



# **GUIDE FOR APPLICATION**

## **South African Research Chairs Initiative**

Revised: 10 February 2012

# **South African Research Chairs Initiative**

## **Call for applications**

**Phase 2 full proposal including  
*Curriculum Vitae* of nominated candidate  
and proposed research programme**

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## Section 1. Strategic background

### 1.1 Context

The White Paper on Science and Technology and the National Research and Development Strategy (NR&DS) put emphasis on the need for South Africa to transform its Science, Engineering and Technology (SET) workforce. Other policy and strategies of government, including the Human Resource Development Strategy (HRDS) and the Medium Term Strategic Framework (MTSF) note the shortage of high-level skills as a significant constraint in the development of the economy and society.

In this regard, South Africa must produce a greater number of highly skilled individuals; particularly in SET, to achieve the goal of *“an equitable, sustainable, and inclusive growth path that brings decent work and sustainable livelihoods, education, health, safe and secure communities, and rural development”*.

The South African Research Chairs Initiative (SARChI) was established in 2006 by the Department of Science and Technology (DST) and is managed by the National Research Foundation (NRF) of South Africa. It is a strategic intervention of the South African government designed to attract and retain excellence in research and innovation at South African universities. In particular, the programme is aimed at increasing scientific research capacity through the development of human capacity and stimulating the generation of new knowledge. It is also intended to support the realisation of South Africa’s transformation into a knowledge economy in which the generation of knowledge translates into socio-economic benefits.

SARChI is designed to significantly expand the scientific research base of South Africa in a way that supports implementation of the national Research and Development policies. Over the past five years, SARChI has been successful in retaining leading South African scientists in the university system and attracting leading foreign researchers and expatriate researchers to South Africa.

## 1.2 SARChI objectives

The main goal of the initiative is to strengthen and improve research and innovation capacity of public universities for producing high quality postgraduate students, research, and innovation outputs. Some of the objectives of SARChI are to:

- Expand the scientific research and innovation capacity of South Africa;
- Improve South Africa's international research and innovation competitiveness while responding to social and economic challenges of the country;
- Attract and retain excellent researchers and scientists;
- Increase the production of masters and doctoral graduates; and
- Create research career pathways for young and mid-career researchers, with a strong research, innovation and human capital development output trajectory.

## 1.3 Guiding principles for SARChI

The following principles will inform the awarding of Research Chairs to universities:

- SARChI is a strategic instrument aimed at strengthening research and innovation capacity in public universities, enhancing the training of a new generation of researchers and the further development of established researchers in all knowledge areas while responding to national priorities and strategies;
- SARChI is a programme for universities, and Research Chairs may be held by a university in partnership with a public research institution such as: another university, a science council, a national research facility or an academic health complex;
- Universities bid for Research Chairs in an open and competitive process, hence Chairs are not pre-allocated to institutions. However, particular opportunity will be afforded to universities of technology, rural-based institutions and those that have historically not participated in this programme but now meet the requirements of the initiative;
- There will be no restriction on the number of Research Chairs that may be awarded to a single institution;

- Research Chairs must be in alignment with the university Programme and Qualification Mix approved by the Department of Higher Education and Training;
- Research Chairs are expected to dedicate at least 95% of their time conducting research, supervising an average of 10 masters and doctoral students per annum and mentoring emerging researchers. The remainder of the time can be for administration or undergraduate teaching;
- Research Chairs are tenable at two Tiers. Tier 1 is for established researchers that are recognised internationally as a leader in their field and/or have received substantial international recognition for their research contributions. Tier 2 is for established researchers, generally under the age of 40 (forty) years with a strong research, innovation and human capital development output trajectory, and the potential to achieve substantial international recognition for their research contributions in the next five to ten years.
- Candidates from abroad that are willing to spend at least 50% of their time within South Africa are eligible for consideration, at the Tier 1 level, with the intention of attracting candidates, including African scholars and South Africans in the diaspora, that have distinguished themselves in their research fields. However, international candidates at Tier 2 level are required to reside full-time in South Africa for the duration of the Research Chair award.

#### **1.4 University accountability for SARChI Chairs**

Research Chairs may be awarded in all knowledge domains including science, engineering and technology and the social sciences and humanities. Chairs shall be appointed by the university, at the level of an Associate Professor or full Professor, benchmarked nationally. The Chairs will fit into the normal management structures of their host institutions. However, accountability for the Chairs will reside with the Vice-Chancellor or Deputy Vice-Chancellor responsible for research.

## 1.5 Profile of candidates

The intention of SARChI is to attract and retain established researchers of high caliber, within the universities, recruiting individuals from within South Africa and globally with particular emphasis on the diaspora. The NRF will require the approved candidate for a SARChI Chair to enter into a five-year performance agreement in the form of a ‘*Conditions of Grant*’ and will evaluate the performance of the Chair against the research plan, stated objectives and targets. The track record of the nominated candidate is therefore very important to the selection process and success of the Chair.

Once a Research Chair has been awarded to a university, the host university will be responsible for nominating and recruiting the Chair candidate. The nominated candidate may be an existing staff member or a new recruit to the university. Where a Research Chair is taken up by an existing academic staff member, the university must immediately initiate a process to fill the vacated position with a suitably qualified candidate<sup>1</sup>. The replacement candidate must be employed on a full-time basis for the duration of the tenure of the Research Chair. Where such replacement candidates are not young, black or female, the university must develop a succession plan designed to develop a range of possible candidates with competitive capacity within two cycles of a Research Chair award.

All candidates nominated for a Research Chair must be established researchers that hold a doctoral degree or an equivalent research qualification and must submit a proposed research programme that is innovative, original and of high quality. Following the peer review of the full proposal and the *curriculum vitae* of the nominated candidate, Research Chairs may be approved at the Tier 1 or Tier 2 level based on their past research and innovation outputs, track record in supervising and mentoring postgraduate students and postdoctoral fellows and national and international recognition for their research contributions. The criteria that must be met by nominated candidates for approval at the Tier 1 or Tier 2 level are detailed in Table 1.

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<sup>1</sup> In short this Initiative must **add** to the number of university research and academic staff.

**Table1.** Criteria for SARChI Tier 1 and Tier 2 Chairs

Tier I Research Chairs	Tier 2 Research Chairs
<ul style="list-style-type: none"> <li>• Should be appointed at the level of a full Professor benchmarked nationally;</li> <li>• Should be an outstanding and innovative researcher whose accomplishments have made a major impact in their field;</li> <li>• Should be recognised internationally as an undisputed leader in their field and/or have received substantial international recognition for their research contributions;</li> <li>• Should have a superior record in attracting and supervising post graduate students and postdoctoral fellows, taking into account the practices of the field; and</li> <li>• Should reside full time in South Africa for the duration of the Research Chair award. Candidates from abroad, including African scholars and South Africans in the diaspora, that are willing to spend at least spend 50% of their time within South Africa are eligible for consideration.</li> </ul>	<ul style="list-style-type: none"> <li>• Should be appointed at the level of an Associate Professor or full Professor benchmarked nationally;</li> <li>• Should be an established researcher, generally under the age of 40 (forty) years, with a strong research, innovation and human capital development output trajectory;</li> <li>• Should have the potential to achieve substantial international recognition for their research contributions in the next five to ten years;</li> <li>• Should have demonstrated the ability to attract and successfully supervise postgraduate students and postdoctoral fellows; and</li> <li>• Should reside full-time in South Africa for the duration of the Research Chair award. Candidates from abroad, including African scholars and South Africans in the diaspora, who are generally under the age of 40 (forty) years, are eligible for consideration.</li> </ul>

## **Section 2. Proposal submission and assessment process**

This section of the Guide for Application outlines the directed and thematic research areas proposed for the awarding of the 62 Research Chairs. It also describes the process for proposal submission and assessment and provides details on the call timelines.

### **2.1 Thematic areas**

The proposed thematic areas for the awarding of new Research Chairs are intended to support scientific research and innovation generally, but also to respond to the five priorities of government, namely:

- Creation of decent work and sustainable livelihood;
- Education;
- Health;
- Rural development, food security and land reform; and
- The fight against crime and corruption.

These have been expanded into priorities of the Medium Term Strategic Framework (MTSF) and the 12 Outcomes. The following outcomes have been prioritised in formulating the themes for the awarding of the Chairs:

- A long and healthy life for all South Africans;
- Vibrant, equitable, sustainable rural communities and food security for all;
- Protection and enhancement of environmental assets and natural resources;
- An efficient, competitive and responsive economic infrastructure;
- Sustainable human settlements and improved quality of households;
- Skilled and capable workforce to support inclusive growth;
- Quality education; and
- All people in South Africa are, and feel, safe.

The proposed themes are also informed by the need to strategically grow specific research areas as well as the absorptive capacity of individual universities and the university system generally. Thus the themes listed below are proposed for Chairs to be awarded in this call.

- Technology Missions;
- Science Missions through Areas of Geographic Advantages for scientific research;
- Science and Technology for poverty alleviation and local/regional innovation including sustainable rural development;
- Open Category with a focus on Fundamental Disciplines, Scarce and Critical Knowledge Fields;
- Innovation, Engineering and Technology Development and Commercialisation; and
- Priority research areas (Grand Challenges).

In addition the following specific research areas are targeted for the awarding of eight (8) directed special category Chairs:

- Global Change
- Health Innovation
- Biotechnology

The proposed distribution of the 54 Thematic Chairs to be awarded is indicated in Table 2 and further details on the six (6) identified themes and eight (8) Directed Chairs are posted on the NRF website at [http://hicd.nrf.ac.za/sarchi/sarc\\_rif\\_overview.html](http://hicd.nrf.ac.za/sarchi/sarc_rif_overview.html). The proposed number of Chairs to be awarded in each research theme is intended to guide the awarding of the 54 Research Chairs to areas where there is a strategic need to develop research and innovation capacity and human capital. However, a degree of flexibility will be exercised, within the thematic research areas, in the awarding of the Chairs. Furthermore, while the proposed thematic distribution specifically identifies three (3) thematic areas in which a total of 16 Chairs will be awarded in the social sciences, all thematic areas are open to applications for Research Chairs in the social sciences.

**Table 2.** Proposed thematic distribution of SARChI Chairs

<b>Research Theme</b>	<b>Proposed number of Chairs to be awarded</b>
Technology Missions (ICT, Biotechnology, Advanced Manufacturing and Emerging Research Areas)	8
Science Missions (Research Areas of Geographic Advantage)	5
Priority Research Areas Grand Challenges Social Sciences within priority research areas	2 6
Poverty Alleviation, Sustainable Rural Development and Local/Regional Innovation All disciplines within these areas Social Sciences within these areas	8 5
Innovation, Engineering and Technology Development and Commercialisation	10
Open category with a focus on fundamental disciplines, Scarce and Critical Knowledge Fields All disciplines within these areas Social Sciences within these areas	5 5
<b>TOTAL</b>	<b>54</b>

## 2.2 Proposal submission and assessment

The proposal submission and assessment process, as illustrated in **Figure 1**, consists of two phases namely, Phase 1 and Phase 2. The objective of Phase 1 is to establish (i) the readiness and commitment of the university to host the proposed Research Chair; (ii) the alignment of the proposed research with the university research strategy; (iii) the potential of the proposed Research Chair to enhance the international research and/or innovation competitiveness within the discipline; and (iv) the potential of the research to impact on social and/or economic development of the country. Following the Phase 1 evaluation process, Chairs will be awarded to selected universities based on proposals

that meet these requirements. Particular opportunity will be afforded to universities of technology, rural-based institutions and those that have historically not participated in this programme but now meet the requirements of the initiative.

### **Phase 1: Application by the university**

This phase begins with the submission of proposals by universities during the call period. As awards of SARChI Chairs are to be made to the host university; Research Chairs must be applied for by the university and not the nominated candidate for the Chair. The submission must be made by the Deputy Vice Chancellor responsible for research at the university. Each university must submit the following documentation to be considered as a host university for Research Chairs:

- University Research Strategy;
- Programme and Qualification Mix approved by the Department of Higher Education and Training;
- Details of current academic and research staff, in the disciplines in which the university proposes to host Research Chairs; and
- Statistics on research outputs and postgraduate students trained and graduated for the period 2006 to 2010, in the disciplines in which the university proposes to host Research Chairs.

A separate application (maximum of 20 A4 pages, Arial font, 11 point and 1.5 spacing) must be submitted for each SARChI Chair and applications must address the selection criteria listed in **Section 2.3**. While it is preferable to have an identified candidate for the Research Chair at this stage, it is however, not mandatory.

Assessment of the Phase 1 proposal will be undertaken by a panel that will make recommendations for approval by the NRF and DST principals. This assessment will not focus on the detailed scientific programme, but rather on the:

- alignment of the proposed Chair with the proposed thematic areas and university research strategy;
- strengths, capabilities, strategic environment and competencies of the university; and

- commitment of the institution to provide an enabling environment to ensure the success of the Research Chair.

## **Phase 2: Selection and nomination of candidates**

Phase 2 follows the award of the SARChI Chair(s) to the host universities and requires the submission of a full proposal (maximum of 50 A4 pages, Arial font, 11 point and 1.5 line spacing) and the *Curriculum Vitae* of the nominated candidate. Full proposals may be submitted either in May 2012 or in August 2012 subject to the university having identified a suitable candidate for the Research Chair. The closing dates for rounds 1 and 2 submissions are 21 May 2012 and 20 August 2012, respectively.

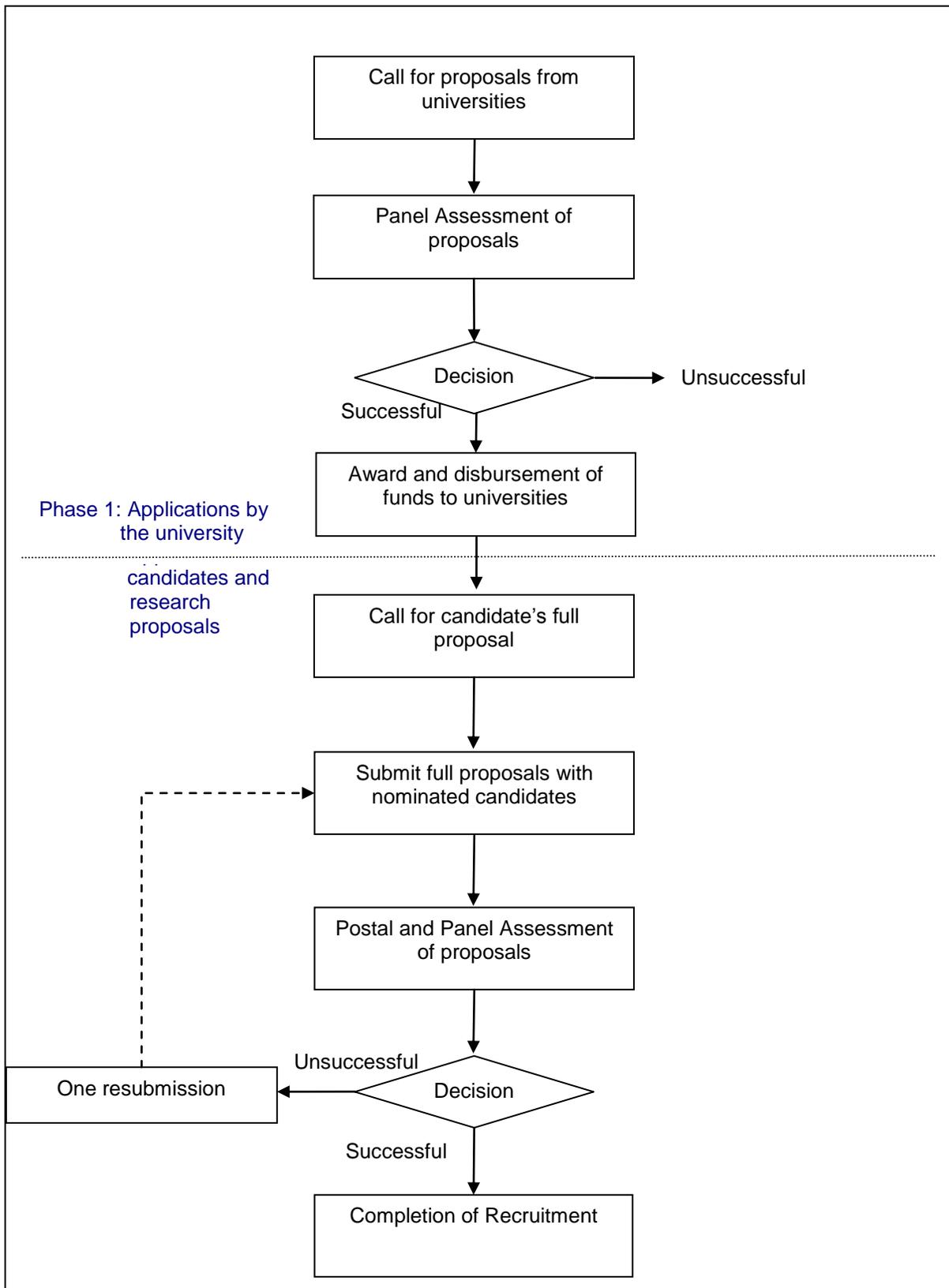
The full proposal shall be authored by the nominated candidate in consultation with the university Deputy Vice Chancellor responsible for research. It will give details on (i) the research focus of the Research Chair; (ii) a proposed plan on how the Research Chair will fulfill SARChI objectives, including the strategic considerations mentioned in the university proposal; (iii) how it will deliver on the university research strategy; and (iv) specific objectives, outputs and outcomes for the five-year period. More information on selection criteria is given in **Section 2.3**. The full application must also include the biography of the candidate, who will have, in principle<sup>2</sup> accepted the nomination for the Research Chair by the university. Nominated candidates must use the NRF Online system (<http://nrfonline.nrf.ac.za>) to register and/or update their *curriculum vitae*

Assessment of proposals will be undertaken through a postal peer review by subject experts who will make recommendations. The recommendations will then be considered by a panel that will then make funding recommendations for approval by the NRF. In the event of the nominated candidate not meeting the requirements for appointment as a SARChI Chair or the proposed research programme requiring substantial revision and resubmission, the host university will be permitted one resubmission of the Phase 2 Proposal. Failure to identify a suitable candidate and conclude the appointment process within 18 months of the Research Chair having been awarded may result in the rescinding of the award to the university and the re-awarding of the available Research Chair.

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<sup>2</sup> No commitment should be given before the NRF has officially informed the university of the award by means of an award letter

Duly signed full proposal by the university and nominated candidate shall be submitted in an electronic format (preferably PDF) and a hard copy, using the templates provided as a guideline.



**Figure 1:** Proposal submission and assessment processes for Research Chairs

## 2.3 Selection Criteria

### Phase 1: Application by the university

All Research Chair applications will also be considered against the identified directed and thematic research areas, national research priorities as articulated in general and specific government or agency policy documents including the National R&D Strategy.

The selection of successful university proposals during Phase 1 will be based on the readiness and suitability of the university to host the proposed Research Chair and the strategic alignment of the proposed Chair. The proposal must therefore address the following:

- The alignment of the proposed Research Chair with the university's research strategy and PQM;
- The alignment of the proposed research with a directed or thematic research area;
- The university's research strength and competencies in the area of the proposed Research Chair;
- Alignment of the proposed Research Chair's focus with that of existing research activities or capacity;
- University commitment for creating an enabling environment with regard to:
  - Office and/or laboratory space.
  - Infrastructure (equipment, IT facilities, etc.);
  - Academic support (information, resource facilities and related research groups);
  - Management and leadership; and
  - Financial support (direct and indirect);
- The reporting lines and location of the Research Chair within the university structure

## **Phase 2: Selection and nomination of candidates**

The selection of candidates will be based on merit of each candidate's full proposal. This will include the strength of the candidate's profile, including her/his qualifications and experience, publishing and postgraduate student training track records. It will also include an assessment of the candidate's research and activity plan in respect of its ability to deliver on SARChI objectives as well as a proposed budget (see **Section 3.3. Funding Levels**).

The full proposal shall also give specific details on:

- The proposed teaching<sup>3</sup> to research time ratio;
- Research objectives for the five year period;
- Expected knowledge<sup>4</sup> outputs in the first five year period;
- Expected human capital<sup>5</sup> outputs in the first five year period;
- The proposed budget;
- Existing and planned collaborations in the first five year period; and
- Expected development trajectory of the incumbent<sup>6</sup>.

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<sup>3</sup> Teaching of postgraduate students only. Note: Chair holders may not spend more than 5% of their time on undergraduate teaching and/or management responsibilities not related to activities of the Chair.

<sup>4</sup> Peer reviewed journal articles, peer-reviewed conference proceedings, scholarly books and book chapters, patents, invited keynote presentations, conference presentations etc.

<sup>5</sup> Numbers of Masters and Doctoral graduates and completed post-doc fellowships

<sup>6</sup> Progress in impact on local and international research community indicated by NRF Rating and other appropriate means

## 2.4 Call timelines

The key activities and timelines, to ensure effective implementation by the NRF and the universities, are outlined in Table 3 below.

**Table 3.** Research Chairs call activities and timelines

Activities	Timelines
<b>Phase 1: Awarding of Research Chairs to host universities</b>	
1. NRF Briefing Meeting for University Deputy Vice Chancellors	02 June 2011
2. Call closes for submission of Phase 1 proposals	01 September 2011
4. Award letter sent to Vice Chancellors and Condition of Award signed by Vice Chancellors and Deputy Vice Chancellors	30 November 2011
3. Transfer of funds, for all Chairs awarded, to universities	10 December 2011
<b>Phase 2: Approval of nominated candidate and full proposal</b>	
4. Call opens for submission of nominated candidate's full proposal	28 February 2012
5. First deadline for submission of candidate's full proposal	21 May 2012
6. Announcement of outcomes of the Phase 2 (round 1) evaluation process	10 August 2012
7. Second deadline for submission of candidate's full proposal	20 August 2012
8. Announcement of outcomes of the Phase 2 (round 2) evaluation process	05 November 2012
<b>9. All Chairs operational</b>	<b>1 January 2013</b>

## Section 3. Management of the Research Chairs

This section of the Guide for Application describes what follows after the Research Chairs have been awarded to the university.

### 3.1 Duration of the Research Chair

Research Chairs are tenable at two Tiers. Tier 1 is for established researchers that are recognised internationally as leaders in their fields and/or have received substantial international recognition for their research contributions. Tier 2 is for established researchers, generally under the age of 40 (forty) years with a strong research, innovation and human capital development output trajectory, and the potential to achieve substantial international recognition for their research contributions in the next five to ten years.

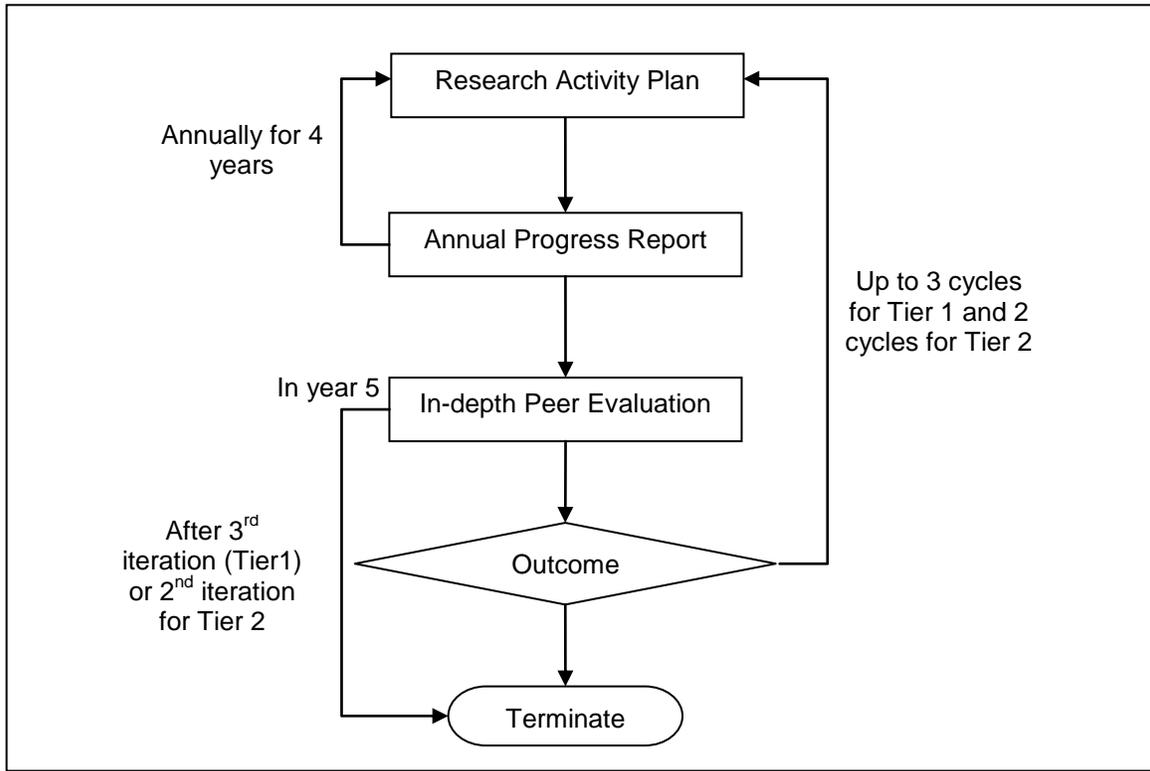
Tier 1 Research Chairs will be tenable for five years, renewable for two further five-year periods giving a total life lifespan of 15 years. Tier 2 Research Chairs will be tenable for five years, renewable for a further five year period giving a total life span of 10 years. Eligibility for renewal will be entirely performance linked and Tier 2 Chairs may be upgraded to a Tier 1 Chair after the first five-year funding period based on the recommendations of the five-year term review.

### 3.2 Management of Research Chairs

The management of SARChI grants is illustrated in **Figure 2** and described below.

On accepting the award and signing the '*Conditions of Grant*', the newly appointed incumbent of the Research Chair will be required to deliver on the research activity plan that formed part of the accepted full proposal. At the end of each financial year the incumbent will be required to submit to the NRF an annual progress report addressing milestones and expected outcomes presented in the research activity plan.

During year five of the five-year funding cycle, the Research Chair will be subjected to an in depth evaluation undertaken by peers following the framework set out in the [SARChI Monitoring and Evaluation Framework](#).



**Figure 2.** Management of Research Chairs over the tenure of the Research Chair

### 3.3 Funding Levels

SARCHI proposes to make an award of up to R2,5 million and R1,5 million per annum per Tier 1 and Tier 2 Research Chairs, respectively. This award will cover salaries<sup>7</sup>, postdoctoral fellowships and postgraduate student bursaries, research operating costs and research equipment and infrastructure. The guidelines for apportioning of the grant across these categories and the values of fellowships and scholarships are shown in **Table 4.**

<sup>7</sup> Salaries of the incumbent and limited administrative support

**Table 4:** Guidelines for SARChI grant annual budget breakdown for Tier 1 and Tier 2 Research Chairs

Budget category	Sub-item	Cost/person/annum	Minimum number of people <sup>8</sup>	Maximum number of people
Salaries	Chair	550 000 to 700 000	1	1
	Admin support	30 000		1
	Research assistants	30 000		3
Fellowships	Post-doctoral fellows	140 000	1	
Bursaries	Doctoral (full time)	80 000	2	
	Masters (full time)	50 000	2	
	Honours	25 000	4	4
Research equipment or infrastructure	Up to R400 000	400 000		
Running	Up to 30% of budget			
University Overhead	Up to 10% of budget			

It is important to note that this budget template provides a guide that stipulates the minimum and maximum amounts per budget category and has the flexibility for each Tier 1 or Tier 2 Research Chair to allocate the SARChI grant based on the research activity plan. The proposed budget will be approved at the commencement of each five-year funding cycle. Incumbents will be given an opportunity, at the end of each calendar year, to make budget adjustment for the subsequent year, in consultation with the SARChI Programme and Grant Directors.

A Research Chair will not be eligible for additional NRF parliamentary core grant funding, except in respect of large equipment grants and Rated Researchers Incentive Funding. Incumbents must apply for grants for large equipment through the National Equipment programmes.

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<sup>8</sup> Minimum number of people allowed

Research Chairs are expected to dedicate at least 95% of their time conducting research and supervising an average of 10 masters and doctoral students per annum. The Chairs are therefore strongly encouraged to attract additional funding for research and human capital development from other national and international funders and donors to supplement the SARChI grant.

### 3.4 Payment of Grants

The grant for year 1 of 5 for SARChI Chairs awarded in December 2011, will be fully disbursed to the university upon written acceptance of the *'Conditions of Award'* by the university Vice Chancellor and Deputy Vice chancellor with accountability for the Research Chairs. However, the funds may only be expensed by the university once Phase 2 of the evaluation process has been concluded and the approved candidate signs the NRF *'Conditions of Grant'* and commences with the Chair activities.

Grants will thereafter be disbursed to the universities on an annual basis, for the approved funding period subject to the appointed Chair meeting the *'Conditions of Grant.'*

**The grant for all Research Chairs awarded in February 2012, will be at the Tier 1 level i.e. R2,5 million per Research Chair. Budget adjustments will be made in year 2 of 5 in the event that the nominated candidate is approved for appointment as a Tier 2 Chair following the evaluation of the full proposal in Phase 2 of the evaluation process.**

### 3.5 Evaluation and Impact of Research Chairs

A baseline study of Chairs and their institutional and intellectual environments will be conducted with each round of new awards. These studies, together with the universities' Strategic Research Plans and the Research Chair's Research and Activity Plan, will serve as the baseline to evaluate impact on the discipline and at the institutional level.

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