

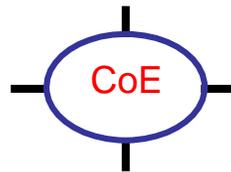


science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

HANDBOOK

to Assist with the Operation of a DST-NRF Centre of Excellence



**National
Research
Foundation**

February 2014

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ABBREVIATIONS

APR	Annual Progress Report
CoE	Centre(s) of Excellence
CoG	Conditions of Grant
DST	Department of Science and Technology
HEI	Higher Education Institute
MoA	Memorandum of Agreement
NRF	National Research Foundation
R&D	Research and Development
RCCE	Research Chairs and Centres of Excellence
SLA	Service Level Agreement

THE PURPOSE OF THIS HANDBOOK

The purpose of this handbook is to guide users so that they make the most of their long-term funding as a DST-NRF Centre of Excellence (CoE). This document should be read in conjunction with the Framework for Funding CoEs which describes the CoE concept, the Memorandum of Agreement (MoA) and the individual Service Level Agreement (SLA) of each centre. The latter two documents are contracts that ensure consistent funding and maximum return on the investment.

NOTE

This is the second version of the handbook. The substantive changes to this version have been marked for quick reference and they mainly arise from feedback on the mid-term (2008) review of the first cohort of Centres of Excellence founded in 2004. All efforts have been made to ensure that all substantive changes are marked. However neither the NRF nor the DST can be held liable should a grant-holder fail to read and understand all of the contents in this handbook.

1. DEFINITION

Centres of Excellence (CoEs) are physical or virtual Centres of research which concentrate existing capacity and resources to enable researchers to collaborate across disciplines on long-term projects that are locally relevant and internationally competitive in order to enhance the pursuit of research excellence and high-level capacity development.

The concept of CoEs as described here and in the Framework for Funding DST-NRF CoEs, has been developed, promoted and primarily sponsored by the Department of Science and Technology (DST). The CoEs are managed by the NRF and are therefore, referred to as DST-NRF Centres of Excellence. CoEs that are established by other government departments for meeting their strategic initiatives will be prefixed by that department's name. The detail of the branding process is described below (Section 3)

2. THE AIMS OF INDIVIDUAL CoE

The aims of a CoE are to:

- Promote **knowledge and human capital** in areas of strategic importance to South Africa;
- Promote **collaborative research**;
- Promote and develop **interdisciplinary research**;
- Systematically develop a creative **research training environment** that is internationally competitive;
- Strive for the highest standards of **quality**, international competitiveness and esteem of their science; and
- Diffuse **knowledge** to where it is needed.

3. CONTRACTING, NAMING & BRANDING

It is envisaged that the aims of the DST-NRF CoE programme will be achieved through funding at the adequate levels of multi-institutional groups pursuing large scale, long-term and inter-disciplinary research. This long-term support is subject to the notarisation of the binding contracts between the granter, the NRF and the grantee - the CoE's host institution. As the host institution will interact with other research-based institutions, it will also be necessary for these relationships to be governed by mutually beneficial Collaborative Agreements (CAs).

The contracts include an overarching and abiding MoA, the specific and current SLA and the CA. The content of these contracts is briefly described in the following sections of the handbook.

The name given to each of the CoEs is to follow the same basic form, i.e. The DST-NRF Centre of Excellence in/for ... The name must not contain the name of any higher education institution or science council. However, it is permissible to state that the DST-NRF CoE in/for ... is hosted by the University of.....

CoEs that are wholly funded by other government departments or quasi-government/parastatals would be prefixed by that government department's name with a suffix stating DST-NRF Centres in/ for, i.e. DHS (Department of Human Settlements) DST-NRF Centre of Excellence in Human Settlements, DHS-DST-NRF Centre of Excellence in/for...

These CoEs will bear the logo of the funding government department, alongside those of the DST, NRF, host institution and partner institutions. After approval by the Minister of Science and Technology, the funding government department will enter into an implementation contract with the NRF.

4. MANAGEMENT, GOVERNANCE, ETHICS & GENDER

As the DST - NRF CoEs are funded through public money it is vital that they adhere to the highest standards of effective and transparent management and governance.

4.1. Management

The day to day operations of the CoE are to be managed by the Director of the Centre. In the case where the CoE is co-hosted, the Node Head will assist the Director in the day to day operations of the CoE at the co-host institution. The Director should report directly to a suitable senior manager/executive within the host institution's top management team, e.g. the Deputy Vice-Chancellor (Research); Group Executive or equivalent. The Node Head should report directly to the CoE Director in consultation with the Deputy Vice-Chancellor (Research) within the co-host institution on matters pertaining to the CoE at the co-host institution. The Centre shall appoint a CoE Research Manager and, where appropriate, other ancillary staff to assist with these daily management duties. In the case where the CoE is co-hosted a Node Head will be appointed and be responsible for management of the CoE and assist the Director as required on all research themes of the CoE at the co-host institution.

The post of CoE Director and Node Head shall be full time. While CoEs are free to apply for SARChI, the Director of the CoE shall not hold both a SARChI and CoE directorship.

Should a CoE Director retire from his/her position, the replacement process of such a director will be guided by the CoE Steering Committee, NRF and DST.

The employment and financial policies that guide the operational activities of the CoE must fall within current South African legislation and the policies of the host and/or co-host institution and should be overseen by the CoE Steering Committee.

The management of the activities of the CoE will be overseen by the CoE management committee, assisted by the preparation of an annual business or activity plan. This plan will be approved by the CoE Steering Committee and should include an annual cash flow projection and an annual budget. The budget should include the following items:

- (i) Income (broken down by source)
- (ii) Expenditure:
 - a. Salaries (of all CoE staff members – not individual amounts);
 - b. Travel, conferences and subsistence;
 - c. Equipment (> R50 000 and < R500 000);
 - d. NRF-funded bursaries (block release to be administered by CoE but nomination of awardees made on the NRF online granting system);
 - e. Running (all other expenses).

4.2. Governance

The activities of the CoE will also be guided by a CoE Steering Committee that will give strategic direction and be responsible for high level control of the CoE. Nominations of Steering Committee members will be guided by the Host, Co-host and the NRF executive responsible for the DST – NRF CoE Funding Instrument. The host institution in consultation with the Steering Committee must provide fiduciary oversight for the CoE and its activities at the host institution and co-host institution where applicable. Nominees will be then approved by the Executive Director: Research Chairs and Centres of Excellence.

Specifically, the functions of the Steering Committee will be to:

- Advise on objectives for the CoE;
- Advise on the Strategic Plan for the CoE;
- Discuss and resolve matters of policy that relate to the CoE;
- Approve the annual Business Plans including the budgets and performance targets (within the constraints set by the NRF);
- Approve Annual Progress Reports prior to submission to the NRF;
- Make recommendations to the NRF concerning the progress through developmental gates;
- Monitor, evaluate and comment on performance of the CoE;
- Assist in the promotion of, and lobbying for support for the CoE to facilitate achievement of the objectives of the CoE;
- Advise CoE on the resource requirements, including the financing;
- Create such sub-committees as may be necessary and define their roles and responsibilities; and
- Assist the Parties in fulfilling their respective fiduciary responsibilities in ensuring the effective and efficient use of the grant funds.

This Steering Committee will be constituted by at least the:

- Director and Node Head of the CoE;
- Deputy Vice-Chancellor (Research) or equivalent of the Host and Co-host institutions (to be nominated by the senior management team of the Host and Co-host institutions respectively);
- Representative of the DST (to be nominated by the Deputy Director-General responsible for the CoEs)

- Representative of the NRF (to be nominated by the Executive Director responsible for management of the CoE Funding Instrument);
- At least two (2) members who can add scientific and technical inputs;
- Any other members that are deemed, to be able to make a scientific, technical and valuable contribution to the CoE; and
- Members of collaborating institutions;

4.3. *Research Integrity/Ethics*

It is imperative that the highest standard of research integrity/ethics acceptable to the host and/or co-host institution(s), the NRF and the DST and all other stakeholders are met at all times during the performance of the mandate of the DST - NRF CoE.

4.4. *Gender Issues*

It is imperative that all activities of the CoE, including administration and research, be performed in such a manner that is sensitive to gender. It is important to report on the performance of the CoE with respect to its gender-relevant research.

5. THE FUNDING CYCLE AND EVALUATION

5.1. *Transfer of Funds*

The transfer of funds will be made biannually in January and July of each year to the host institution (in two equal instalments), based on the annual CoE Steering Committee-approved cash flow projection and monthly (actual) cash flow statements. Monthly cash flow statements sent to the NRF will be compulsory for the first 18 months of the life of the DST - NRF CoE, after which quarterly cash flow statements will be required.

In cases where the CoE is co-hosted with another institution, the host institution will facilitate the transfer of funds to the co-host institution and a consolidated cash flow statement of the host and co-host must be sent to the NRF as per the above statement.

The transfer of funds is subject to:

- Steering Committee approval of business and/or activity plan;
- Satisfaction of all NRF requirements (including submission of Annual Progress Reports);
- Availability of funds;
- Presentation of an unqualified audit report.

5.2. *Expenditure*

The core funding of an approved DST - NRF CoE will be for a period of 10 years¹ where appropriate and subject to the availability of funds in order to ensure continuity and to encourage long term research programmes. The funding will be based on the standard costing model involving the full declaration of costs. Funding will cover salaries, including student support, operational costs and limited equipment purchase costs. The details of the funding limitations are presented in the tables below. All expenditure must be incurred using the most effective and efficient spending model.

¹ It is highly recommended that hosting and collaborating institutions of the CoE put in place a sustainability plan post 10 years. Limited funding will be considered after this period, in consideration of the recommendations summative review and in consultation with the host institution, to contribute to the sustenance of the CoEs and their branding as DST-NRF establishments.

5.2.1. Salary costs

Item	Allowed	Not allowed
CoE Director/Principal Investigator ²	Subvention (to be negotiated with institutions)	
Node Head/ Principal Investigator ²	Subvention (to be negotiated with institutions)	
CoE Research Manager	Institutional staff level equivalent	
CoE ancillary staff	Institutional staff level equivalent	
CoE Investigators	Institutional staff level equivalent plus top up (see below)	Researchers perform research as part of their functions as university academics
Contract positions	See below for details concerning top-ups	
Post-Doctoral Fellows	Institutional staff equivalent	
PhDs	Bursaries in line with institutional norms	
Masters	Bursaries in line with institutional norms	
Research assistants (3 rd & 4 th Year)	Bursaries in line with institutional norms	
Technical expert/consultant	Must be justified and supported by information on the expertise, rates of pay and hours of work. Rates should not exceed the normal daily rates.	
Fellowships, technical, assistantships, short stay and other initiatives		

Should you choose to “top-up” the salaries of CoE investigators, it must be applied under the following conditions:

- The investigators must be full-time, permanent employees or full-time, contract employees of a South African institution participating in the centre.
- The total top-up salary bill for the centre must not exceed 33% of the total basic salaries³ paid by the employing institutions to all the CoE’s investigators (this excludes the director, administrator, etc.).
- The investigators must be established scientists, ideally with an NRF rating. Top-ups can be paid to non-rated scientists on condition that the candidate enters the rating process. Failure to achieve a rating in a reasonable time will exclude the candidate from further top-up support. This rule can be waived on written approval of the NRF. The motivation would typically revolve around the fact that the researcher concerned is unable to obtain a rating due to restrictions on the publication of research.
- Top-ups should only apply where individuals do not already receive additional income from other sources. Further, in those instances where they do receive a

top-up and it is less than 33% of basic salary, then top-up to 33% from CoE funds may be considered.

- Individual top-ups must be determined by the CoE's Steering Committee or steering committee according to the rules of the employing institution and in a transparent and fair manner.
- The top-up will only be paid for the duration of time that the principal investigator works with the CoE in the capacity of investigator.

² The CoE Director is the principal investigator.

³ Basic salaries exclude employer contributions to pension, provident fund, medical aid, etc. In other words basic salary will always be less than the total cost of earnings (TCOE) to the employer.

5.2.2. Operational costs

Item	Approved	Not approved
Domestic air travel	Economy round trip rates, SA flag carriers preferred.	
Domestic road travel	Consistent with host institution norms and procedures.	
International air travel	Economy round trip, SA flag carriers preferred, accompanied by justification, travel plan and must be directly related to the CoE work and consistent with host institution norms and procedures.	
Subsistence	Consistent with host institution norms and procedures.	
Participant support (transport, per diem, stipends and other related costs for participants or trainees but not CoE employees) in CoE-initiated conferences, seminars, workshops, training sessions or symposia	Direct costs only – justified and clearly documented.	
Other direct costs	Only direct and reasonable expenditures (cf consultants, computer services) for the functioning of the CoE.	

5.2.3. Equipment Costs

Item	Approved	Not approved
Computing hardware & software	For exclusive or majority use by CoE	
Small equipment of value between R50k to R500k	For exclusive or majority use by CoE	
Large equipment > R500k	CoEs can save over time to purchase large equipment of more than R500k.	Except by negotiation and in accordance with the National Equipment Programme

5.3. Bursaries

As indicated above, the cost of student bursaries will be covered by the support of the CoE or other NRF student funding stream. The total amount required annually will be released with the first payment. Student nominations will be made through the NRF student nomination online system. Bursary funds will be based on an actual nomination or estimated numbers. The payment of the bursaries will be subject to:

- The provision of a list (and other relevant data/information) of registered students;
- Verification of the data by the institutional administrations;
- Verification by the NRF that these students are not being paid other bursaries;
- Adherence to the principles contained in the Ministerial Policy Document on Bursaries, Scholarships and Fellowships.

5.4. *Income*

It is vital that the host and participating institutions make contributions to the cost of running the CoE. Other sources of income to ensure longer term sustainability are also strongly encouraged. It is imperative, though; that all sources of income are declared in full in the financial records of the CoE and that the CoE Steering Committee oversight role is also extended to the CoE leveraged funds. The principle behind this requirement is that the total cost of the research should be known and not that funding levels can be scaled to balance income with expenditure.

5.5. *Auditing*

The proof and test of appropriate expenditure will be carried out by external auditors, appointed and paid⁴ for by the CoE at the end of each developmental stage

(see below). These audit reports will eliminate the need for the standard NRF claim system.

5.6. *Evaluation*

The funding cycle [Phase 1] will be for a period of 10 years where appropriate, based on the ongoing evaluation of the progress and success of the CoE. Evaluation will be focused on the six Key Performance Areas (KPA) presented in the Guide, i.e. research; education and training; information brokerage; networking; service rendering. The KPA on management will look at the effectiveness of the CoE, including structure and function, and this assessment will be accomplished through regular site visits, or the so-called technical audits, and standard reporting, i.e.:

- Annual progress reports (APRs)
- External audit reports
- Stage/gate reviews (see below)
- Final report
- Post funding report

The assessment will be carried out by the DST-NRF CoE Steering Committee and independent advisors appointed by the NRF, if necessary. The Steering Committee can recommend closure of a CoE if progress is not satisfactory as indicated by the failure to meet specific aims and targets as laid out in the MoA or the associated SLA. The closure of a CoE will be subject to the provisions made in the MoA under Breach and Termination.

5.7. *The Stage/Gate Process*

The lifespan of each CoE will be controlled and guided by the stage/gate process. This will consist of five stages of development, each focusing on different deliverables appropriate for that stage of development, separated by four gates. The deliverables will be defined in the current SLA. The SLA will be updated for each developmental stage. The gates are decision making processes that involve reviews of progress and plans for further development.

The gate-keepers, or decision-makers, will consist of the NRF representatives supported by necessary experts (peers) recruited from the appropriate scientific field and advised by the CoE Steering Committee. Outcomes of the gate-keeping process will include:

- Pass through gate and proceed with agreed funding according to presented plan;
- Pass through gate with continued funding subject to the meeting of immediate targets and additional conditions;
- Do not pass through the gate – close the CoE based on Breach and Termination clause of the MoA.

⁴ This payment may be made out of the interest earned on transferred funds

The stages and their separating gates will be specifically tailored for each CoE, but are described in general in **Figure 1**. The relationship between outputs and time for the five stages is illustrated in **Figure 2**.

6. CO-DEVELOPMENT AND LEARNING

It is the intention of the DST (and other government departments) and NRF to use CoEs as experimental laboratories for the study of the development of science within the South African science and innovation system. Therefore, from time to time the NRF will call for the co-operation of the CoE staff to map performance, attitudes, successes and failures so as to create a picture of the new initiative as it unfolds. Special attention will be paid to the impact of the investment on students and their development, knowledge and its use and the development of the host institutions.

7. REGULAR LAY-REPORTING THROUGH “NUGGETS”

The DST-NRF CoE programme is sponsored by public funds and therefore there is a strong need to account for the expenditure to the lay public. This will be achieved through the regular collection of “nuggets” of information from each CoE concerning their performance and achievements. These nuggets will be suitably packaged so that they are easily understandable by the lay public and will be posted on the “Centres” page of the NRF website (www.nrf.ac.za/centres).

8. ANNUAL TIME LINE

The various administrative deliverables described in the MoA, e.g. submission of Annual Business Plan, are summarised in the time line shown in **Figure 2**. This time line is based on the assumption that the financial years of the host institution and the NRF run from January to December and from April to March of every year.

The Statement of Compliance (SoC) is to be submitted annually as a formal declaration of adherence to all provisions in the MoA and the SLA.

9. CONCLUSION

The DST-NRF CoE initiative is expected to provide multiple positive benefits to the science community and the National System of Innovation as a whole. It is hoped that this handbook will assist in maximising these benefits.

STAGES

GATES

1. FORMING	<ul style="list-style-type: none"> Establish CoE Steering Committee Hire required staff Recruit students Fine tune long-term strategy Establish management system Determine short-term goals Establish spirit 	Setting the scene
 Gate 1: 12 Months		
2. STORMING	<ul style="list-style-type: none"> Produce early outputs Demonstrate good management Demonstrate synergies Confirm long-term strategy Cash flow Demonstrate growing team spirit 	Bedding down
 Gate 2: 6 Months		
3. NORMING	<ul style="list-style-type: none"> Research outputs Networking examples Knowledge transfer Service delivery Stakeholder surveys Capacity development Growing team spirit 	Growth & Rol
 Gate 3: 6 Months		
4. PERFORMING	<ul style="list-style-type: none"> Research and other outputs Cash cow Re-imagine Re-engineer 	Production & Rol
 Gate 4: 24 Months		
5. EXITING	<ul style="list-style-type: none"> Future strategy Funding (other sources) Forming 	Winding up & impact assessment

Figure 1: Stage/Gate Process

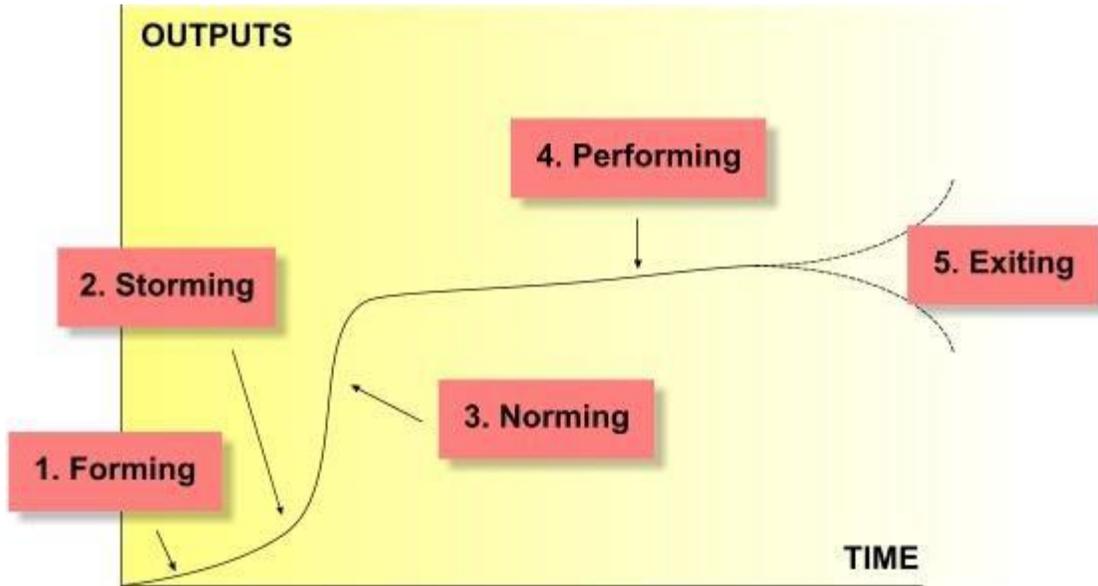


Figure 2: Relationship between outputs and time.

10. NRF contact persons

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