



Annual Report

2002 | 2003

**NAACi**  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

The background of the page features a close-up of an aloe vera plant in the lower-left corner, set against a dark blue night sky filled with numerous bright, out-of-focus stars. A faint, reddish-pink nebula or star cluster is visible in the upper-middle part of the sky. The overall color palette is dominated by deep blues and purples.

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## The National Advisory Council on Innovation (NACI)

- In 1996, the *White Paper on Science and Technology: Towards the 21st Century* recommended the establishment of the National Advisory Council on Innovation "charged with carrying out enquiries, and consultations with respect to the functioning of our national system of innovation, as requested by the Minister".
- NACI was established by the *National Advisory Council on Innovation Act No 55 of 1997*
- It commenced operation on 02 November 1998
- The first meeting of NACI took place on 13 April 1999

## Functions of NACI

NACI is a statutory body tasked with advising the Minister of Arts, Culture, Science and Technology on the role and contribution of innovation, including science and technology (S&T), in promoting national objectives, e.g. the improvement of quality of life, sustainable economic growth and international competitiveness.

The Act lists 15 main foci with regard to which advice should be rendered; these can be clustered into the following set of functions:

- Advice on the **co-ordination** of policies, strategies and structures within the National System of Innovation (NSI)
- Advice with regard to the continuous **review** of relevant legislation, S&T institutions, etc.
- Advice on the **funding** of the S&T system
- Advice on the **development** of human resources for innovation
- Advice on research and development (R&D) **prioritisation**
- Advice with regard to the **promotion** of the public understanding of science, of mathematics, science and technology at school level, of the accessibility of scientific knowledge and technology and of all aspects of technological innovation
- Advice on international **liaison** and co-operation

## NACI Logo - rationale

The NACI logo depicts a balance between formality and creativity. The capital 'NA' represents the formal, business-like element, whilst the italicised 'Ci' represents creativity and innovation. The 'Ci' is depicted almost as brush strokes, complementing the rigid, upright nature of the 'NA' and demonstrating how business and innovation can work together to produce something special. The blue colour of the logo represents professionalism.

# Foreword by the Chief Executive Officer

Writing a contribution to an annual report always challenges the author to reflect on the real meaning and dynamics of that organisation. This is even more so when one comes to the end of a cycle.

This fourth annual report is the final one of the first Council. NACI was established in 1998 in terms of Act 55 of 1997 and the first meeting of the full council took place on 13 April 1999. The series of annual reports clearly reflects the development trends that NACI has experienced over the past four years. One of the most noticeable trends is the increasing volume of work that NACI has initiated over time. Whereas the first annual report focused more on the context within which NACI was operating - understandably so, since this new body had to locate itself within the National System of Innovation (NSI) - the current report is largely taken up by internally generated programmes. In these four years the innovation policy context has changed significantly.

## Policy context

During the past year NACI operated in and contributed to a dynamically changing innovation landscape. The following are some of the outstanding features of that new landscape:

- o The National R&D Strategy that was approved by Cabinet towards the middle of 2002 offers a new framework of research missions that, firstly, underlines South Africa's commitment to the importance of S&T in the national household and secondly identifies new directions that S&T will take in the medium to longer term. I am convinced that this strategy will help greatly to refocus research in our country and to optimise the contribution of research to growth and the improvement of the quality of life of all our people.
- o The Medium Term Expenditure Framework is having an ever-widening effect on the way we approach public funding of research and development in the country. This effect is felt, not only in terms of national priorities but, increasingly, in terms of the fundamental questions asked by government in respect of expected outcomes and impact of research - we have to be convincing about the expected outcomes and impact that publicly funded research will have.
- o The challenge of accelerating the development of human resource capacity in the research field is becoming more acute. Not only is the pool of productive top-level researchers greying, but the establishment of the new generation of researchers seems to be taking place at too slow a pace and rate. This is cause for great concern.

- A number of significant new initiatives have been launched by government, notably the bid to host the Square Kilometer Array radio telescope, arguably the most important initiative in radio astronomy in 50 years. The message - to stakeholders in general and specifically to our own scientific community - should be clear, namely that South Africa is committed to fulfilling an important and dynamic role in the international scientific community.

## NACI's response

The above and other developments formed the context within which NACI operated in 2002 and will operate in future. In the course of the year, NACI established itself as an important role player within the above dynamic environment. This it achieved primarily through three mechanisms, as the rest of the report clearly shows.

- Firstly, NACI established and made considerable progress with a very relevant research programme. Examples include studies focused on improving the utilisation of research findings, understanding and managing the effects of the increased mobility of researchers (including the brain drain), identifying how S&T can contribute more to development in Africa, and the development of an advanced manufacturing technology strategy.
- Secondly, NACI became quite visible

through the seminars and conferences it organised in the course of 2002.

- Thirdly, individual Members of Council were actively involved in steering various studies, thereby transcending the traditional image of a Council that only makes contributions at scheduled meetings.

## Conclusion

The success of NACI during the report year was pre-empted by the positive conclusions of the panel that reviewed its performance over the past four years. The panel's conclusion that NACI has been growing steadily as an advisory body on policy within the NSI, is a vote of confidence in the work conducted by this first Council and at the same time a sound launching pad for the new council that is expected to be announced at about the time that this annual report is released.

This report gives reason for optimism that NACI will grow in its role as a research-based advisor to government on policy within the ambit of the NSI.

## Word of thanks

It was people who made the success of NACI during 2002 possible and it is a privilege and pleasure to thank the following persons and groups for their contributions to the success reflected in this annual report:

- Dr Roy Marcus, Chairperson, for his dynamic enthusiasm that inspired all to make NACI a success; he has set a productivity standard that will be difficult to emulate.
- The members of Council for their contributions to the year's programme, whether it be through knowledge and experience-sharing at meetings, the steering of projects by means of reference groups and other subcommittees, participation in public forums or other interactions where their membership shone through. They can look back at their first four-year term of office knowing that it has impacted positively on the NSI.
- Members of the Secretariat for their loyal, professional and untiring support for all the initiatives launched by Council.



**Dr Rob M Adam**

*Chief Executive Officer*

# Chairperson's Report

## Introduction

The year 2002 proved to be a successful one for NACI in the sense that we have succeeded in establishing a visible presence in the NSI. Three factors, separately and interactively, are especially responsible for contributing to this success. Firstly, substantive progress was made in our venture to develop a sound research base for advice to the Minister. Secondly, NACI has successfully engaged in interaction with other role players in the NSI, through various communication media, including seminars, publications and visits. Thirdly, the extent of our international policy network has been significantly expanded.

Testimony to the above was borne out clearly in the conclusions of a review of our performance, commissioned by NACI in the last quarter of 2002.

## NACI review

The review panel consisted of Prof Wieland Gevers (convenor; ASSAf), Prof Saleem Badat (CHE), Mr Dennis Hunt (SA Chamber of Business) and Mr Jim Mullin (Mullin Consulting, Canada) and was commissioned to assess the success or otherwise of NACI in executing its statutory mandate and to make recommendations on any strategic matters it deemed necessary.

The main findings of the review are summarised below:

- o The overall conclusion of the panel was that NACI had developed dynamically in the course of the four years under review, that NACI had given effect to its statutory mandate and that there was consensus among all interest groups that NACI constitutes an essential component of the NSI.
- o With regard to the composition of the new Council (2003-2007) the report recommended that the composition of the new Council should be more representative of the population as a whole.
- o The report further recommended that attention be paid to the perceived independence of NACI in view of overlapping roles of some members.
- o Finally, the report recommended that the resources at the disposal of NACI should be increased in view of the comprehensive programme it is managing.

The report was accepted by the full Council and submitted to the Minister whose reaction is now awaited. In the meantime, recommendations contained in the report are being implemented.

I am convinced that the report will serve as a very useful set of co-ordinates for the new Council in charting its way over the next four years.

## Review of year

The year's activities were guided by a corporate business plan, approved at the beginning of the year under review. This plan proved indispensable in organising a rapidly



The NACI Council



The NACI Executive Committee

expanding portfolio of activities within the context of limited resources. However, the year yielded its portion of urgent initiatives that had to be completed within a short space of time, with the consequence that minor adjustments had to be made during the course of the year.

Specific information - statistical and otherwise - is reflected elsewhere in this report and the following paragraphs therefore offer a more qualitative and evaluative overview of work done in the course of the report year. The overview covers the following activities: Council and Committee meetings, studies undertaken, seminars and conferences organised by NACI, publications, awards, new projects, and administrative systems.

## Council and Committee meetings

Three full Council, eight Executive Committee and 10 Reference Group meetings took place in the course of the year and were well attended.

It has become common practice to invite specialists to brief a meeting on a salient issue; speakers included:

- Prof A Buys (UP) and associates: *The South African Innovation Survey 2001*
- Dr Grant Black (Georgia State University): *The importance of local knowledge infrastructure for innovation*
- Prof S Benatar (UCT): *The challenge of ethics in biotechnology*
- Mr M Kellerman (Consultant): *Final report on a product design strategy*
- Dr H Maree and Mr S Borde (CSIR): *Final report on advanced manufacturing and logistics technology*
- Dr S Asmall (DST): *The SA reference group on women in S&T*

## Studies

In the course of the year NACI directed much of its energy towards the completion of current studies and launching of new ones, in order to provide government with informed advice. In the course of the year 16 projects were in process. By the end of the year, eight of these had reached or were very close to, completion and three had just been launched. The average project life was just over nine months. Since these projects form part of NACI's research-for-policy approach, it follows that all project reports will be converted into advice to the Minister; at least six such advices are expected to be ready within a few months after the end of the report year.

All the projects were steered by reference groups, consisting of councillors and external specialists and this approach led to a far greater involvement of members in NACI business than before. Since the Secretariat of NACI is small, service providers

undertook most of the work on a contract basis and every contract contained a provision for capacity building. More than 15 service providers were involved in contract research and other services for NACI. External and internal evaluators assessed final reports before acceptance in conclusion of each contract.

Essentially the project portfolio covers the whole innovation chain from knowledge development, through its utilisation and user-needs to production-user interactions. Selected highlights of the year include the following:

### **Knowledge production perspective**

#### **o Mobility**

The inadequate provision of appropriately skilled and experienced researchers and the threat this posed to the achievements of the S&T system prompted NACI to commission a study by the HSRC to assess the extent, nature, dynamics, functions, dysfunctions, and possible strategies of R&D worker mobility and the implications of this mobility on the productivity of the NSI. The study was nearing completion at the time of this report and the findings are being synthesised into clear options and recommendations for policy makers.

### **Knowledge utilisation**

#### **o Utilisation**

The need for an evaluation of the extent to which research findings are being implemented and utilised in South Africa led NACI to initiate this study to ascertain the extent to which research findings are utilised/implemented, to map the dynamics of the process of implementation, and to develop a model of and strategy for the optimisation of the utilisation of research findings. The project was divided into three phases (the literature study and electronic survey by the Centre for interdisciplinary studies, the case study by the CSIR/HSRC/NRF, and the strategy development phases by Access Market International, CyberKnowledge Systems and Da Vinci Institute for Technology Management. The separate project reports are currently being synthesised into a composite report, which is expected to provide policy recommendations.

#### **o Facts and figures on the National System on Innovation (NSI)**

Key information about the NSI is indispensable for monitoring the performance of the system. However, since there was no consolidated source of recent information available, the Council undertook the task of compiling the most recent statistics on the institutional landscape, the policy context, the size of the NSI, funding and outputs. The project was undertaken in co-operation with the Department of Science and Technology. The publication has been very well received and more than 1 800 copies have so far been distributed. It has also served as a basis for a ministerial submission.

### **User perspective**

#### **o Product design**

Product design as a potent form of embodied knowledge is locally an essential factor in the establishment of new businesses and a key element in international competitiveness. In view of the fact that South Africa lacks a coherent national strategy to promote excellence in product design, this study was commissioned in May 2002 and the final report was accepted at the February 2003 meeting of NACI.

#### **o Advanced Manufacturing and Logistics Technology Strategy**

A dynamic strategy on advanced manufacturing and logistics technology is imperative for global competitiveness at national level. NACI consequently launched this study in June 2002 to support the Department of Trade and Industry's *Integrated manufacturing strategy* and the Department of Science and Technology's *National R&D strategy*. The study, consisting of extensive

Prof Arie Rip Seminar



Prof Arie Rip



Dr Marais, Prof Rip and Dr Marcus

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participation by all stakeholders focused on key sectors in the economy and is aimed at supporting the development of technology in domains such as advanced materials, ICT and logistics, and cleaner production. The final report was accepted by NACI at its February 2003 meeting and forms the basis of a submission to government.

### Producer-user interaction perspective

#### □ Intellectual Property Rights

Public funded research institutions face a number of challenges with regard to intellectual property right (IPR), such as a weak legislative framework, lack of standardised institutional policies, low IP awareness and challenges in dealing with indigenous knowledge. Realising this need, NACI kick-started an Intellectual Capital Forum of all stakeholders in November 2002 to address policy, programmatic and capacity building issues.

### Seminars and conferences

A seminar or conference has great potential for a genuine exchange of information and viewpoints. NACI consequently increasingly used this medium for interaction with other role players. Four types of events were organised in the course of the year, viz. project workshops, regional seminars, expert seminars, and national/international conferences.

### Project workshops

- A workshop on the development of a *Competitiveness Ranking System for South Africa* was held on 22 May 2002 to share the experiences of a delegation on national and international competitiveness ranking systems.
- A successful colloquium was held on 11 September 2002 with stakeholders from government, industry and the private sector to obtain their inputs to the *Mobility* project. Similar dissemination sessions are being planned for other major NACI projects.

### Regional seminars

In order to promote knowledge about the work of NACI and to learn more about the innovation needs of the regions, the NACI Council approved the conducting of regional seminars in the different regions. The first two seminars were held in Nelspruit (on 17 September 2002) and in Durban (on 2 October 2002). These seminars were successful, although attendances could have been better. Meanwhile, NACI made two successful presentations to regional seminars of the Black Management Forum.

### Expert seminars

- Launch of the *Facts and Figures* booklet - 15 August 2002
- Prof Arie Rip - *Critical points at which the innovation process can be influenced* - 7 October 2002

## Conferences

NACI hosted two very successful conferences during the year - both were planned to feed into two major themes, viz. the World Summit on Sustainable Development (WSSD) and the New Plan for Africa's Development (NEPAD).

- o As part of the Forum on Science and Technology of the WSSD we hosted a conference on the important issue of *Science as bridge between development and sustainability* on 28 August. Eight papers were presented by four prominent international guests and four South African specialists. Attendance peaked at 165 delegates.
- o On 9 and 10 October 2002 a very successful conference was convened on *Conditions for optimising the contribution of S&T to the NEPAD process*. Thirteen papers were read by very prominent speakers (including three from overseas and two from NEPAD structures). The conference was attended by 110 delegates from a range of sectors and regions.

## Co-operation within the National System of Innovation

Co-operation within the NSI is imperative in terms of the innovation policy of South Africa in general and the NACI act in particular. Many activities in this report bear proof of our commitment to such co-operation. Not listed so far in this report is the emergence of the formalisation of collaborative modes.

- o While NACI and the National Science and Technology Forum (NSTF) have in the past undertaken joint projects, the nature of our future co-operation was taken further in March 2003 by entering into a functional co-operative agreement. The South African Research and Innovation Management Association (SARIMA) has in the mean time also approached NACI with a request to explore modes of co-operation.
- o Cabinet approved that the newly established SA Reference Group on Women in S&T (SARG) would become a special advisory committee of NACI thereby adding a significant dimension to NACI's focus.

## Publications

NACI launched two series of publications as a means of disseminating information on innovation in the course of 2003. The first was the *NACI Newsletter*, a four-page quarterly publication containing information on NACI's own programme as well as other developments in the NSI in general. Four editions (plus a special WSSD edition; 1 500 copies per edition) were published and distributed. The *NACI Newsletter* seems to make an impact, modest as it may be, judging by the wide spectrum of enquiries we have received in response to every edition.

The other publication was the first in a series of information publications, *Facts and figures: South African science and technology 2002* and provides an overview of the most recent and relevant data on research and development indicators. It proved to fulfil a real need and approximately 1 800 copies have so far been distributed.

WSSD Conference



Mr Madhi, Dr King, Dr Pushpangadan and Dr Mugabe



Dr Marais, Prof Shrum and Dr Teng-Zeng



Dr King



Minister Ngubane and Dr Marcus



Dr Mzimba

## Awards

One of NACI's functions is the promotion of innovation and two awards were established to give effect to this function, viz.

- The *NACI postgraduate innovation award*: The award was established to encourage students, especially at postgraduate level, to focus on converting their research into innovations, rather than stopping short and not going beyond mere "knowledge production". A set of guidelines, a comprehensive submission form and evaluation instrument were developed for the administration of the award. Eight submissions were received and the winners of the first award were Dr Dunay Schmulian and Mr De Wet Swanepoel of the University of Pretoria for their research on a new technique to estimate hearing thresholds.
- The *TT 100 NACI innovation award*: This award forms part of the national Technology Top 100 series of awards to organisations that have made breakthroughs in any field of innovation. The first winners of this award were the Medical Research Council for its development of the Doppler wave form analyser (DWA) specifically for use by midwives in maternity clinics and Sasol for conceiving, developing, testing and installing eight Advanced synthol reactors (SAS) at Sasol synfuels.

## New projects

The end of the report year saw the launching of the following three significant new projects:

- *Skills shortage in the construction industry* - undertaken internally by the secretariat
- *The funding of black postgraduate and novice researchers* - commissioned to the Centre for Higher Education Research at the University of Western Cape
- *Innovation facts and figures 2003* - undertaken by a consortium of specialists from UP, CSIR, HSRC, DST and NACI

All three projects are scheduled to be completed in the second semester of 2003.

## Conclusion

The above overview convincingly shows, I believe, that NACI has had a very productive year in terms of the spectrum and diversity of initiatives launched and completed, the national - and even international - relevance of those initiatives, the extent of individuals and groups involved, the cost-effectiveness and hopefully the eventual impact of the outcomes. In certain respects NACI has, in the final year of its first four-year cycle, reached an asymptote which it would do well to keep up in future.

## Administrative systems

### Offices

The Secretariat of NACI is accommodated in the Didacta Building which also accommodates the South African Agency for Science and Technology Advancement (previously the Foundation of Education, Science and Technology) and the Council on Higher Education.

### Financial systems

With the assistance of Councillor Geoff Rothschild, the Secretariat has developed an internal financial control system, although the budget of NACI is handled as a line entry in the comprehensive DST budget and the final record-keeping resides in the department. In the course of the year the internal system proved to be indispensable in administering the finances of NACI.

### Information processing

We switched over from an old MS Word database system to a new much more manageable system in MS Access. The database currently consists of approximately 1 100 entries and is still growing.

### Standardisation of procedures and records

Good progress has been made in the standardisation of communication and reporting. Firstly, standard administrative procedures have been developed, e.g. for the release of reports, delegations and project management procedures. Secondly, a series of templates has been developed for agendas, minutes, project proposals and terms of reference, reports, etc. I expect these to be introduced early in the new financial year.

## Disappointments

Notwithstanding the fact that I have described the year 2003 as having been highly successful, it did produce a few disappointments. The following two require mention: The temporary suspension of three projects and a delay in converting two reports into ministerial advices. In both cases, the shortage of appropriate capacity was the main contributor to delays. However, mechanisms have been put in place to address this challenge.

*NACI postgraduate innovation award*



*Dr Marcus, Prof Hugo, Mr Swanepoel,  
Dr Schmullian and Dr Adam*

## Future challenges

Three immediate challenges await NACI during its second term of office. These are identified in the following paragraphs.

### **Development and competitiveness**

An analysis of the missions of peer organisations in the developed world shows that advisory bodies such as NACI are primarily focussed on innovation for the sake of economic growth and international competitiveness. This is also the perception that many stakeholders have of NACI's role. The NACI Act, however, identifies the promotion of the role of innovation in development as part of its mandate. This is, incidentally, the reason why we have at least one project dealing with innovation development (*Optimising the contribution of*

*S&T to the development process*). The challenge to NACI in the next few years will be to find a dynamic balance between these two emphases.

### **Conversion from report to advice**

One of the types of study which NACI undertakes can be described as research-for-policy, which clearly means that the research report should be converted into a policy advice to be useful within the policy space, as opposed to the new knowledge space. As indicated above, this process of converting research reports into policy advice has not always gone as smoothly as we would have hoped. Different options will in future be explored to prevent any delays from occurring in this regard.

### **Operating in a multi-stakeholder environment**

The review of NACI's performance during its first term of office alluded to the fact that NACI will increasingly have to consult with stakeholders in the NSI (as part of developing informed advice) and may from time to time have to take positions that may not be viewed in a positive light by some stakeholders. The challenge would be for NACI to formulate the best and most relevant advice possible in a credible way without permanently alienating some NSI stakeholders.

## Threats and opportunities

A number of important developments confront NACI if we look at the future external environment. Most of these form part of the set we can describe as the influence of the new world order, including globalisation, on innovation in South Africa. A few examples of these potential influences will illustrate their potential to be either threats or opportunities.

- Immediacy and the need to 'future gaze'
- Movement of people
- The role of S&T in development
- ICT

## Membership and staff

The Minister appointed two new members to Council early in the year, namely Prof Jennifer Thomson of the University of Cape Town and Mr Craig Venter of ALTECH.

Sadly enough we lost one of our most eminent members - Prof Friedel Sellschop - who passed away on 4 August 2002. He was one of the leading nuclear physicists in the world who had also made major contributions to the science system - policy,

structure and processes - in South Africa through the various positions he occupied in the higher education and science systems. He was a member of the National Advisory Council on Innovation since its inception.

The Secretariat of seven officials still consists of contracted staff. It has become essential to recruit at least two additional senior persons and additional funds will have to be found in the year ahead.

## Thanks

Finally, I would like to thank all those who contributed to the success of NACI's performance during 2002/2003. In the first place, I wish to express our sincere appreciation to Minister Ben Ngubane for his encouragement and openness to inputs from NACI. The new Council will work for a Minister who appreciates the role of innovation in making this a great country. I further wish to thank my fellow members of Council for their support of our mission - I trust that you will experience the achievements listed in this report as a reasonable reward for your commitment to the mission of NACI. I also wish to express the Council's gratitude to Dr Rob Adam, CEO of NACI and Director-general of the Department of Science and Technology, for his unstinting support for and inputs to the course of NACI. Finally, I extend a warm word of appreciation to the members of the Secretariat for their untiring efforts to make NACI the success it has become.

I trust that readers will see this report as a real, albeit modest, contribution of innovation towards a better future for all in South Africa.



**Dr Roy D Marcus**

*Chairperson*



*Minister Ben Ngubane*



# Attainment of Corporate Goals 2002 - A summary

## Background

Council approved the Corporate Business Plan (CBP) in February 2002. This plan summarises the goals and accompanying strategy and plan of action, based on the mission, vision and values of an organisation. This represented the first full outline of, rationale for, and approach to, the work planned for a given year. As such, the corporate business plan relied very heavily on the implicit and explicit priorities and *modus operandi* developed since the establishment of NACI.

The following paragraphs offer a summary of the extent to which those goals were attained in the course of the year under review.

## Summary of Events: 2002

<b>Meetings</b> Council: 3 ExCo: 7 Reference groups: 25 <b>Cabinet memoranda:</b> Two submitted Contributions to one Six in preparation <b>Publications</b> ( <i>production and distribution</i> ) <i>Annual report:</i> 1 x 1 000 <i>Facts &amp; Figures 2002 booklet:</i> 1 x 2 000 <i>NACI Newsletter:</i> 4 x 2 000 <b>Regional seminars:</b> Nelspruit Durban Sandton	<b>Conferences</b> WSSD: 8 papers; 165 delegates NEPAD: 13 papers; 110 delegates NAMLTs: 320 delegates (organised by the CSIR) <b>Seminars</b> Competitiveness project: 25 delegates Arie Rip (Twente): 55 delegates Mobility project: 24 delegates IPR: 51 delegates <b>Awards</b> <i>NACI postgraduate innovation award:</i> Entire process <i>TT100: NACI award for the most outstanding technological innovation</i> <b>Projects</b> Outsourced projects initiated and coordinated: 10 Internal projects initiated and coordinated: 4
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## Realisation of the NACI mission

NACI has launched initiatives that have or would address most of its functions (see p. 2 of this report) with the exception of R&D prioritisation and the review of legislation. These are on the agenda for the next year.

## Optimal utilisation of members' expertise

Apart from the contributions to plenary and executive meetings, the past year saw additional inputs by 11 members (most on several occasions) to reference groups and project enquiries.

## Projects and relevant outputs

- The mean project completion time: nine months; eight have been completed, while five should be completed before the middle of 2003; four projects have either been delayed (by about six months) or provisionally suspended.
- The following figure represents a summary of the outputs of NACI up to March 2003.

Project type	Targets	Results
		- March '03
Quick response advice	5	5
Researched advice	7	7
"AWACS" advice	2	1
Conferences	3	4
International visits	4	6
Media releases	4	4
Data bases	2	2

## Resources

*Financial report* - NACI evaluates the performance of the national system of innovation and draws on various instruments to examine scientific research and technology priorities across the different sectors of the system. These evaluations enable NACI to advise the Minister on issues relating to the distribution of the parliamentary research grant funding. Provision for the accomplishment of these functions is currently still integrated within the Department of Science and Technology's budget and all expenditure in this respect is accounted for in its financial system. A provision of R6,5 million was made for the activities of NACI for the 2002/2003 financial year. Total expenditure incurred in respect of projects as at 31 March 2003 was R6,404 million.

*Human resources* - While the search for a permanent executive director is continuing, career development of the present staff remains a priority; the current staff consists of 5½ FTE contract appointments; at its February meeting the Council approved a new structure that will allow for the appointment of two programme managers and three support staff appointments.

## Conclusion

The year 2002 has been a very full one for NACI in which it has been operating at practically full capacity and during which an increasing proportion of time of many councillors was taken up by NACI related work. A firm base has now been laid for NACI to realise all aspects of its mission to the fullest.

## NACI Expenditure: 01/04/2002 - 31/03/2003

	DACST	DST	Total
	01/04/2002 - 31/07/2002	01/08/2002 - 31/03/2003	
	R	R	R
Personnel expenditure <sup>1)</sup>	8,788.00	-	8,778.00
Administrative expenditure <sup>1)</sup>	44,536.33	344,579.37	389,115.70
Inventories <sup>1)</sup>	42,589.84	91.83	42,681.67
Equipment <sup>1)</sup>	5,064.60	-	5,064.60
Professional and special services <sup>2)</sup>	585,052.52	5,793,999.27	6,379,051.79
Transfer payments <sup>2)*</sup>	-	25,536.00	25,536.00
Miscellaneous expenditure <sup>1)</sup>	-	-	-
<b>Total</b>	<b>686,021.29</b>	<b>6,164,206.47</b>	<b>6,850,227.76</b>

1) Funded from the Department's budget.

2) Funded from dedicated allocation for NACI in terms of projects.

\* The amount was erroneously allocated against transfer payments; should have been allocated against professional and special services.

## NACI: Budget versus expenditure in respect of projects

	Budget / Allocation	Expenditure	Surplus / (Deficit) <sup>1)</sup>
Allocation to NACI	6,500,000.00	6,404,587.79	95,412.21
<b>Expenditure</b>			
Professional and special services <sup>2)</sup>		6,379,051.79	6,379,051.79
Transfer payments <sup>2)*</sup>		25,536.00	25,536.00

# Council Members

## Appointment of the new Council - A transparent process

According to section 5 of the NACI Act, Council should comprise 16 to 20 members plus a Chairperson, a Chief Executive Officer, and an officer of the Department of Trade and Industry appointed by the Minister of Science and Technology in concurrence with the Minister of Trade and Industry.

The process followed by the Minister in the appointment of a new Council consisted of the following steps:

- A call for nominations of new Council Members was published in the Sunday press and yielded 37 nominations.
- All serving members of council were requested (a) to submit names of persons they thought should be nominated and (b) to indicate whether they would be available for a second term of office; all these names were added to the gross list.
- The Minister appointed the following advisory panel to compile a short list of candidates: Dr Rob Adam, Dr Alistair Ruiters, Ms Bongiwe Njobe, Mr Max Sisulu, Dr Vincent Maphai and Professor Njabulo Ndebele.
- The Minister used the short list as point of departure in finalising the composition for approval by cabinet.



**Ms Luci Abrahams**

- Director: Learning, Information, Networking, Knowledge Centre (LINK), Wits Graduate School of Public & Development Management



**Prof Ahmed Bawa**

- Programme Officer for Higher Education: Ford Foundation

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**Dr Rob Adam**

- Chief Executive Officer: NACI
- Director-General: Department of Science and Technology



**Mr Alan Hirsch**

- Policy Co-ordination and Advisory Services Division of the Presidency.

### Mr Louis Kriel

- Executive Chairman: Vinfruco (Pty) Ltd



### Dr Steve Lennon

- Managing Director: Resources and Strategy, Eskom



### Prof Malegapuru Makgoba

- Vice-Chancellor and Principal: University of Natal



### Dr Percy Amoils

- Ophthalmic surgeon, inventor and businessman



### Dr Roy Marcus

- Chairperson: NACI
- Executive Director: ADCORP Holdings Ltd
- Ministerial Advisor on Science and Technology



### Ms Bongwiwe Njobe

- Director-General: Department of Agriculture



### Dr Adi Paterson

- Chief Operating Officer: Dept of Science and Technology



### Prof Dave Kaplan

- Director: Science and Technology Research Centre and chief Economist of Dept of Trade and Industry





### **Prof Calie Pistorius**

- Vice-Chancellor and Principal: University of Pretoria



### **Mr Thero Setiloane**

- Executive Director: Real Africa Group



### **Prof Mapule Ramashala**

- Vice Chancellor and Principal: MEDUNSA



### **Dr John Stewart**

- Independent Consultant



### **Mr Geoff Rothschild**

- Board Member - JSE Securities Exchange SA (Immediate past Chairman)
- Director - Sasfin Frankel Pollak Securities (Pty) Ltd



### **Prof Jennifer Thomson**

- Professor: Dept of Molecular and Cell Biology, University Cape Town



### **Dr Sibusiso Sibisi**

- President and CEO: CSIR



### **Mr Craig Venter**

- Chief Executive Officer: Altech Group



## International participants in NACI events

Date	Name	Institution	Country	Purpose
<b>Seminars</b>				
9 May '02	Dr G Black	Georgia State U	USA	Presentation at plenary meeting
7 October '02	Prof A Rip	U Twente	The Netherlands	Presentation at NACI Seminar

### WSSD Workshop: Science as bridge between development and sustainability

26-31 Aug '02	Prof D King	Scientific Advisor to the UK Government	Britain	Presentation
	Dr M Hassan	President: African Academy of Sciences	Sudan	Presentation
	Dr J Mugabe	NRF; NEPAD S&T Commission	Kenya	Presentation
	Dr P Pushpangadan	CSIR-India	India	Presentation
	Prof W Shrum	U Louisiana	USA	Presentation
	Dr Frank Teng-Zeng	U Stellenbosch	Ghana	Presentation

### Conference: Optimising the contributions of S&T to the NEPAD process

9-10 Oct '02	Dr T Odhiambo	Hon Pres, African Academy of Science	Kenya	Presentation
	Dr J Zachmann	EC-Science Brussels	France	Presentation
	Dr J Mugabe	NRF-NEPAD S&T Commission	Kenya	Presentation
	Prof A O Olorunda	U Venda	Nigeria	Presentation

### NACI visit overseas

13-27 April '02	Mr A Hirsch, Mr I Saloojee and Dr T Singo	World Economic Forum (Lausanne), DTI (London), Oxford U, NSF (Washington)	Switzerland, UK and USA Ireland	Specialists and centres of excellence: National and international competitiveness.
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## Project list

Subject	Strategic focus	Target date
Advanced manufacturing technology strategy	Development of technology strategy for different sectors and technology types	02/03
Audit of implementation of SETI reviews	Assess the extent of science council's implementation of recommendations of 1997/98 reviews	09/02
AWACS	Development of an instrument to determine possible future scenarios for strategic purposes	03/03
Competitiveness measures	Assessment of development sensitive competitiveness measurement; supplement to International Competitiveness Report	09/03
Demand & supply of technical skills in construction industry	Current skills shortage in construction industry impacting on major capital engineering projects	08/03
Funding of black researchers	Assessment of equity in capacity building in R&D	11/03
Innovation: Facts and figures:	Innovation indicators for NSI promotion	07/03
Innovation policy audit	Determine extent of implementation of White Paper on S&T (1996)	02/03
Metadatabase	Identification, location and quality of relevant innovation databases in SA; access to information over short term	08/03
Mobility of R&D workers	Extent, nature and implications of R&D worker mobility; strategies for productive steering	06/03
NACI Audit	Assessment of NACI's performance during first term of office	03/03
Product design strategy	Analysis of position and role of product design in SA	12/02
Role of S&T in development	Designing a programme of engagement by the S&T sector in NEPAD	11/03
S&T: Facts & Figures	Published booklet on selected key information about S&T system in SA	07/02
Tax incentives	Stimulating investment in R&D in the business sector; reconsideration of policy	12/03
Utilisation of research findings	Extent and dynamics of the utilisation of research findings; outcomes of R&D and strategies to improve cost-benefit ratio	06/03

# Selected other activities of Council Members 2002 - 2003

Professionally, the past year has been a very busy one for the members of Council. The following list represents a small selection from a big set of innovation related activities, achievements and outputs. The activities were selected to highlight the spread of achievements and activities.

*Note: Government officials have not been listed, due to the broad nature of their involvement in the line of duty*

## Percy Amoils

- Lectures delivered in Philadelphia at the American Society of Cataract and Refractive Surgery Congress
- New prototype adaptations for the rotary epithelial scrubber made and patented

## Luci Abrahams

- Appointed Chairperson of the SA Reference Group on Women in S&T

## Ahmed Bawa

- Appointed as programme official for higher education: Ford Foundation

## Dave Kaplan

- Published the article, Measuring our competitiveness - a critical examination of the IMD and WEF competitiveness indicators for South Africa in *Development Southern Africa*, March 2003, 21(1)
- Founder member of a new international network on National Systems of Innovation - Globelics

## Louis Kriel

- Appointed to the Northern Cape Economic Development Agency

## Steve Lennon

- Appointed as Chairperson of the International Chamber of Commerce's Environment and Energy Commission
- Appointed to the World Nuclear Association Advisory Board

- Appointed as Chairperson of The International Electricity Research Exchange
- Instrumental in the launching of the African Energy Fund at the WSSD to assist with energy and related services infrastructure in Africa and in strong support of NEPAD

## Malagapuru Makgoba

- Appointed Vice-Chancellor and Principal of the University of Natal

## Roy Marcus

- Appointed as Honorary Professor at the University of Warwick, UK

## Calie Pistorius

- Elected as Fellow of the Royal Society of South Africa and also as Fellow of the South African Institute of Electrical Engineers
- Analysing technological threats and opportunities in wireless data services, *Technological Forecasting and Social Change*, 2003, 70(1): 1-20. (co-author: GT du Preez)

## Mapule Ramashala

- Appointment as Vice-Chancellor and Principal of the Medical University of Southern Africa

## Geoff Rothschild

- Address on, *Africa - The Hidden Edge: South Africa* to the Africa Business Club Conference at Harvard University, Boston

## Thero Setiloane

- Appointed as General Manager, Marketing: AngloGold

## John Stewart

- Chairperson: SA Mining Caucus concerned with preparations for the World Summit on Sustainable Development
- Chairperson: Review Panel of the Council for Geoscience
- Chairperson: Audit Committee of the National Nuclear Regulator

## Jennifer Thomson

- Published a book, *Genes for Africa: Genetically modified crops in the developing world*. Cape Town: UCT Press
- Appointed to the boards of International Service for the Acquisition of Agri-biotech Applications, Biotechnology in Eastern Africa, and African Agricultural Technology Forum
- Addressed the General Assembly of the UN on GM crops for developing countries

## Craig Venter

- As CEO of Altech, winner of the Technology Top 100 award in the Holding and Management Company category

