the funding instruments will be reviewed by the NRF and the DST on an annual basis.

10. Eligibility

10.1 Applicant-Specific Criteria

All researchers who meet the following criteria may apply as primary applicants:

- Applicants must be employed at an NRF recognised research institution such as:
 - South African Public Universities; and
 - South African Public Research Entities namely Science Councils,⁷ National Research Facilities, Research Laboratories, Research Hospitals and Museums.
- The primary applicant must have held a doctoral degree for at least five (5) years **prior** to the submission of an NEP application; and
- The primary applicant must be a full-time employee or on a full-time fixed term-appointment, extending for at least five (5) years from the time of submission of the NEP application.

10.2 Co-applicants

An application may be submitted by a single applicant or a primary applicant and a co-applicant.

- In instances where the primary applicant will be retiring from his/her position at the host institution within five (5) years of submitting the NEP application, a co-applicant must be included as a potential successor to take over the management of the equipment;
- Emerging researchers, that do not have proven experience with managing high-end research equipment, may apply as a co-applicant together with a primary applicant that meets the eligibility criteria;
- The primary and co-applicant will be required to be actively involved in the management of the equipment and, in the utilisation of the equipment for his her research endeavours; and
- Both the track record of the primary and co-applicant will be evaluated during the review process.

⁷ The Nanotechnology Innovation Centres based at Mintek and the CSIR are excluded from applying for nanotechnology related equipment as they receive funds directly from DST.

Table 1: Eligibility and Grant Criteria Summary

Eligibility and Grant Criteria Summary for 2018 Applications for 2019 Funding	
Eligibility Criteria	<p>All researchers who hold a doctoral degree (for at least five (5) years prior to the application to the infrastructure funding instruments) and are full-time employees or on a full-time fixed term-appointment (for at least five (5) years following the application to the infrastructure funding instruments) in any of the NRF recognised organisations are eligible to apply:</p> <ul style="list-style-type: none"> • South African public universities; and • Public research entities such as Science Councils, National Research Facilities, research laboratories, including research hospitals and museums. <p>In the case where the applicant is approaching retirement (within five (5) years to normal retirement), a successor must be identified and included as a co-applicant.</p> <p>Proposed research must fall directly into any of the national research priorities and those referred to in the DST <i>10-Year Innovation Plan</i>⁸ and <i>South Africa's National R&D Strategy</i>⁹.</p> <p>Applications to the total value of acquisition of the equipment (excluding maintenance and other costs) should not be less than R1million. The NRF contribution will not exceed R10 million.</p> <p>The Institution at which the applicant is employed must be committed to a funding contribution with the NRF on a 2:1 (NRF: Institution) ratio.</p>
Maximum period of support	<p>This is a once-off grant spanning a maximum period of two years (year of award/remaining part thereof and one (1) additional year). If the acquisition of the equipment has not been completed by that time unspent funds may be withdrawn and reallocated at the discretion of the NRF.</p>
Type of support	<p>For the purchase of research equipment as per application and based on review panel recommendation, the NRF reserves the right to make the final funding decisions depending on availability of funds and objectives of the funding instrument.</p>
Expected outputs and reporting	<ul style="list-style-type: none"> • Annual progress reports from date of award to a period of five (5) years post commissioning of the equipment. In cases where there is a delay in commissioning of the equipment, this would mean that the grantholder must report to the NRF for five years after the commissioning of the equipment. • A minimum of 10 postgraduate students trained per year on research utilising the research equipment commissioned. • A minimum of three (3) publications in international refereed (peer-reviewed) journals per year from the research undertaken utilising the equipment for research purposes.

11. Application Process

The NRF issues a Call for Proposals for the NEP, which is placed on the NRF website, and is disseminated, to the Research Offices of the various institutions, and the application is accessible online at <https://nrfs submission.nrf.ac.za>. All applications must be duly authorised and approved by the Designated Authority (DA) of the research administration at the institution that submits the application.

Plagiarism is viewed in a very serious light and evidence of plagiarism will result in an application being returned to the institution, without review, for further

⁸ DST, 2007, *Innovation towards a knowledge-based economy - Ten year plan for South Africa (2008-2018)*. Pretoria. Accessible at <http://www.dst.gov.za/index.php/resource-center/strategies-and-reports/143-the-ten-year-plan-for-science-and-technology>.

⁹ DST, 2002, *South Africa's national research and development strategy*. Pretoria, South Africa. Accessible at: <http://www.dst.gov.za/index.php/resource-center/strategies-and-reports/159-south-africas-national-research-and-development-strategy>.

investigation and action. Applicants are required to follow standard referencing practices and texts of sections copied directly from suppliers web-sites and marketing brochures will not be accepted.

The NRF allows only one application per applicant. An equipment application that was previously rejected by the NRF may be revised and resubmitted. In such cases, any revision or reworking of the application to respond to the reviewers' feedback on the original application should be explained and highlighted in the revised application.

The processing of a successful grant application takes approximately six (6) months from the time of submission until the commencement of funding.

11.1 How to Submit Applications

The Call for Proposals for the NEP will be open from 09 April 2018 to 17 May 2018.

Applications will be accessible online at <https://nrfs submission.nrf.ac.za> from 09 April 2018. Applicants are advised to complete their applications as soon as possible to prevent an IT system overload nearer the closing date.

This is an electronic submission system and applicants need to be registered on the system. If already registered on <https://nrfs submission.nrf.ac.za>, it is essential that applicants, co-applicants and prospective co-users update their CV as it will form part of the application for review purposes. The onus is on the applicant to ensure that the Online CV is kept fully up-to-date as this plays a vital role in ascertaining the track record and ability to manage the requested equipment. If not yet registered on this site, applicants should register on the NRF Online submission system at <https://nrfs submission.nrf.ac.za>. Applicants are urged to complete or update ALL screens of the CV, including the Research Profile and Research Outputs screens as it will be considered an integral part of the application. Applicants who fail to complete the NRF Online Registration and CV sections timeously will not be considered for funding.

When the final version of the application form is submitted by the applicant, by selecting the *Final Submit button on the online application*, the application will be routed to the DA for internal institutional review and validation. The DA must submit the validated applications to the NRF electronically. Late applications, additional supporting documentation or information received after the closing date, as stipulated in the Call documents, will not be accepted or considered. Applicants must ensure that they adhere to their institution's internal closing date for submission of their application to allow for internal institutional screening and review. The internal closing date will be announced by the respective research offices and is usually at least two (2) weeks prior to the NRF closing date.

The NRF will not process applications that are incomplete, contain insufficient or incorrect detail, or fail to follow instructions; in these instances such applications will be rejected. The application must contain sufficient scientific and technical detail to allow for a comprehensive review and evaluation by peer reviewers. In addition to the electronic application and required attachments, the NRF may request additional information or documentation to support an application. Failure to supply such information or documentation upon request may result in the rejection of the application.

It is important for all applications to be screened and approved by internal institutional processes before being submitted to the NRF. Institutional authorities should take particular care regarding the financial information included in applications.

In submitting an application to the NRF, the DVC Research or equivalent, through the respective DA confirms, (i) agreement with the standard of all proposals validated and submitted; (ii) that the institution approves and supports the proposed research; and (iii) that the institution has made financial provision for the stipulated 1/3 funding contribution and any infrastructure costs that will be required to house the equipment.

11.2 Institutional Responsibility: Research Office

Institutions submitting applications for funding are required to:

- Limit the number of applications to a maximum of five (5) per institution;
- Prioritise applications, in the case of multiple submissions, and send the priority list to the NRF by 31 May 2018;
- Ensure completeness of applications including commitment to ensure that:
 - the appropriate building infrastructure to house the state-of-the-art equipment is/will be in place;
 - the equipment will be fully commissioned within two (2) years of the NEP grant award having been made; and
 - training programmes will be regularly hosted on a regional and national basis for the optimal utilisation of the equipment;
- Approve and authorise all applications submitted, through the institutional management structure; and
- Ensure that applicants adhere to the institution's internal closing date for submission of their application to allow for internal processes.

12. Unacceptable Proposals

The following types of proposals **will not be** considered:

- Applications without an updated *Curriculum Vitae* (CV) of the applicant and co-applicant, if applicable.
- Research equipment that cannot be used in postgraduate student training or where no plan for such training is provided.
- General laboratory research equipment i.e. well-founded laboratory equipment.
- Renovation of buildings, utilities and facilities.
- Fixed equipment, that forms part of laboratory infrastructure, such as laminar flow cabinets, power systems, cold rooms and gas reticulation systems.
- Proposals that do not include three (3) written quotations or detailed explanations where less than three (3) suppliers are available.
- Proposals that are not endorsed by the designated authority (DA).
- Proposals where a number of equipment is proposed that are not complimentary in capability and can be regarded as a general list to equip a laboratory.
- Proposals where there appears to be duplication of equipment within departments and / or between regional institutions. It is the responsibility of the applicant to ensure that the relevant background checks with regard to availability and / or access and capacity of existing equipment have been completed (*see requirements in section 4.3*). A point of departure for searching for such availability could be the National Research Equipment Database (<http://eqdb.nrf.ac.za>).

13. Online Application Documentation

The details below provide an overview of the sections, which must be completed through the online application process as explained in *Section 4.1* above. This overview details the information that must be submitted in order to provide the NRF with a complete proposal. The online documentation is divided into two main sections:

- The *Curriculum Vitae* Section
- The Application/Proposal Section

13.1 The CV Section

The CV section forms an integral part of the application as it provides information on the track record of the applicant with respect to student training and research outputs. The onus is on the applicant to ensure that this is complete and up-to-date as it forms a vital component of the review and assessment process.

Table 2: CV Section of the Application

Registration Details *
Contact Details*
Qualifications *
Career Profile *
Research Expertise *
Personal Profile
Student Supervision Record
Absence from Research
Staff Development Record
Books
Chapters in Books
Articles in Refereed/Peer-reviewed Journals
Refereed/Peer-reviewed Conference Outputs
Patents
Keynote/Plenary Addresses
Articles in Non-refereed/Non-peer Reviewed Journals
Other Significant Conference Outputs
Technical/Policy Reports
Products
Artefacts
Prototypes
Other Recognised Research Outputs
Disability *
ORCID *

13.2 The Application/Proposal Section

This section should be completed in full and is designed to provide the applicant with an opportunity to present the information that is required as per sections **15.2** and **16** respectively.

Table 3: Application/ Proposal Form

Sections (as per online Application Form)	Information required (see Online Application Process in this regard)	Documents that would need to be uploaded (under the Attachments section)
Applicant and Co-applicant details	<ul style="list-style-type: none"> Applicant’s institution details Co-applicant details, if applicable. A co-applicant must be from the same institution. 	N/A
Description of equipment	<ul style="list-style-type: none"> Description of the proposed research equipment. Justification for the proposed research equipment. Equipment capabilities. Describe the complimentary nature of multiple instruments, motivating how they collectively constitute a single analytical research system, where applicable. 	N/A
Classification of equipment	<ul style="list-style-type: none"> Detail why equipment is considered to be state-of-the-art. 	N/A

Sections (as per online Application Form)	Information required (see <i>Online Application Process in this regard</i>)	Documents that would need to be uploaded (<i>under the Attachments section</i>)
Impact of equipment	<ul style="list-style-type: none"> Alignment to the <i>National Research and Development Strategy</i> and to the <i>10-Year Innovation Plan</i>. Multidisciplinary applications of proposed equipment. Value-add of the proposed equipment and incorporation into the longer-term institutional research plan. Support by the Regional Equipment Committee, if applicable. 	<ul style="list-style-type: none"> Upload a Letter of support from the Regional Equipment Committee, if applicable.
Motivation for supplier	<ul style="list-style-type: none"> Quotations from a minimum of three (3) suppliers against a standard/set terms of reference of a specified equipment should be submitted. A motivation for a preferred supplier should be provided. In the event where three viable options are not available, the motivation should clearly indicate the reasons for preference and why three quotes were not available. Quotations must be valid for at least 12 months from date of submission. 	<ul style="list-style-type: none"> Upload the relevant quotes (<i>under the Motivation for Supplier section</i>) Upload the picture of the equipment
Availability of similar equipment	<ul style="list-style-type: none"> Detail on whether similar equipment exists at own institution, regionally or elsewhere in South Africa. Refer to the National Equipment Database: http://eqdb.nrf.ac.za. It is the responsibility of the <u>applicant to ascertain what type of equipment, the model, where it is currently situated and its accessibility and present this convincingly.</u> Expand why similar equipment is not suitable to applicant's research needs. Upload Letters/Confirmation from host institution of the identified equipment explaining why applicant is unable to access the equipment. 	<ul style="list-style-type: none"> Upload Letters / Confirmation on why similar equipment is not accessible.
Proposed research project	<ul style="list-style-type: none"> A description of the planned research activities which includes both the: <ul style="list-style-type: none"> Scientific merit of the proposed research in terms of advancing knowledge which contributes to the national research agenda and improves global competitiveness; and Qualification and competence of the researcher(s) to conduct the proposed research. Details on the feasibility of the proposed infrastructure and research work. Justify how the proposed equipment will support the planned research activities. A clearly defined research plan for current and new research projects to be undertaken. 	N/A
Societal/Economic impact of proposed research	<ul style="list-style-type: none"> Describe how the proposed research contributes towards improving the quality of life of South Africans. Briefly describe the type of impact economic/societal impact (e.g. Healthcare, Environment (Ecology), Biotechnology and Energy). In cases where the nature of the proposed research precludes these types of benefits, state the reasons. 	N/A

The Equipment Management Plan is addressed in a separate subsection.

Table 4: Proposal/Application Form: Management Plan Section

Sections (as per online Application Form)	Information required (see Online Application Process in this regard). All sections are compulsory.	Documents that would need to be uploaded (under the Attachments section)
Equipment Management Plan	<p>This section in its entirety is compulsory and should be completed to result in a comprehensive management plan (the complexity of which is commensurable with the value of the proposed equipment), that includes discussion on the subsections provided.</p> <p>It is required that the applicant uploads a Detailed Project Schedule/Gantt Chart outlining the timeframe for the procurement and installation process. A template containing the headings for what the Project Schedule/Gantt Chart should outline is provided in the section 'Supporting Documentation' for completion. This forms an integral part of the application and thus no application will be considered without it. (see Appendix)</p>	<ul style="list-style-type: none"> • Upload the Project Schedule/Gantt Chart (compulsory)
Equipment Management Plan: Building Infrastructure to house the equipment	<p>Detail specific organisational commitments regarding building infrastructure and costs associated with maintenance.</p> <ul style="list-style-type: none"> • Does the building require refurbishment, • Feasibility of the refurbishment costs, • Is there a building refurbishment plan in place? 	<ul style="list-style-type: none"> • Attach letter from the supplier/manufacturer • Upload a letter from the DVC indicating commitment to refurbishment and the associated budget
Equipment Management Plan: Required Services and Utilities	<p>Details on service utilities required to operate the equipment.</p>	
Equipment Management Plan: Safety and Security	<p>Provide a Safety plan.</p>	
Equipment Management Plan: Insurance Arrangements	<p>Detail the insurance arrangements to be made for the proposed equipment.</p>	
Equipment Management Plan: Alternate Power Supply	<p>Detail measures to be put in place to supply alternate power in the event of power outages.</p>	
Equipment Management Plan: Other supportive/feeder equipment available	<p>List and describe feeder equipment available to support the proposed equipment.</p> <p>Alignment of the research infrastructure with other equipment placed at different departments at their respective research institutions with regard to availability, access and capacity of existing equipment.</p>	
Equipment Management Plan: Operational Responsibility	<p>Detail how technical staff and other users will be provided with the necessary training for diagnostic, maintenance and operational purposes by the selected supplier.</p>	<ul style="list-style-type: none"> • CVs of operator/s
Equipment Management Plan: Maintenance and	<p>Maintenance, operation and repair of the equipment, inclusive of the necessary technical expertise for these tasks.</p>	

Sections (as per online Application Form)	Information required (see <i>Online Application Process in this regard</i>). All sections are compulsory.	Documents that would need to be uploaded (under the <i>Attachments section</i>)
Repairs		
Equipment Management Plan: Training and Accessibility	<ul style="list-style-type: none"> • Conducting user training workshops to train and acquaint other users with the applications of the proposed research equipment. • A comprehensive plan for human resource development, including students, staff, operators and technicians; including mentoring of emerging researchers. • In addition the plan must address the involvement of individuals from the designated groups, particularly young, black and female researchers as well as researchers with disabilities. • Provide number and demographic profile of postgraduate students that will be trained on the infrastructure. • Expand on plans to attract other users. 	
Equipment Management Plan: Operational Costs <i>(Operational costs not covered by the NRF)</i>	<ul style="list-style-type: none"> • Budget, including all other sources of funding applied for and committed. Applications must clearly indicate how the total cost for the acquisition, housing, operation and maintenance of the equipment applied for will be raised. • This should be complemented with a financially viable costing plan, including an indication of the projected income from other sources to cover operational and maintenance costs including training. This viable costing model must also present charge-out rates that do not prohibit researchers from the public research institutions accessing the equipment. 	<ul style="list-style-type: none"> • Upload a viable Costing Plan
Equipment Management Plan: Envisaged Collaboration	<ul style="list-style-type: none"> • Details of current and future collaborations intra-institutional, regionally, nationally and internationally. • The collaborative initiatives proposed must ensure that the equipment is used sustainably across institutions, especially with historically disadvantaged institutions. • A strategy for international exposure of young researchers, and for attracting international expertise. 	
Equipment Management Plan: Envisaged students	<ul style="list-style-type: none"> • How will the equipment be utilised for postgraduate training; as well as research and innovation activities by academic staff and postgraduate students. • Plans for student training (Please name students where applicable, state degree level, as well as how they will use the equipment in their research). 	
Equipment Management Plan: Utilisation Details	<ul style="list-style-type: none"> • Ensuring access to the equipment for intra- and inter-institution as well as emerging researchers at Historically Disadvantaged Institutions (HDIs). • Details on access to the research equipment or plans for use by staff, students and users from other institutions. • Publications from research involving similar equipment. 	
Equipment Management Plan: Past and Current grants held with the	<ul style="list-style-type: none"> • List all grants held with the NRF, currently and historically. 	

Sections (as per online Application Form)	Information required (see <i>Online Application Process in this regard</i>). All sections are compulsory.	Documents that would need to be uploaded (under the <i>Attachments section</i>)
NRF		
Equipment Management Plan: Succession planning	<ul style="list-style-type: none"> In the event that the applicant leaves the institution, or retires within five years of receiving the grant award, provide information on a potential successor. 	<ul style="list-style-type: none"> Upload a succession plan Upload CV of successor
Equipment Management Plan: Current and Historical Research Collaborations	<ul style="list-style-type: none"> List the collaborators and provide information on the nature of current and historical collaborations. 	

The sub-sections indicated below form part of the main application.

Table 5: Application/Proposal Section Continued

Sections (as per online Application Form)	Information required (see <i>Online Application Process in this regard</i>)	Documents that would need to be uploaded (under the <i>Attachments section</i>)
Science communication	<ul style="list-style-type: none"> If applicable, describe any previous experience/involvement in science communication through public engagement programmes with SAASTA and propose any involvement/engagement with SAASTA in the event that your application is successful. 	
Co-users/collaborators	<ul style="list-style-type: none"> A co-user can be from the same research institution or an external research institution, including private sector. The co-user will be accessing time on the equipment in order to achieve his/her research and training objectives. Upon adding a co-user the system generates an 'Equipment co-user utilisation form' that is automatically e-mailed to the co-user for completion. This co-user utilisation form requests information on the co-users utilisation of the proposed equipment for research projects and expected student involvement. 	
Publications emanating from similar equipment	<ul style="list-style-type: none"> Select the relevant records from the Research Outputs in your CV that support or show your experience in the use of similar equipment. 	
Track Record of applicant	<ul style="list-style-type: none"> Provide details of staff members from your institution and other institutions trained by applicant and co-applicant in the last three years. Clearly identify mentoring of emerging scientists from institutions with low levels of research capacity and activity. Clearly indicate if training was done on the same or similar equipment, where possible. 	
Financial Details (The NRF does not cover Operational Costs inclusive of:	<p>Provide detailed financial information for the proposed equipment as follows:</p> <ul style="list-style-type: none"> The preferred supplier cost of equipment (inclusive of VAT) will automatically be drawn into 	

Sections (as per online Application Form)	Information required (see <i>Online Application Process in this regard</i>)	Documents that would need to be uploaded (under the <i>Attachments section</i>)
1. Salaries 2. Wages 3. Overheads)	<p>this section based on the quote information submitted under the <i>Motivation for Supplier section</i>. The cost for maintenance/service contract should be included into this sections and will be automatically totalled.</p> <ul style="list-style-type: none"> • With respect to the Development Equipment provide a breakdown of the total equipment costs submitted as follows: <ul style="list-style-type: none"> ○ Cost for Design ○ Cost for Procurement ○ Cost for Construction ○ Cost for Testing ○ Cost for Certification/Accreditation ○ Other Costs (please specify) • Compulsory one third contribution by own institution and/or other institutions. Therefore providing the Total contribution by other institutions/users • Total requested from the NRF <p>If a tender process is required by the institution, this should be completed either prior to submission of the proposal or as soon as possible after receiving the letter of award in the case of a successful applicant, in order to expedite the subsequent steps for the release of funding.</p> <p>Note: Funding from this funding instrument cannot be utilised for HCD</p>	
Possible reviewers	<p>At least six (6) suggested independent peers, not involved in joint research projects or collaboration that can objectively review the proposal. These should not be co-users or collaborators and should not be from the applicant's institution. The responsibility is on the applicant to ensure that the information provided is current and correct. A mix of local and international reviewers is recommended.</p>	
Excluded reviewers	<p>It is also possible to note, with justification, individuals that should preferably not be used as reviewers for the application.</p>	
Attachments	<p>Upload the picture of the equipment. Refer to the <i>Motivation for Supplier section</i> (Document type: JPEG)</p> <p>Upload the Letter/Confirmation from the host institution explaining why the applicant is unable to utilize the equipment available in the country. Refer to the <i>Availability of Similar Equipment section</i> (Document type: PDF).</p> <p>Upload a Detailed Project Schedule/Gantt Chart (Refer to the <i>Equipment Management Plan section</i>) outlining the timeframe for the procurement and installation process. (see Appendix) This forms an</p>	<ul style="list-style-type: none"> • Picture of Equipment in JPEG format <p>Confirmation Letter</p> <p>Project Schedule/Gantt Chart (compulsory)</p>

Sections (as per online Application Form)	Information required (see Online Application Process in this regard)	Documents that would need to be uploaded (under the Attachments section)
	integral part of the application and thus no application will be considered without it. (Document type: PDF/MS Project).	
	Upload a financially viable costing plan including an indication of the projected income from other sources to cover operational and maintenance costs as well as training. This viable costing plan/including must also present charge-out rates that do not prohibit researchers from the public research institutions accessing the equipment. Refer to subsection 'Operational Costs' under the Equipment Management Plan section (Document type: MS Excel or PDF).	Costing Plan
	Where applicable, attach the letter of support from the Regional Equipment Committee	Letter of support from the Regional Equipment Committee (not compulsory. Only if applicable).
	Other documents: Besides the documents uploaded as requested by the NRF, please indicate what 'other' documents was added and why'. Other documents should not exceed more than 1 ½ A4 pages in length.	Provide a Descriptive Title for documents to be uploaded.

Note: Applicants are advised to complete their applications as soon as possible to prevent IT system overload near the closing date. Specifically, allow sufficient time for co-users to respond once a co-user utilisation form is created and sent as part of the Online Application Process. It is recommended that individual sections be refined and completed off-line (e.g. as a Word document) before being finally uploaded.

14. Budget Breakdown

Provide detailed financial details for the proposed equipment through the following:

Table 6: Application/Proposal Form: Budget/Financial Section

<u>Financial Details required for 2018 applications for 2019 funding</u>			
Classification of Equipment	In the Classification of Equipment Section it is required that an applicant indicates whether the requested equipment is:		
	New Equipment	Upgrade	Development Equipment
Required information for each classification	For New Equipment it is required that the applicant provides the following financial information: <ul style="list-style-type: none"> Equipment Costs (inclusive of VAT) 	<ul style="list-style-type: none"> For New Equipment it is required that the applicant provides the following financial information: <ul style="list-style-type: none"> Equipment Costs (inclusive of VAT) Five (5) year 	For New Equipment it is required that the applicant provides the following financial information: <ul style="list-style-type: none"> Equipment Costs (inclusive of VAT). Provide a breakdown of the total equipment costs

	<ul style="list-style-type: none"> Five (5) year Maintenance/Service Contract. (Note the NRF will only contribute towards three (3) years of the maintenance/service contract) Contribution by own institution Operational Expenditure (cost to be assumed by Institution) Total Requested from NRF 	<p>Maintenance/Service Contract (Note the NRF will only contribute towards three (3) years of the maintenance/service contract)</p> <ul style="list-style-type: none"> Contribution by own institution Operational Expenditure (cost to be assumed by Institution) Total Requested from NRF 	<p>submitted as follows:</p> <ul style="list-style-type: none"> Cost for Design Cost for Procurement Cost for Construction Cost for Testing Cost for Certification/Accreditation Other Costs (please specify) <p>Note:</p> <ul style="list-style-type: none"> No student bursaries will be considered as part of the cost of new equipment development. The NRF only contributes for Three (3) years Maintenance/Service Contract of the five (5) year Maintenance/Service contract Indicate Contribution by own institution Operational Expenditure (cost to be assumed by Institution) Total Requested from NRF.
Equipment Costs (incl. VAT)	<p>The total value for acquisition (excluding operational and other costs) should not be less than R1million. The NRF contribution will not exceed R10 million.</p> <p>The quoted cost of the requested equipment, including VAT, of the preferred supplier.</p>		
Costs for a five (5)-year Maintenance/Service Contract	<p>Cost for maintenance/service contract over a five (5)-year period. The NRF will, as part of its two-thirds contribution, subsidises the cost of the maintenance contract for the first three years. The institution thereafter needs to commit to covering the additional cost for a full five year maintenance contract with the preferred supplier.</p>		
Contribution by own institution (compulsory 1/3 contribution)	<p>Compulsory one third (1/3) contribution by own institution. The host institution is expected to provide funding towards the purchase of each piece of equipment at a ratio of 2:1 (NRF: Research Institution). That is, the NRF will contribute 2/3 of the total cost of acquisition to a maximum of R10 million. It is further required that the institution to make a 1/3 contribution towards the cost of the equipment.</p> <p>Applications must be endorsed by the DVC or equivalent to be considered for funding.</p>		
Operational Expenditure	<p>Applicants must clearly indicate how the total cost for the acquisition, housing, operation and maintenance of the equipment applied for will be raised. This should be complemented with a financially viable costing plan/including an indication of the projected income from other sources to cover operational and maintenance costs including training. Finally the viable costing model must also present charge-out rates that do not prohibit researchers from the public research institutions accessing the equipment. This cost must be assumed by the institution.</p>		
Total contribution by other institutions/users	<p>Applicants should indicate whether any other source(s) of funding/financial contributions will be received for the equipment applied for in the infrastructure funding instrument.</p>		
Total requested from NRF	<p>This should amount to 2/3 of total capital cost plus three (3) year maintenance/service contract, and cannot exceed R10 million.</p>		

15. Evaluation Process

15.1 Screening Process

All applications will be screened by GMSA staff for completeness. If the criteria, described in detail, in this document, are not met, the application will be returned to the institution without review.

Pre-screening will be done on the following criteria:

- Does the applicant meet all other eligibility criteria as per the Funding Guide?
- Are the applicant and co-applicant's (if applicable) CVs updated?
- Is the application complete with all sections filled in and no missing information?
- Are there three (3) quotations from different suppliers? If not, is there a motivation included?
- For applicants within the five (5) year period of retirement, is a succession plan attached?
- Have co-users confirmed access to equipment?

15.2 Panel Peer-Review of Qualifying Proposals

The Reviews and Evaluation Directorate (RE) of the NRF identifies local and international panel members who are experts in the scientific fields of the applications as well as in the use of the specific equipment. There are two peer-review panels to which the applications are assigned:

- NEP physical sciences and engineering – this panel evaluates those applications that request equipment required for the advancement of the physical sciences and engineering disciplines; and
- NEP environmental and biological sciences – this panel evaluates those applications that request equipment required for the advancement of the environmental and biological sciences.

The peer review panel undertakes an evaluation process according to the criteria listed in the section 10, and makes recommendations to the NRF regarding the funding of the applications. In the case of a re-submission, the previous panel comments will be made available to the review panel.

16. Funding Recommendations

The peer review panels, based on the afore-mentioned evaluation criteria, proposals submitted by the applicant and discussions by the peer reviewers will make recommendations that will be categorised as follows:

Recommended for funding	Conditionally recommended for funding or Revise and resubmit	Not recommended for funding
The proposal does not have any gaps or weaknesses apart from minor changes (e.g. to the management plan that may be addressed without requiring any further peer review).	The proposal meets all the necessary requirements in this section. However, there are some issues that should be addressed by the institution before an award is made.	The proposal contains numerous inconsistencies and gaps which renders it non-fundable.

Note:

A number of applications may be recommended in the first two categories but may not be funded for a variety of reasons, including but not limited to:

- The application is considered a high risk;
- The funding instrument budget is insufficient to fund the short-listed applications;
- The application does not comply with all, or some, of the Funding Instrument objectives; or
- The transformational objectives, with regard to institutional spread and grantholder demographics, need to be met in accordance with ministerial directives.

17. Grants Administration

Grants are paid to the organisation where the grantholder is employed.

- The release of NRF funds for payment will be made according to the normal granting rules used by the NRF. The grant will be awarded over a period of two

years, that is, 80% of the grant will be released within the first year upon receipt of the following documentation:

- (i) The signed Conditions of Grant (CoG), which declares the institutional commitment towards addressing the additional requirements for installing and maintaining the equipment, including but not limited to the requirements below:
- (ii) Management Plan, approved by the DVC: Research and the CFO, which describes the institution's commitment towards addressing the requirements for installing and maintaining the equipment. The management plan must include:
 - The physical infrastructure for housing the equipment;
 - Appointment of appropriately skilled staff to maintain and operate the equipment; Training of operators and technicians by the supplier of the equipment, as well as ensuring that provision is made for them to access training abroad (the Equipment Related Travel and Training Grants Programme that is managed by HICD at the NRF is geared towards such needs);
 - Five (5) years' service and maintenance contracts; and
 - Sustainability i.e. a non-profit financial model is in place to recover the costs of operating the equipment and that the fees for usage if this equipment does not prohibit researchers from the public research institutions from accessing the equipment.
- (v) The outcome of the tender process, if applicable;
- (vi) Information that can be uploaded onto the National Research Equipment Database at the following URL, <http://eqdb.nrf.ac.za>;
- (vii) A Project Schedule/Gantt Chart; and
- (viii) Pro Forma Invoice(s) from the supplier.

These documents are subject to approval by the NRF.

The balance of the grant (20%) will be released for payment within the second year of funding **or** immediately upon receipt of the following documentation:

- (i) A final Tax Invoice;
- (ii) Updated information for uploading onto the National Equipment Database (where applicable); and

- (iii) An official written notification, signed by the grantholder and the Designated Authority, of the equipment having been installed and working satisfactorily.

18. Grantholder Responsibilities

18.1 Reporting

All grantholders must submit an APR from the date of grant award to **five (5) years** post the commissioning of the equipment. The APR will be based on an **electronic online template and a separate user and output spreadsheet** that will be provided by the NRF. The following information will be requested in the APR:

- Number of Users: This includes the Number of Honours, Masters and Doctoral students; Postdoctoral Fellows; Technicians and Staff; Grantholder and Collaborator; and Researchers, from both the private and academic sectors (local and abroad), that utilised the equipment. Details to be provided include the names and demographics of user, ID number / Student number / Staff number, Department, Citizenship, as well as Institution and Country;
- Type, name of equipment, supplier and details pertaining the installation of the equipment and how the equipment was used for research by the user;
- Total amount of funds leveraged for the duration of the project, from different types of sources including financials over the past year;
- Publications and outputs produced namely, Books, Book chapters, Articles (peer-reviewed and non-peer-reviewed), Peer-reviewed conference outputs and Technical reports;
- Training of technical staff on the operational, maintenance and diagnostic purposes;
- Training workshops undertaken;
- Collaborative initiatives with historically disadvantaged institutions, and other regional players in the same field of research;
- Number of active research collaborators who use equipment;
- Number of collaborative projects associated with the equipment;
- Research and knowledge and/or innovation outputs;
- A brief narrative describing how the equipment impacted the advancement of national priorities and any science engagement activities or research highlights; and
- Co-users need to report on actual usage and research outputs achieved.

The NRF will also conduct annual institutional site visits to ensure that the research equipment is being properly maintained, well-utilised and that postgraduate students and staff members are being trained to understand and operate the state-of-the-art research equipment.

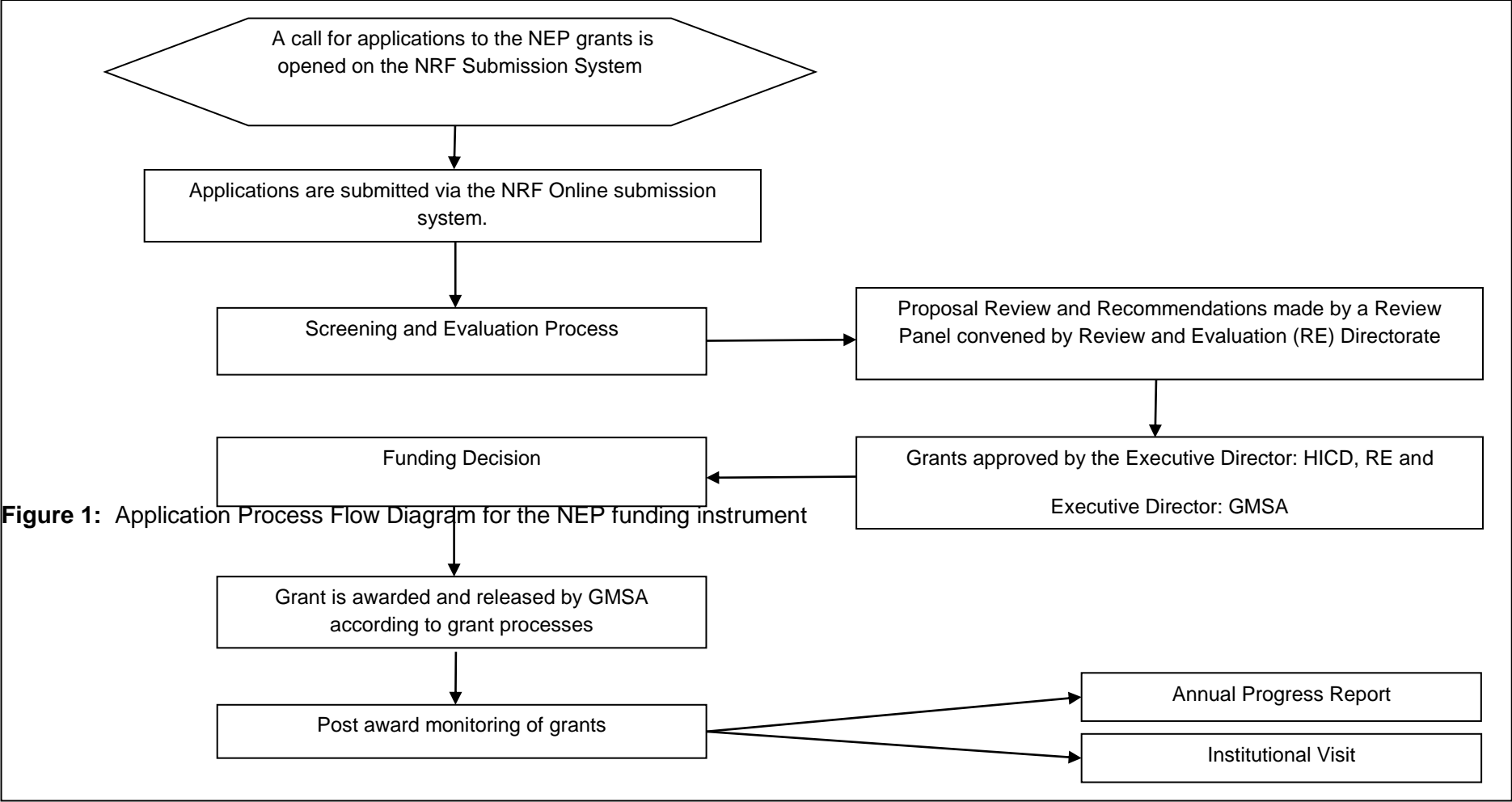


Figure 1: Application Process Flow Diagram for the NEP funding instrument

19. General

19.1 Intellectual Property Rights

The intellectual capital generated by NRF funded research must be appropriately protected and exploited for the benefit of South Africa. This condition should not interfere with the Intellectual Property Rights arrangements already made on condition that the majority of the benefits arising from the intellectual capital accrue to South Africa and its citizens. This condition is aligned with the *Intellectual Property Rights Act*¹⁰ which will override this condition of grant.

19.2 Ethics

A grantholder, and all users of the equipment commissioned through an NEP, is required to maintain the highest ethical and safety standards in conducting the research, particularly when human and animal subjects are involved. It remains the responsibility of the project leader to comply with all relevant regulations in this regard, including those of the institution at which the research is carried out. An ethical clearance certificate (where applicable) must be submitted to the NRF in respect of successful applications before funding can be released.

19.3 Access to Data

The data generated from the proposed research must become available to other researchers working in the same field. Therefore, it is important that the data is provided to domain specific databases or in their absence, to the South African Data Archive (SADA).

19.4 Data Storage, Usage and Dissemination

Should the outputs of the research project not be protected, conscious plans need to be made to make the data available to the larger research community through existing databases, some of which can be specific to the research field and others to generic research fields. Furthermore, measures need to be undertaken to ensure effective data management and integrity.

19.5 Change of Leadership

In the event of the grantholder leaving the Institution for whatever reason, the NRF must be informed, where possible, within 30 days prior to the departure of the existing grantholder from the Institution. The institution must inform the NRF of

¹⁰ Republic of South Africa, 2008, *Intellectual property rights from publicly financed research and development*. Act 51 of 2008. Government Gazette, 22 Dec 2008. Vol 522, no 31745, RSA.

alternate arrangements for the continued sustainable management of the research equipment, use of the equipment and alternate leadership.

A new grantholder must be nominated by the institution for approval by the NRF. Following NRF approval, the new grantholder will be required to sign a revised CoG document and submit a CV as well as a revised management plan. The awarded equipment will remain with the Institution and will not move with the current grantholder. Funding will only continue if the NRF is satisfied that the equipment will be managed at the same level under the proposed alternate leadership.

20. Contacts

Programme Related enquiries: Human and Infrastructure Capacity Development (HICD):

Ms Sphumelele Duma

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+27 12 481 4051

or Ms Queen Mohohoma

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Grant related enquiries: Grant Management Systems and Administration (GMSA):

Ms. Mpai Motsei

Professional Officer: GMSA

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or Ms Vireshni Moonsamy

Liaison Officer: GMSA

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Annexure 1: NEP Project Schedule/Gantt Chart Template

In accordance with good corporate governance to mitigate potential risks, it is required that each applicant submits a timeline scheduling as part of the application form. The scheduling should specify the milestones and deliverables associated with the requisite infrastructure for housing the equipment and the commissioning¹¹ the equipment, that was detailed and explained in the Equipment Management Plan. The following key issues must be addressed:

- Cost Management (charge out rates for the different types of users)
- Timelines
- Training (technicians, operators, researchers and students);
- Human Resource requirements
- Infrastructure
- Equipment installation and sign-off

The table below provides headings to information that should be provided and expanded on by the applicant, preferably using MS Project. Please note that one-line responses to the headings are unacceptable as this should be a comprehensive plan that addresses the aspects below in detail and this should be in support of the information provided in the Equipment Management Plan.

Criterion	Description/Explanation	Duration	
		Begin	End
Administration			
<ul style="list-style-type: none"> • NRF grant award (management plan, claiming of funds, updating CV, submitting APRs promptly) • Access additional financial resources if needed • Finalise building architectural and project plans • Initiate and complete supply chain management processes, including tenders • Insurance • Required services and utilities (e.g. water and electricity supply) including mandatory safety requirements if needed • Plans to attract other users and encourage access 			
Equipment			
<ul style="list-style-type: none"> • Testing of the capabilities of similar equipment, ideally from three different suppliers as per grant rules • Identification of the preferred supplier • Final detail specification of the equipment to be procured, designed or upgraded • Manufacturing of the equipment by the supplier 			

¹¹ Commissioning refers to the point at which the equipment has been successfully installed, all pre-tests have been completed, and has been signed off by the supplier and grantholder in terms of technical capabilities and specifications.

<ul style="list-style-type: none"> • Installation of the equipment • Pre-testing of the equipment • Commissioning and final sign off of the equipment • Acquiring software licences for the equipment at the stage of final sign off of the equipment • Other 			
Infrastructure			
<ul style="list-style-type: none"> • Renovate an existing building or construct a new building to house the equipment • Final check and approval of building specifications by supplier technician/engineer • Safety and security measures in place • Alternate energy supply • IT Infrastructure • Other 			
Training			
<ul style="list-style-type: none"> • Appointment of operator/technician • Training for PI and staff members (operators and technicians) • Training workshops for students and other users • Other 			
Maintenance			
<ul style="list-style-type: none"> • Preventative maintenance schedule defined with supplier of equipment. • On-going maintenance and support • Replacement and upgrade of equipment (or its components) • Other 			
Access			
<ul style="list-style-type: none"> • Proposed usage by the following users: <ul style="list-style-type: none"> ○ Own research activities ○ Researchers from the same institution ○ Researchers from HDIs ○ Academic Users from public research institutions ○ Private Sector 			
<ul style="list-style-type: none"> • Costing model for accessing equipment <ul style="list-style-type: none"> ○ Researchers from the same institution ○ Researchers from HDIs ○ Academic Users from public research institutions ○ Private Sector 			
<ul style="list-style-type: none"> • Other 			