

Change of Course for CSIR

President talks to CSIR staff

FIRST of all I want to make two qualifying statements

— my communication to you is an abridged version of the 67 page Executive Communication Document on the 'Strategy for the Future Course for the CSIR'. The unabridged version is available from the Institute Management. The communication is in preparation for internal consumption. A document for external communication is in preparation. Obviously the abridged version could, due to its brevity, be susceptible to alternative interpretations. I want to emphasize that the unabridged document is the official document, and I encourage all who are interested to read the unabridged document. Spare copies are available in your institutes.

— I wish to reiterate my previous preparedness to visit institutes to clarify questions in the minds of staff.

1. BACKGROUND

LAST year, 1985, the CSIR celebrated its fortieth anniversary. During the past forty years the CSIR has grown from its modest beginnings to a large organisation serving many markets.

The environment in which the CSIR functions has undergone major changes during the past forty years, which played an important rôle in shaping the CSIR as we know it today.

In recent years there have been increased efforts worldwide towards more effectively harnessing the benefits from achievements in science. Governments are curbing their own spending while encouraging industry to spend more on R & D. Export drives based on technology intensive products are dominating the international market place. The policy on science and technology is under constant scrutiny to attempt to improve the return on investment in research.

South Africa is not isolated from these international trends. The technological challenges South Africa faces are enormous, especially if our strengths and weaknesses are compared with those of the well developed economies of some countries. In South Africa there is a great requirement for the increased generation of wealth to meet the demands of a rapidly growing population.

During 1984 and the first half of 1985 your Executive made inputs to the Board of Trade and Industry in their finalisation of the White Paper on an Industrial Development Strategy for South Africa. This White Paper published in May 1985, outlined the strategy for promoting industrial development to achieve the economic growth required. As part of the strategy technology transfer and development were given special attention and specific responsibilities were assigned to the CSIR. This served as the first major stimulus for review within the CSIR.

Secondly, inflation and cutbacks in Government sponsorship are expected to erode the future CSIR grant from Parliamentary funds, necessitating that the CSIR earn a greater proportion of its budget through contract income. In addition, international developments and the strengths of the CSIR lend an urgency to such a review which was set in motion by Executive in mid 1985. The following steps were taken:

1.1 In May 1985 the HSRC was commissioned to assess CSIR em-

ployee perceptions regarding various aspects of the organisation.

1.2 A think-tank by Executive, Chief Directors, Head of Units and Groups was arranged in Rustenburg (2/3 August 1985).

1.3 Consultants were appointed to study management and business structures, aspects of marketing as well as the interaction of the CSIR with its major stake-holders, including industry, government departments, universities and private individuals. The possible privatization of SAIDCOR also received extensive attention.

1.4 A number of working groups were created within the CSIR to study specific topics, problem areas and opportunities and to make recommendations. Members of the Council of the CSIR were consulted during the review to gain the benefit of their rich and varied experience.

All these inputs were used by Executive in collaboration with the appointed consultants, P E Corporate Services, to formulate a strategy which was submitted to Council on October 16, 1986. In this submission to Council we addressed the major CSIR activities viz the line function R & D activities; the national facilities (inter alia, the NAC, SAAO, MO, SRSC, RAO, MMSM, etc); the activities of FRD in their funding of researchers and post-graduate students at universities, museums and technicians; as well as the South African Inventions Development Corporation (SAIDCOR).

2. THE ANALYSIS

The CSIR has much to be proud of, based on significant achievements of the past! The review identified the new challenges facing the CSIR in contributing to the future development of South Africa. Based on these challenges in the new and rapidly changing environment in which we shall henceforth operate and on an evaluation of our existing strengths and weaknesses, certain features of the CSIR emerged which require attention and rectification. Some of the features have a negative tone. However, Executive believes that this frank self criticism is a healthy approach in improving our performance even further.

What emerged was

- the need for a unified mission statement to enhance the corporate character of the organisation. Coupled to this is the identified requirement for a corporate response linked to national priority functions. The CSIR does not at present func-

tion effectively as a corporate body;

- that considerable confusion existed regarding the several fundamentally different rôles played by the CSIR (e.g. research, funding, management of national facilities). Some of these rôles have elements of conflict, support or competition built into them. The organisation is called a Council, whereas its board is also called the council;

- that the CSIR's focus and organisational culture have been heavily oriented towards the process of research and the production of research findings. In addition

- the implementation of research findings generally has been given lower overall priority
- the CSIR has not been sufficiently focussed on the industrial 'market place'
- the CSIR has not traditionally operated its research projects on a cost benefit analysis

- there has been limited on-going commitment after the completion of the task and limited follow-through after technology has been transferred

- ample evidence of activities being maintained as part of an on-going rôle rather than to meet a specific organisational goal or objective.

Some of the following features reinforce the existing culture:

- extensive division of labour with a high degree of specialisation
- lifelong employment based on a fairly rigid tenure system
- extensive use of standard forms, procedures, work studies, codes and multiple approval steps,
- a lack of urgency in parts of the CSIR regarding the task in hand.
- the domination of the recent history of the CSIR by the external micro-management of the CSIR according to procedures laid down by the Commission for Administration, which created approaches and attitudes in the CSIR closer to those of the Civil Service than those expected within a statutory research council.

- the extensive central control of financial and personnel matters with excessive attention being given to control of inputs with limited attention given to outputs.

- that the CSIR has a limited strategic management component, requires a formal research management development programme and that the marketing of the CSIR is not carried out within the framework of a clearly defined effective strategy. Furthermore, communication within the organisation is not carefully structured or actively promoted.

- that the effectivity of advisory committees in advising Council is

seriously questioned, that the mechanism for the purchase and replacement of capital equipment requires review and that the provision of service activities to the community should be reassessed.

3. THE CHANGE IN COURSE

This section will formulate the main thrusts whose implementation within the CSIR will form the essence of the announced change in course. At the outset it must be recognised that we are describing an initiative which will fundamentally alter the fabric of the CSIR and will necessitate a significant change in organisational culture. The process of change will take time and require on-going commitment. It is a major task and a major challenge. We shall not achieve our goals overnight, but we are going to start right away with the steps necessary for the implementation of the change in course, which has been formulated in the following five thrusts:

THRUST 1: The changing South African environment makes it imperative for the CSIR to optimally mobilise and manage its resources to fulfil all its rôles. When activities are managed in the national interest, strategic CSIR policy decisions will be required which clearly place the specific activity into the portfolio of CSIR activities. Where a national need surfaces, it will first be determined in greater detail and a management approach will be used which balances the national need with the reality of providing a service to meet the need.

THRUST 2: The CSIR will enhance corporate behaviour and character. **THRUST 3:** The CSIR will accept not only research and development, but also a commitment to the successful implementation of research and development findings as its business. This will necessitate a shift of current activities to include greater commitment to implementation activities.

THRUST 4: The CSIR will adopt a market orientated approach in all its rôles. This will include a reactive as well as pro-active approach. In its research and development line function the CSIR will commit itself to a process which will start by determining what the marketplace wants and then set out to satisfy identified needs within time-scales that are acceptable to the marketplace. The CSIR will undertake research, development and technology transfer to meet immediate market needs, but will also need to position itself

to actively service market needs which are likely to arise in the medium to longer term. A balance between these activities will be required, but immediate needs must dominate. Thus the CSIR will endeavour to become a force to develop South Africa as an industrial country.

The CSIR will set out to market itself as a professional service in research, development and implementation of research findings. The adoption of the rôle of a professional service organisation implies a sharply changed outward orientation on the part of the organisation as a whole.

THRUST 5: The reinforcement of the legitimacy of the CSIR by the South African community and its obligations nationally and internationally make it imperative that the CSIR have organisational autonomy in accordance with its statutory autonomy.

4. MISSION STATEMENT OF THE CSIR

The Council requested CSIR Management to consider in depth the future rôle of the CSIR and to formulate the mission and goals for the CSIR with a strategy how to achieve these goals. Over an extended period of contemplation the following mission statement was submitted to and approved by Council:

CORE MISSION STATEMENT

The CSIR undertakes, fosters and manages broadly scientific research, development and technology transfer in support of and to meet the needs of South African industry, community interests and quality of life in a cost effective and ethical manner. We strive for excellence.

EXTENDED MISSION STATEMENT

As a national research and development organisation, our mission is to promote national prosperity and the quality of life of all South Africans through the power of a broadly based capacity in science and technology.

Empowered by its founding statute, the Council's main goals are:

- to interactively develop, transfer and apply new, improved or adapted scientific and technological expertise to strengthen local industry, commerce and supportive infrastructure, as well as to protect the environment;