NATIONAL ADVISORY COUNCIL ON INNOVATION

Call for Proposals

The National Advisory Council on Innovation (NACI) has been created by legislation [NACI Act of 1997] to advise the Minister of Science and Technology on the role and contribution of science, technology and innovation, including indigenous technologies, in promoting and achieving national objectives. NACI bases its advice on evidence-based policy research and to this end we are commissioning four studies. Service providers are hereby invited to submit proposals for one or more studies. All service providers are strongly requested to read the detailed research brief, which is available on the NACI website – www.naci.org.za, for each of the studies that they are interested in submitting proposals for.

1. The Required Physical Infrastructure to Attain the Vision of the NSI

The aim of this study is to determine the required physical infrastructure to attain the vision of the NSI. The study has two constituent parts, each with its own research objectives, and service providers can submit a proposal for either **one or both** parts:

PART A: Secondary School Education Component

(i) To highlight international best practice in terms of laboratory equipment and systems to support secondary school education from the perspective of entry into and optimal performance in tertiary level science and engineering courses.

(ii) To provide a detailed survey of the generic items of equipment and systems available on the market, together with an indication of their cost.

PART B: Competitive Component

(i) To identify the ideal public technology infrastructure to support the technology missions identified in the National Research and Development Strategy (NRDS), and globally competitive large-scale research in the five areas identified in the NRDS as being well-placed to exploit the principle of 'South Africa's geographic advantage'.

(ii) To clearly establish how the 'ideal-type' scientific and technological infrastructure should be deployed in order to ensure that all strategically prioritised research has the necessary infrastructure support and that the infrastructure is optimally used.

(iii) To specify the capacity requirements needed to deploy and productively use the technologies identified.

(iv) To indicate how the technological infrastructure will be deployed and managed in order to ensure optimal utilisation of facilities and equipment and the widespread availability of the infrastructure to all potential users.

(v) To determine the gap between the existing scientific and technological infrastructure in South Africa and the 'ideal-type' which is urgently required for crafting a more productive and sustainable NSI in South Africa.

2. Development of a Profile of Best Practices in the NSI

The objective of this project is to produce a profile of national and international best practices in key spheres that account for a significant portion of the productivity, effectives and efficiency of the NSI.

The service provider will compile a portfolio of case studies in the following critical areas that have been identified by of NACI as a point of departure for establishing best practices, and making recommendations on the applicability and transferability of these practices to the South African context:

- Monitoring infrastructure needs availability and utilisation.
- Technology transfer.
- Governance of the national system of innovation (NSI).
- Role of innovation in public-private linkages.
- Incentives for innovation.
- Smart ways of accessing foreign funding.
- Incentives for regional co-operation.
- Capacity building.
- Role of FTE in innovation capacity provision.

The service provider will also need to consult widely with recognised local and international experts in order to ascertain the full spectrum of areas that are regarded as being critically important for the productivity of the NSI.

3. Profile of Local and Provincial Innovation Systems

The goal of this project is to assess the status and needs of, and the potential for, local and provincial innovation systems. The service provider needs to:

(i) Specify the regional innovation systems that have worked both nationally and internationally, and indicate why they have worked.
(ii) Undertake a quantitative mapping of innovation and economic clusters by province. The intention is to provide data on what sectors are innovating in the different provinces and the correspondence or lack thereof between a province's share of innovation and output in the different sectors.
(iii) Identify the geographical gaps in SA as it pertains to innovation, and make recommendations on how to fill these gaps;
(iv) Explore policies and instruments that might be deployed at the local and provincial level.

4. Human Capital and the Knowledge Base

A key objective of the study would be to identify the centres of gravity in SA as they pertain to the core fields of science, engineering, and technology. Such information needs to be readily accessible to key S&T policy decision-makers. This is largely a

mapping exercise and data will be generated mainly through secondary sources. Internet solutions should be explored. We expect the service provider to:

(i) Provide a detailed conceptual/theoretical framework including a quantitative profile of the knowledge base.
(ii) Provide a quantitative profile of the knowledge base in terms of critical "knowledge products" such as peer reviewed articles, scientific books, etc.
(iii) Produce a more detailed profile of the key institutions producing knowledge in highly strategic fields.
(iv) Deliver a bibliometric profile and benchmark South Africa's knowledge base with similar knowledge economies.
(v) Generate a network analysis of patterns of scientific and technological collaboration and networking of the top 20 science fields in the country.
(vi) Align this study with other NACI studies as well as addressing the capacity of the knowledge base in attaining the goals as set in national priorities.

5. Investigations of the Dynamics Leading to Competitiveness

The key to improved growth in South Africa lies in greater innovation and competitiveness. The aim of this study is to investigate the dynamics leading to innovation and competitiveness. This study has two components each with its own research objectives, and service providers can submit a proposal for either **one or both** parts:

***Part A: Investigate the dynamics of innovation and competitiveness in large, medium, small and emerging South African business*:**

- Review existing models of innovation and competitiveness, including relevant previous work of NACI, and against this background, the key factors related to innovation that determine the competitiveness of large, medium, small and emerging business in South Africa.
- Identify material linkages between competitiveness and science, technology and innovation, including the role of universities, science councils and their spin-off companies in these linkages, according to criteria developed for this purpose. The criteria to be presented and agreed with the NACI sub-committee prior to their use.

***Part B - Review the role of Intellectual Property Rights in innovation and competitiveness*:**

- Review existing documentation relevant to this objective
- Identify any special IPR considerations that should be applicable to South Africa as a developing country, taking into account its position within the region.
- Noting the existence of national policy on Indigenous Knowledge Systems, investigate the concept of creative commons, and, of how best to handle indigenous knowledge within an internationally accepted system of property rights.
- Review IPR protection for individuals, as opposed to that for corporations, as well as the relationships with relevant international agencies.
- Develop recommendations for any interventions considered necessary

General Instructions

All submitted proposals should provide:

- Detailed information on the proposed design of the project.
- A detailed project management plan.
- An indication of the timeframe for the project.
- A detailed project budget.
- An indication of how the different tasks will be executed.
- List of at least three current and/or recent projects directly related to the present call for proposals.
- Résumés (i.e. qualifications and experience) of all consultants who would be involved in the project.

Submissions should reach the NACI Secretariat on or before Friday, 28 October 2005 at the following postal address: The National Advisory Council on Innovation (NACI), PO Box 1758, Pretoria, 0001. All enquiries should be directed to Ms Charlotte Mzolo: Tel (012) 392 9351; Fax (012) 392 9353; Email: Charlotte.Mzolo@dst.gov.za.