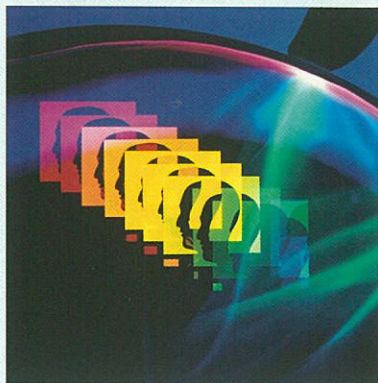




CSIR ANNUAL REPORT 1996



M i s s i o n s t a t e m e n t

As a uniquely South African organisation, the CSIR is committed to providing technology solutions and information to support sustainable development and economic growth in the context of national priorities.

C o n t e n t s

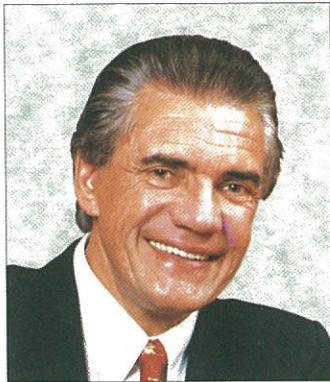
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Chairman's review

The celebration last year of the CSIR's 50th anniversary presented an unusual opportunity to review the road that had been travelled and the road that lies ahead. Not only was the new South Africa only one year of age, requiring substantial nurturing and support from all South Africans, but it also became apparent that



Dr WP Venter (Chairman)

South Africa would increasingly become a fully-fledged member of the world free-market economy. In this demanding environment, the CSIR finds itself at the centre of the challenge for high productivity and excellence in design, development and research, and the need for strong technological support in both the public and private sectors.



Mr L Boyd

These demands span the broad spectrum of science, technology and their applications in business, socio-economic development and the supply of solutions to improve the quality of life of all South Africans both in urban and rural communities. This has led to a redefinition of the CSIR's mission as that of focusing on providing scientific and technological solutions and up-to-date information to assist industry and Government to address national priorities, to help grow and strengthen the South African economy and to help create jobs at all levels.

Rising to these challenges, the CSIR enhanced its position as a uniquely South African and world-class scientific and technological organisation. During the year focus areas were revised to a set of key strategic priorities that include growth, quality, people issues and an impact in the socio-economic arena. In addition, and to ensure continued relevance in the macro-developments of its local and international environments, the CSIR has identified three areas for



Prof AA Eberhard

investigation and possible refinement to its existing corporate strategy: contributing to the development of human resources in science and technology, harnessing the information revolution and supporting the development of national excellence in manufacturing.

Developing the country's human resources, particularly in the fields of science, technology and engineering, is critical for South Africa's growth and development. It became clear that bursary schemes are not sufficient to develop the necessary pool of talent and graduates in the country. Based on discussions with the Department of Arts, Culture, Science and Technology and in collaboration with the Foundation for Research and Development, a number of initiatives were launched. These include the creation of research capacity at historically disadvantaged institutions, and in-service training for black Technikon students unable to find industrial placements.

An exciting initiative to create science and technology awareness amongst



Dr D Gihwala

scholars was also launched by the CSIR in its 50th year as part of its commitment to promote science and technology education in South Africa. The CSIR took bold steps to increase its income from sources other than Government funding and has achieved real increases in external contract income. The increase in external turnover of 15%, compared to the 4% for the previous financial year, mirrors the results of an audit of stakeholder and client opinions about the CSIR's effectiveness.

The CSIR's ten operating divisions are now pursuing a strategy to identify and address new market opportunities. The focus is on international alliances as well as multi divisional projects to support vital national initiatives, such as small, medium and micro enterprises (SMMEs), sport, eco-tourism and crime prevention.

Sustaining real growth in the CSIR's external contract income, at acceptable levels of profitability on projects of high scientific or technological content, is a critical requirement over the rest of the millennium and beyond. Perhaps even more important is the task of maintaining an appropriate level of Parliamentary

Grant investment in basic scientific and technological development, which is essential if the CSIR is to maintain and expand further its contribution to the South African economy.

From time to time it is necessary to launch new initiatives (market-related and in the national interest) at the corporate level and to devolve these to the divisions when the markets, products and service requirements are clearer. A recent example has been the CSIR's approach to the environment market, where a new Division of Water, Environment and Forestry Technology has been formed. This consolidates the skills and competences of three previous divisions together with a corporate environmental services programme, to significantly strengthen the CSIR's capacity in natural resources and environmental management.

Also relevant to the CSIR's growth challenge are corporate initiatives relating to its Technology for Development thrust, positioning the CSIR to support the national SMME initiative and establishing it as a key resource for science and technology policy information.

Within the context of the CSIR's long-range (five-year) human resources planning initiatives, either in place or immediately planned, are activities such as the implementation of an Employment Equity Policy and new ways of attracting and retaining staff from historically disadvantaged groups.

Central, provincial and local governments are increasingly looking to the CSIR to provide decision support in areas such as infrastructure planning, environmental management, housing stock and related technological management. Accordingly, the CSIR's decision support services could expand even further to embrace all aspects of national growth and development.

The term of office of the CSIR's previous Board, which consisted of Mr P du P Kruger (Chairman), Dr IF Matsepe-Casaburri and Messrs L Boyd, JC Hall, RA Plumbridge, E van As, WC van der Merwe and myself, came to an end on 31 March 1995. In response to a request by the then Minister of Trade and Industry, Mr Trevor Manuel, the Board agreed to stay in office until the end of August 1995. On 1 October 1995,



Dr IF Matsepe-Casaburri



Mr KC Phihlela



Prof JPF Sellschop

Chairman's review (continued)

Mr Manuel announced the CSIR's new Board, consisting of myself as Chairman, Profs AA Eberhard, JPF Sellschop and E Tyobeka, Drs D Gihwala and IF Matsepe-Casaburri, Ms LF Shope-Mafole and Messrs L Boyd, KC Phihlela and E van As.

I would like to thank past Board members for their valuable support and wise counsel over their periods of service to the CSIR and I want to express my appreciation to current Board members for their contributions, from which the CSIR has already benefited.

Mr Manuel, at the time of the announcement of the Board, also confirmed the Board's decision to appoint Dr Geoff Garrett as President with effect from 1 December 1995. Prior to this, Dr Garrett had been Acting President for several months. On behalf of the Board, I wish Dr Garrett well in leading the CSIR during these challenging times.

I would also like to thank the CSIR's Executive Management Board for their energy and enthusiasm with

which they have undertaken their tasks. I am confident that under the able leadership of Dr Garrett, the CSIR will successfully meet the challenges that lie ahead.

I feel greatly honoured to chair this unique organisation's Board and, with the support of my fellow Board members, will endeavour to set correct policy for this very special group of over 3 000 people. The challenge has never been greater, never more exciting!

South Africa has a good research infrastructure and we must make every effort to preserve and even enhance further this resource for our future.

It is going to take dedication and commitment from business, labour and Government for South Africa to achieve the growth rates necessary to adequately meet the needs of South Africa's less privileged citizens. I firmly believe that the CSIR has a crucial role to play in this and in bringing about peace and prosperity for all.

On a broader front, I look forward to

continuing good performance through dynamic management, asset growth and the expansion of the CSIR's activities in both the local and the international markets. In conclusion, I would like to express my sincere thanks to:

- our valued customers and clients,
- my fellow Board members,
- our dedicated and capable employees, and
- our suppliers of services and goods.

We are of the opinion that quality service and products begins with a well-trained, motivated and committed staff. The CSIR has always been committed to train and educate its staff. We shall continue to strive to provide levels of service that compare well with the best similar institutions worldwide.



Dr Bill Venter

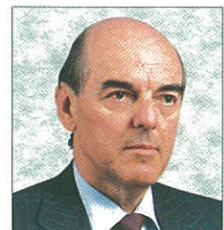
Chairman



Ms LF Shope-Mafole



Prof E Tyobeka



Mr E van As

CSIR highlights

Awarded to the CSIR

- the IAIA (International Association for Impact Assessment) Regional Award in June 1995 in recognition of outstanding achievement in the field of impact assessment within the southern African region;
- the International Techtextil Innovation Prize for 1995 in the field of the development of new applications and products, for the design of a 5-spoke carbon composite motorcycle wheel;



Pitout Horn (left) accepted the 1995 Top Technology 100 R&D Award on behalf of his division from Dr Ben Ngubane

- five CSIR divisions were nominated for the 1995 Top Technology 100 Awards and top honours for technological excellence in research and development went to its Division of Textile Technology who won the 1995 Top Technology 100 Research and Development Award;
- 1995 Best Map of the Year Award for a map of Table Mountain for the Mountain Club of South Africa, Cape Town section; and
- a Certificate of Accomplishment from the International Society of Photo Instrumentation Engineers

(SPIE) for 50 years of achievement in optical engineering.

Accreditation achieved

- the Food Quality and Fishing Industries Research programmes of the CSIR's Division of Food Science and Technology were accredited by the National Calibration Service for implementing the EN45001 quality system; and
- COMSEC (Community Self-employment Centre) – a joint effort between community and party leaders, the CSIR and Chambers of Industries to respond to the needs of SMMEs – was accredited as a Local Business Service Centre by the Business Development Services (BuDS) of the Department of Trade and Industry.

Outstanding achievements of some of our key people

- Prof Frank Nabarro, CSIR Fellow, received the Robert Franklin Mehl Medal from the Minerals, Metals and Materials Society of the USA;
- Peter Gill won the annual Murray & Roberts JD Roberts Award for his work on the provision of housing and development;
- Dr Ben Fouché was elected Vice President of the International Council for Scientific and Technical Information;



Prof Frank Nabarro



Peter Gill



Dr Gideon de Wet

- David Bath was elected to the Board of the International Council for Building Research Studies and Documentation;
- Dr Gideon de Wet of the CSIR's Policy Studies Unit received the award for the best paper at the 5th International Conference on the Management of Technology by the International Association for the Management of Technology in Miami, Florida;
- Dr Petro Terblanche was one of four national finalists in the Corporate Business Woman category

CSIR highlights

(continued)

for the Business Woman of the Year competition;

- Patricia Gouws and Denita Visagie, who respectively received the UNISA Senate Medal and the University of the OFS Dean's Prize for outstanding academic performance;

- Innovator of the Year Awards for 1995 went to John Napier and George Harper for, respectively, a Discontinuity Interaction Growth Simulation program and a quiet rock drilling system;

- Dr George Dehlen received the Chairman's Award for Meritorious Service in recognition of his work in roads and transport research for over 40 years from the Division of Transportation Engineering of the South African Institution of Civil Engineers; and

- the CSIR's 1995 Outstanding Achievers Awards for excellent performance went to Neil Viljoen, Johan Strydom, Chris Rust, André Nepgen, Berenice Lue and Herman Diale.

Memoranda of Understanding

- with the Institute of Food Research in the United Kingdom to collaborate on research opportunities in which to apply complementary expertise in food science and technology;
- with the Centre for the Investigation of Minerals and Metallurgy



André Nepgen



Herman Diale



Johan Strydom



Chris Rust



ALP group (l to r): Nico Taljaard, Berenice Lue, Hans Ittman, Annelie Forbes, Mandie Calinikos, Pat Willis, Mankone Ntsaba, Rodney Milford, Joseph Moloto, Petro Terblanche and Johan Hattingh



Dr George Dehlen



Neil Viljoen



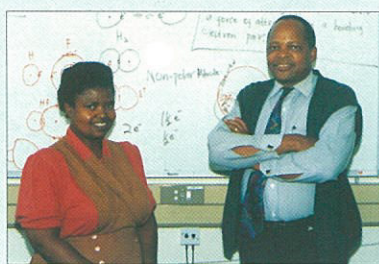
George Harper



John Napier

(CIMM) in Chile for research and development cooperation and joint research projects;

- with the Scientific and Industrial Research and Development Centre of Zimbabwe to cooperate in joint scientific and technological research and development, provide technological services and pursue regional opportunities;
- with the Kenya Industrial Research and Development Institute (KIRDI) for the exchange and joint development of technology, services, products and training, initially in the agri-food sector;
- with the Deutsche Forschungsanstalt für Luft- und Raumfahrt aimed at, *inter alia*, cooperation in the application of airborne synthetic aperture radar technology for earth observation purposes;
- with the Industrial Technology Research Institute of the Republic of



Lilley Ngoepe and Peter Moagi of the CSIR's Learning Centre

China which has led to the CSIR being commissioned to assist in the development of a water conservation plan for Taiwan; and

- collaboration agreements with Daimler-Benz in Germany and several other international research and technology organisations.

Launched during 1995

- a Parliamentary office for the CSIR to create an awareness of science and technology matters and identify business opportunities for the CSIR;
- a Product Development Centre to partner industry in its future development towards global competitive-

ness with new, innovative, quality products;

- an Outreach initiative which aims to help create an increasing national awareness of the importance of science and technology in support of various educational initiatives in this field;
- a CSIR Learning Centre to promote literacy and employee development;
- a Thermal Spray and Repair Facility to provide industry with high-quality surface engineering, welding and brazing technology support; and
- the CSIR's first Advanced Leadership Programme (ALP).

Presenting the activities of the CSIR

The CSIR's Executive undertook a number of visits to Parliament during 1995 to present its activities and discuss its role in supporting

Financial highlights

(R million)	Three-year compound growth %	Annual growth %	1996	Annual growth %	1995	Annual growth %	1994	1993
31 March								
Turnover	10	13	562	1	497	17	492	419
Parliamentary Grant	8	12	260	(3)	233	17	240	205
Contract income	13	15	300	4	261	20	251	209
Private sector	28	15	171	11	149	63	134	82
Public sector	(8)	(4)	47	(11)	49	(10)	55	61
National Safety & Security sector	5	30	61	(10)	47	(2)	52	53
Other sectors (including Africa)	17	31	21	60	16	(23)	10	13
Royalties	(26)	(33)	2	200	3	(80)	1	5
Turnover/manpower cost		5	1,93	(2)	1,84	14	1,89	1,66

CSIR highlights

(continued)

Parliament. Visits included contact with the Speaker of Parliament, Ms Frene Ginwala and the Portfolio and Select Committees for Trade and Industry; Arts, Culture and Language; Science and Technology; and Education, Sport and Recreation.

Visitors to the CSIR

The CSIR's reception offices on its Scientia site in Pretoria handled 144 702 visitors during the 1995/96 financial year. Foreign VIPs included King Mswati of Swaziland; His Majesty King Gustav of Sweden and members of the Royal Technology Mission; Dr John Gibbons, Scientific Adviser to US President Bill Clinton; and Ambassador Erwen Fouere of the European Union. Ministerial visits included Ministers Joe Modise, Department of Defence; Jay Naidoo, then Minister without Portfolio; and Dr Ben Ngubane, Department of Arts, Culture, Science and Technology.

Among the groups of organised visits were delegates from the UK, USA, Japan, Taiwan, Holland, France, Germany and many African countries. Local visitors included school groups, University and Technikon students, the Youth Science Olympiad and groups from industry and NGOs.

1945 – 1995: 50 Years of science and technology

The CSIR celebrated the first 50 years of its achievements in science and technology during 1995. To commemorate the occasion, a number of events took place to mark an important milestone for the organisation and to create a greater awareness of the importance of science and technology for South Africa.

Some of the highlights included the launch of the CSIR Mindwalk Competition; the issue by the Post Office in June 1995 of a CSIR commemorative postage stamp and first-day cover; the establishment of a wetland at the CSIR site in Pretoria; a Children's Art Workshop; a staff function and a commemorative garden at the main entrance to the CSIR's Scientia site in Pretoria.



Wetland at the CSIR site in Pretoria



Being creative at the Children's Art Workshop



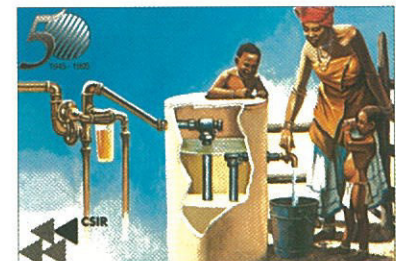
Having fun at the 50th anniversary staff function



Commemorative garden at the main entrance to the CSIR site in Pretoria



L to r: Themba Goba, Anthos Yannakou, Tsietsi Maleho and Bryan Slingers at the launch of the CSIR's Mindwalk Competition



The artwork on the CSIR's commemorative stamp, issued by the Post Office in June 1995

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A u d i t o r - G e n e r a l ' s r e p o r t

Report by the Auditor-General on the annual financial statements of the CSIR for the financial year ended 31 March 1996.

1. Audit assignment

The group annual financial statements of the CSIR, set out in statements 1 to 3 and the notes thereto have been audited in terms of section 3 of the Auditor-General Act, 1995 (Act No 12 of 1995), read with section 14(1) of the Scientific Research Council Act, 1988 (Act No 46 of 1988). These annual financial statements and the maintenance of effective control measures are the responsibility of the President of the CSIR. My responsibility is to report on these financial statements and the matters stipulated by the first-mentioned Act.

2. Regularity audit

2.1 Financial

(a) *Nature and scope:* The audit was carried out in accordance with generally accepted governmental auditing standards. These standards require the audit to be planned and performed in such a way as to obtain reasonable assurance that, in all material respects, fair presentation is achieved in the annual financial statements. An audit includes an evaluation of the appropriateness of the accounting policies, an examination on a test basis of evidence supporting the amounts and disclosures included in the financial statements, an assessment of the reasonableness of significant provisions and a consideration of the appropriateness of the overall pre-

sentation of the annual financial statements. I consider that the audit procedures were appropriate in the circumstances to enable me to express the opinion presented below.

(b) *Audit opinion:* In my opinion these annual financial statements fairly present the financial position and the results obtained by the CSIR as at 31 March 1996 in accordance with generally accepted accounting practice applied on a basis consistent with that of the preceding year. Furthermore, in my opinion, the information furnished in terms of sections 6 and 7 of the Reporting by Public Entities Act, 1992 (Act No 93 of 1992) is fair in all material respects and where applicable, on a basis consistent with that of the preceding year.

2.2 Compliance

The CSIR's functions are determined by the Scientific Research Council Act, 1988 (Act No 46 of 1988) and as a listed public entity it is subject to the provisions of the Reporting by Public Entities Act, 1992 (Act No 93 of 1992). Compliance with this and other appropriate legislation was audited on a test basis.

2.3 Audit observations

Except for the matters discussed in paragraph (a) below, in my opinion:

- the transactions of the CSIR that came to my notice in the course of my examination were made in accordance with the applicable laws and instructions; and
- the transactions that had come to my attention during auditing were in

all material aspects in accordance with the mandatory functions of the CSIR as determined by law or otherwise.

(a) *Estimated income and expenditure for the 1993/1994, 1994/1995 and 1995/1996 financial years:*

(i) With reference to paragraph 3 of the previous report, the Department of Trade and Industry informed the CSIR on 16 November 1995 that the retrospective approvals of the CSIR's budgets for the 1993/1994 and 1994/1995 financial years had been discussed with the Department of State Expenditure. The latter pointed out that, according to a legal opinion of the State Law Advisors, retrospective approval could not be granted and that the budgets for the said financial years were therefore unauthorised. Similarly, the budget for the 1995/1996 financial year could also not be approved retrospectively.

(ii) The expenditure for the 1993/1994, 1994/1995 and 1995/1996 financial years is therefore regarded as unauthorised in terms of section 33(l)(c) of the Exchequer Act, 1975 (Act No 66 of 1975), and is reported as such.

3. Appreciation

The courtesy extended and assistance rendered by the CSIR personnel during the audit is greatly appreciated.



GR Witthöft

for Auditor-General

Pretoria

26 June 1996

Executive report

For the CSIR, 1995 was a special year in commemorating its 50th anniversary. We have pleasure in presenting, for submission to Parliament, the annual report on the activities of the CSIR for the financial year ended 31 March 1996.



Dr Geoff Garrett (President)

Nature of our business

The CSIR provides technology solutions and information through, *inter alia*, contract research and development and specialist consulting services to clients and stakeholders in the public and private sectors.

Acts and legislation

Established in 1945 as a statutory scientific research council, the CSIR is governed by the Scientific Research Council Act (Act 46 of 1988). It was listed as a public entity with effect from 1 April 1993 in terms of the Reporting by Public Entities Act (Act 93 of 1992). In addition to the Scientific Research Council Act, the

activities of the CSIR are currently also determined by the science policy and system of the Republic of South Africa and the system of framework autonomy for science councils.

A historical perspective

Globalisation has brought South Africa to the centre of the sub-continent's awakening to a political, cultural and technological renewal. It has also brought our country into the mainstream of international market competition, where it will have to equal and better global standards, abroad and at home.

The watershed events of 1990 set in motion a range of transformation-related activities in South Africa that impacted significantly on all spheres of society including the business community. Having started its transformation process in the late 1980s, the CSIR has since then been committed to ongoing repositioning to build an organisation that is truly responsive to the market and the needs of its stakeholders.

It is in this scenario, calling for investment, development and a new approach to South African and global involvement in Africa's future, that the CSIR – representing the largest concentration of scientific and technological capability on the African

continent – can step to the fore.

With its blend of Africa expertise, scientific and technological capability and international networking and collaboration, the CSIR is positioned to build technology bridges for the transfer of scientific and technological advances by funnelling technology from abroad and adapting it for Africa's unique conditions, or by developing it locally to meet specific needs.

Fifty years of science and technology

The past year saw the commemoration of the CSIR's 50th anniversary. Coinciding as it did with the first celebration of a new democratic South Africa, this provided an opportunity to review past achievements and to look at the road ahead for the CSIR as an organisation poised to play an important role in the national processes of democratisation, economic growth and socio-economic development.

Apart from heralding 50 years of scientific and technological endeavour, the CSIR's commemoration activities included a number of celebratory events and a 50th anniversary book (to be published shortly) that highlights the transformation process of the CSIR over the last ten years.

During 1995 the CSIR also introduced an Outreach initiative to help

Executive report (continued)

create an increasing national awareness of the importance of science and technology in support of various educational initiatives in this field. An important first project of the Outreach Programme was the launch of the CSIR Mindwalk Competition for high school pupils which is aimed at challenging young minds to be bold and creative in finding technology solutions to real-life problems in local and rural communities.

Mandate and strategic context

The objectives of the CSIR, as set out in its Act, are to foster industrial and scientific development to contribute, in the national interest, to the quality of life of all people in South Africa.

The CSIR, through strategy and practice, is committed to providing technology solutions and information to contribute meaningfully to the national priorities articulated in the Government's growth and development strategy. Its mission and strategies reflect the duality of its challenge: to provide scientific and tech-

nological competences designed to support both sustainable development and economic growth.

The CSIR's strategic orientation is inspired by its ongoing determination to enhance its core business competence, social relevance and financial viability. Its corporate strategy provides the overall framework within which the business plans and budgets of its divisions and corporate support and service functions are formulated and approved.

Recognising that its relevance and contribution will depend on its competitiveness – to remain viable and to grow – the CSIR continues to strive for the highest levels of scientific and technological excellence and quality in all aspects of its business. Key performance indicators are used to measure performance against goals.

Organisation structure

CSIR Board

The CSIR's Board is appointed for a term of three years by the Minister responsible for administering the

Scientific Research Council Act, 1988 (the Minister of Trade and Industry). The Board approves the mission, goals, basic research policies and priorities of the organisation. The term of the previous Board, which expired on 31 March 1995, was extended by the then Minister of Trade and Industry, Mr Trevor Manuel, to the end of August 1995.

CSIR Board members for the 1995/96 financial year until the end of August 1995 were Mr P du P Kruger (Chairman), Drs IF Matsepe-Casaburri and WP Venter and Messrs L Boyd, JC Hall, RA Plumbridge, E van As and WC van der Merwe.

The CSIR's new Board was announced by Mr Manuel on 1 October 1995 and consists of the following members: Drs WP Venter (Chairman), D Gihwala and IF Matsepe-Casaburri, Profs AA Eberhard, JPF Sellschop and E Tyobeka, Ms LF Shope-Mafole and Messrs L Boyd, KC Phihlela and E van As.

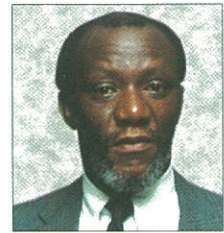
At its first meeting on 30 November 1995, the new Board elected



*Mr Mike Groch
Executive Vice President:
Commercial*



*Mr Albert Jordaan
Executive Vice President:
Finance and Marketing*



*Mr Neo Moikangoa
Executive Vice President:
Technology for Development*

CSIR STRUCTURE

CSIR BOARD

PRESIDENT

COMMERCIAL

FINANCIAL &
MARKETINGHUMAN
RESOURCESTECHNOLOGY FOR
DEVELOPMENTTECHNOLOGY
& POLICY**OPERATIONAL DIVISIONS**

BUILDING TECHNOLOGY

COMMUNICATIONS & INFORMATION
NETWORKING TECHNOLOGY

FOOD SCIENCE & TECHNOLOGY

INFORMATION SERVICES

MANUFACTURING & AERONAUTICAL
SYSTEMS TECHNOLOGYMATERIALS SCIENCE &
TECHNOLOGY

MINING TECHNOLOGY

ROADS & TRANSPORT TECHNOLOGY

TEXTILE TECHNOLOGY

WATER, ENVIRONMENT & FORESTRY
TECHNOLOGY

Dr WP Venter as Chairman and appointed Dr GG Garrett, who had been Acting President since June 1995, as President of the CSIR.

Executive Management Board

Executive responsibility for the CSIR rests with its Executive Management Board, which consisted of Dr GG Garrett as President and four Executive Vice Presidents: Messrs MD Groch, AJ Jordaan, NL Moikangoa and Dr AW Paterson. Their Executive Vice President portfolios, respectively,



*Dr Adi Paterson
Executive Vice President:
Technology and Policy*

were Commercial and SMMEs (small, medium and micro enterprises); Finance and Marketing; Technology for Development; and Human Resources (acting). Mr Fred Camphor, Executive Vice President, Human Resources, resigned with effect from the end of June 1995.

Audit Committee

An audit committee was formed in 1990 and is integral to the CSIR Board's system of control. The committee meets twice during the financial year to deal with matters prescribed by the Act. These meetings took place on 15 June 1995 and 22 February 1996. The members of the audit committee as at 31 March 1996 are: Mr E van As (Chairman), Mr L Boyd, Dr D Gihwala, Mr KC Phihlela and Dr GG Garrett.

Human Resources Committee

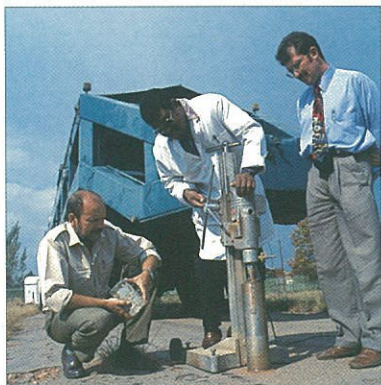
The CSIR Board's influence and control of human resources is primarily exercised through the human resources committee, which is appointed annually. The committee meets at least twice during the year to discuss and determine human resources policy and strategy. The members of this committee as at 31 March 1996 are: Dr WP Venter (Chairman), Prof AA Eberhard, Dr IF Matsepe-Casaburri, Ms LF Shope-Mafole and Dr GG Garrett.

Organisation changes

In response to opportunities in the environmental market and a comprehensive strategy review during the 1995/96 financial year, a new Division of Water, Environment and Forestry

Executive report (continued)

Technology (Environmentek) was launched in April 1996. The new business unit consolidates the skills, competencies, products and services of three previous CSIR Divisions, namely Earth, Marine and Atmospheric Science and Technology (Ematek), Forest Science and Technology (Forestek) and Water Technology (Watertek), together with the corporate programme for Environmental Services. This new division will significantly focus the CSIR's capacity in natural resources and the environment.



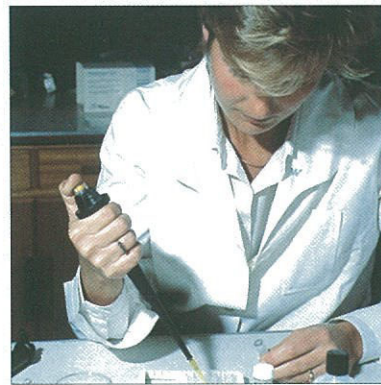
On 1 April 1995 the Fishing Industries Research Institute (FIRI) merged with the CSIR's Division of Food Science and Technology. This also creates a base from which the CSIR can expand its services to the food processing industry in the Western Cape. At the time of the merger, 25 FIRI employees joined the CSIR.

The "engine room" of the CSIR centres around its ten operating divisions. In addition, two cross-cutting

corporate programmes in the areas of technology for development and industrialisation support integrate skills and expertise from across the organisation to respond to client and stakeholder needs.

Acquisitions

The CSIR has increased its effective holding in the Technology Finance Corporation (Pty) Limited (Technifin) to 100% (1995: 50%) with effect from 1 July 1995. The consideration paid for the increased shareholding was



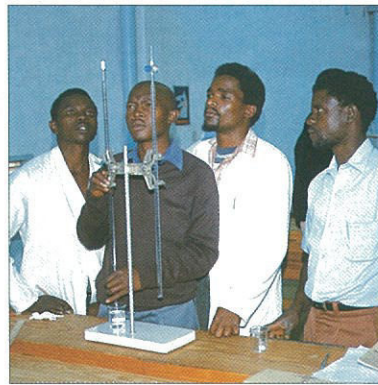
R1,8 million. Refer to note 4 of the annual financial statements on page 30 of this report.

Information required under schedule 4 of the Companies Act

This annual report and the financial statements deal with all matters required by the abovementioned schedule and the Reporting by Public Entities Act, where appropriate.

Auditors' report

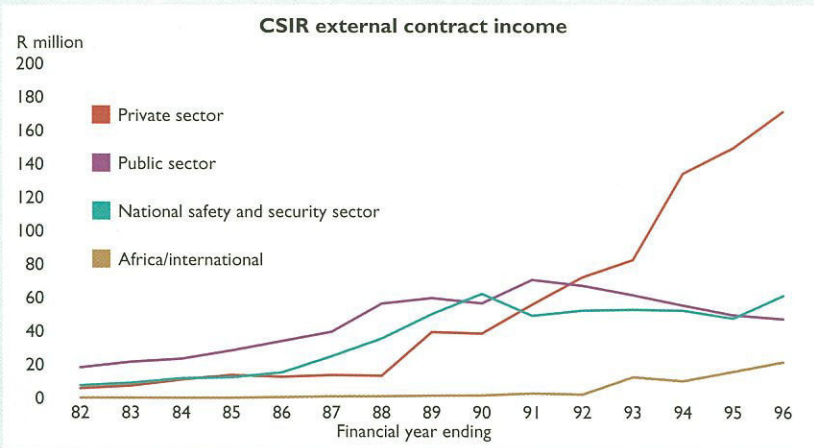
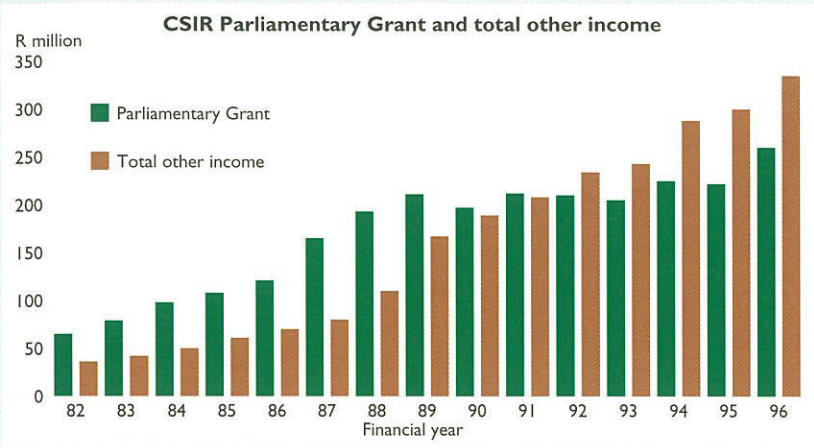
Reference is made in the report by the Auditor-General to the unauthorised status of the 1995/1996 CSIR budget. This must be put in perspective. The CSIR budget was formally approved by its Board on 16 March 1996 in terms of its Act. The non-approval by the relevant Ministers is a technicality resulting from time constraints. There were no issues or differences related to the compilation or content of the budget submission and we refer, in this respect, to the unquali-



fied audit opinion. Efforts to improve communication with the Department of Trade and Industry to facilitate an early and timeous approval of the 1996/1997 budget were successful and the process had a range of positive benefits as a result of the improved lines of communication.

Organisation performance

The report on organisation performance deals with financial manage-

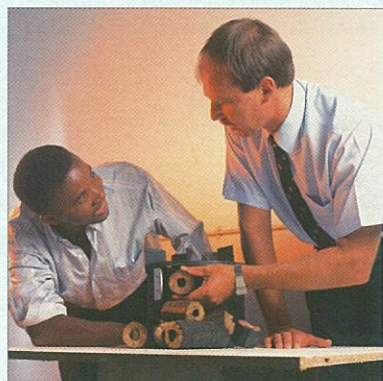


ment, short-term goals, international strategy, stakeholder satisfaction and customer perceptions and environment, health and safety.

Financial management

In response to the challenge faced by all science councils of undertaking more contract research and develop-

ment work for the private and public sectors, the CSIR has steadily increased its external income over the past nine years. It now derives 56,5% (1994/95: 55,9%) of its revenue from external contract income and has recorded, for the past financial year, a turnover of R563 million (1994/95: R498 million).



The CSIR's achievements against short-term goals are given below, and the financial position and results of the organisation are reflected in detail on pages 22 to 36 of this report.

Short-term goals

The CSIR's management has set annual short-term goals to operationalise strategy in a focused manner and to measure performance. The goals are stated in bold italics.

Goal number 1: Sales and financial performance

- An external contract income target of R300 million was set and R300,2 million was realised (1994/95: R261,7 million). This represents nominal growth of 15% and real growth of approximately 6%.
- A net operating margin of R8,405 million and a return on total assets of 7% were targeted; R8,5 million and 7,7% respectively were achieved.

Goal number 2: Innovation

The goal was to generate at least 20% of external contract income in 1995/96 from new products, processes and services launched within the previous two and the current financial years. A level of 21% (1994/95: 16,9%) was achieved.

Goal number 3: Technology for Development (TfD)

- The CSIR aimed during 1995/96 to

Executive report (continued)

invest a minimum of 20% of its Parliamentary Grant to develop and deploy its Tfd capacities to provide relevant technologies, services and product offerings to its stakeholders in the provinces and local communities and the SMME sector. Parliamentary Grant investment in this area is now 21% (up from 15% in 1994/95 and 8% in 1993/94), which represents a significant investment shift towards the creation of capacities, products, services and technologies aimed at the development arena and the SMME sector.

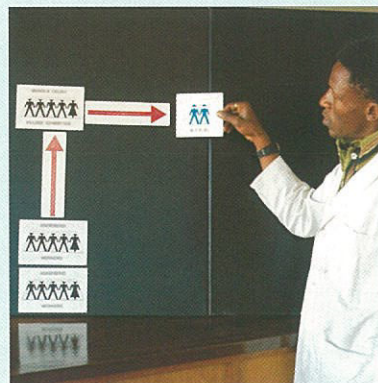
- The CSIR aimed to grow its income from this sector to R40 million. Sales from this sector amounted to R25,4 million (1995: R25 million). This is lower than the goal and indicates a lack of full understanding in the organisation of the extended lead times prevailing in the development arena, together with the slower delivery on RDP goals as experienced nationally.

- The CSIR aimed to be acknowledged as the primary South African supplier of Technology for Development-related technology products, that reflect national priorities, by the recipients of these products. Research is currently under way to determine the attitudes towards and perceptions of the CSIR amongst central, provin-

cial and local governments; urban and rural communities; supporting structures (NGOs, community-based structures); and managers and entrepreneurs in the SMME sector. First indications are that the CSIR enjoys a considerably better image than was the case when similar surveys were undertaken during the 1993 strategic review.

Goal number 4: Strategy implementation

This goal stipulated a maintained



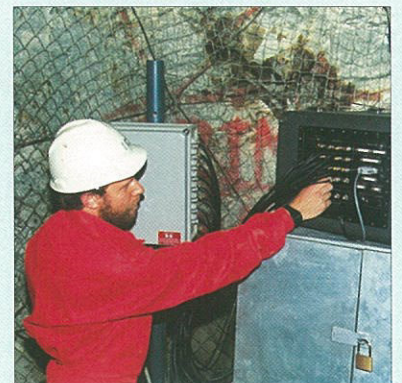
focus on the implementation and embedding of objectives set out in the 1993 corporate strategy in the four areas of *Regstellende Aksie*, creating a quality organisation, empowerment of first-line leadership and competitiveness in the CSIR's core business. Performance against this goal were:

- **Regstellende Aksie**

The CSIR believes that special efforts have to be made to increase science and technology capacity and to ensure

staff representivity. Progress in this area has been slower than hoped for, and intended, although some notable achievements include:

- a survey of employee attitudes to *Regstellende Aksie* as part of the annual employee satisfaction benchmark survey of which the results are being utilised to correct certain actions at operational level;
- a long-range (five-year) human resources plan (1 January 2001 vision), including clear goals, for all divisions



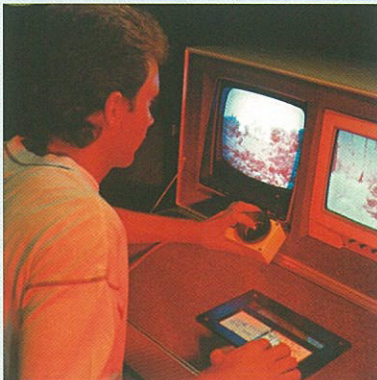
has been initiated;

- a revised Employment Equity policy is in place and has been well received by employees in the organisation;
- a career enhancement programme has been initiated, which offers black staff the opportunity to grow into a science and technology career;
- an internship programme, although still on a small scale, is also under way;
- the CSIR opened a Learning Centre for employees which offers basic literacy to matric-level courses; and

– employment equity forums have been established in seven of the CSIR's divisions.

• **Creating a quality organisation**

As part of the CSIR's programme of phased introduction of Total Quality Management (TQM), eight of the CSIR's divisions have quality management structures in place. During 1995/96, more than 430 staff members attended six different types of quality-related training programmes. Resources have been allocated to 67 quality improvement projects and activities, including ISO9000-,



EN45000- and ISO25-related accreditation projects.

The Management Board of the CSIR (Executive members and Division Directors) acts as the Quality Council for the organisation, with oversight of the whole TQM initiative.

The impact of the CSIR's TQM initiative on its dealings with stakeholders, clients and staff is tracked twice annually through its customer satisfaction monitor and internal market alignment performance surveys.

• **Empowerment of first-line leadership**

This initiative has been absorbed into the human resource planning approach (1 January 2001 vision) referred to above.

• **Competitiveness in the CSIR's core business**

Highlights achieved against this goal include:

– continued differentiation from other local and international technology organisations by better meeting stakeholder and client needs through market-driven, comprehen-



sive, multi disciplinary and cost-effective technology solutions and information;

– sound positioning as the *Technology Partner* of industry and the public sector, which is evolving further and gaining substance;

– market segment analyses to develop specific strategies within and between divisions, supported by the implementation of Key Account Management for greater market penetration;

– a new approach to industrialisation and commercialisation of product and process technology, and the implementation of specialist capacities to establish manufacturing-based, technology-intensive SMMEs in a business incubator at the CSIR and in selected decentralised locations;

– the implementation of an international strategy that has increased foreign income to R21 million (1994/95: R16 million); and

– the successful deployment of the CSIR's sophisticated range of management and information systems that support its marketing, human resource, finance, project management, and investment and technology management processes.

Goal number 5: Growth

This goal focused on the development of organisation-wide strategies to pursue significant real growth for the organisation. As a result, the CSIR's divisions have incorporated growth goals in their business plans; a provincialisation strategy has been developed as well as an international strategy that includes SADC (Southern African Development Community) and the wider African continent; and improved industrialisation and commercial processes are being implemented. Real growth in external income in excess of 6% was achieved for the financial year under

Executive report (continued)

review. This goal remains integral to the ongoing refinement of the CSIR's corporate strategy.

International strategy

Progress has been made in breaking down barriers that arose during the sanctions era which, in many respects, isolated the CSIR from international technology markets and sources. Foreign contract



income increased to its highest level ever, as indicated above, whilst a number of specific collaboration agreements have been entered into to further enhance the CSIR's international business development strategy.

Stakeholder satisfaction and customer perceptions

The CSIR's customer satisfaction monitor research is undertaken every six months to measure the organisation's responsiveness to stakeholder

and market needs, and forms part of an ongoing monitoring process. The information provided from the survey is used for the implementation of strategies to develop an appropriate customer service culture.

Environment, health and safety

In terms of occupational safety, the CSIR retained its four-star NOSA status during 1995 at all its main cen-



tres, namely the Scientia site in Pretoria, and the sites in Stellenbosch and Port Elizabeth. In addition to this, the CSIR's Division of Mining Technology site in Johannesburg was also awarded four stars at the time of its first NOSA audit in 1995. With the promulgation of the Hazardous Chemical Substances Regulations late in 1995, a re-evaluation of the CSIR's existing environmental, health and safety (EHS) structure was undertaken and it was consolidated with Health Services into one unit.

Policy framework

Having initially been part of the National Science and Technology Initiative and thereafter in the establishment of the National Science and Technology Forum in 1994, the CSIR's involvement continued during the past year in support of the preparation of the draft Green Paper on Science and Technology. Since January 1996, when this was published, ongoing contributions which involved the CSIR have led to the publication of a draft White Paper.

This process has allowed key managers in the CSIR to contribute actively in the national science and technology debate and to bring back to the organisation critical insights to refine and accelerate its ongoing transformation process.

The CSIR is also supporting the development of key industrial strategies by the Department of Trade and Industry through a number of different inputs. These include inputs to the Regional Industrial Location Study through the CSIR's GIS support group, the development corridor strategies and the industrial cluster studies.

In terms of the national small, medium and micro enterprise (SMME) initiative, the CSIR has been an active player in supporting policy formulation to create decentralised capacities

that will underpin the establishment and maintenance of SMMEs. Local business service centres will be established to provide education and training for SMMEs, while manufacturing technology centres will stimulate the development of manufacturing SMMEs. Consequent to the demand from the SMMEs, the CSIR will provide technology and technical support.

Technology management and the Parliamentary Grant

In addition to reporting on the organisation's performance against short-term goals for the past financial year, a selection of the key outputs, achievements and the impact of its technology and competence deployment are highlighted in *Technology Impact*, the companion document to this report.

Technology investment in appropriate capacity by means of the Parliamentary Grant – which amounted to R260 million in the 1995/96 financial year or 43,5% of total revenue (1994/95: R233 million or 44,1%) – are mediated through the CSIR's core management systems and full recording at a detailed level is ensured for all projects.

To meet the output orientation objective of the CSIR, it has developed an effective Project Management System (PMS) to track all projects undertaken within divisions and at the corporate level in terms of human resource and running (operational) costs. PMS is the core operating system that tracks

outputs and deliverables in the CSIR.

In addition during the past year, as a logical extension to PMS, the CSIR has developed an Investment Process Tool (IPT) based on its experience with the management of investments in product development. IPT captures the investment objectives of divisions and corporate initiatives at thrust level and calls for a longer time horizon for planning. Providing a six-year view of investments and a high-level summary capability, it is based on modern concepts of tech-



nology management and has close links to PMS.

People management

The number of people employed by the CSIR during the 1995/96 financial year was 3 189 as at 31 March, compared to 3 003 at the end of the previous financial year.

Organisation climate

The CSIR staff's perceptions of the organisation are now surveyed every six months to establish an Employee

Satisfaction Index. The information from this survey is used to improve the work environment, management practices, communication within the organisation and internal customer service.

Employment equity

The CSIR believes strongly that special efforts have to be made to ensure staff representivity. These efforts should be over and above the normal human resource development and procurement processes which are



already in place or, where necessary, are being revised for the purpose of promoting diversity in the workplace. In this regard, the CSIR has allocated resources for change management training, an increase in the number of bursars (both undergraduate and graduate) and an increase in the number of black and women scientists to be recruited.

Pension fund

The Board of Trustees of the CSIR's pension fund consists of

Executive report (continued)

Mr AJ Jordaan (Chairman), Dr AW Paterson, Mr P Masemola, Mr RJ Khonothi, Ms CN Ramphomane, Mrs S Harmse and Mr J Moloto. The Board of Trustees, elected in December 1994, serves for a period of three years.

The financial statements of the CSIR pension fund are the responsibility of the Board of Trustees. The Board ensures the establishment and maintenance of accounting systems and practices adequately supported by internal accounting controls. The controls, which are implemented and executed by the fund's administrators, provide assurance that the fund's assets are safeguarded, that transactions are properly authorised and executed and that the financial records are reliable. No benefit changes to the fund occurred during the 1995/96 financial year.

Labour relations

There has been a noticeable decrease in industrial relations incidents over the past year and good progress has been made in establishing a sound working relationship between NEHAWU and the CSIR.

The future

Organisation priorities

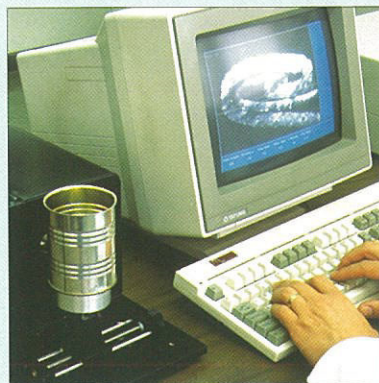
From the middle of 1995, the CSIR's

priorities have been refined to the following five areas, which form the framework by which the organisation's divisions have developed their business plans:

Growth – in the CSIR's business, in real terms, through meeting the needs of clients and stakeholders

Quality – through a focused total quality management initiative

People – where CSIR people will feel increasingly positive in a stimulating, innovative and rewarding working



environment, while striving for employment equity across the organisation

Development – to make a significant impact, through technology, on sustainable development in our country, and

Information – by harnessing the power of the information revolution for the CSIR's own business and its ability to leverage that of its clients and stakeholders.

In addition, in the ongoing refine-

ment to its corporate strategy, the CSIR has initiated some specific strategy review processes with particular reference to the following three areas: *Developing the country's human resources* is a key goal of the growth and development process in South Africa. As a major national resource with significant capacities in staff, facilities and equipment, the CSIR is strongly positioned to help young South Africans develop careers in science and technology. It is a chal-



lenge and an opportunity for the CSIR to help increase the pool of relevant manpower for the nation and for itself. To effectively support this human resource development initiative, consultation with the appropriate authorities and other relevant role players, including those from the formal education sector, is ongoing.

The development, deployment and uses of information technology in the CSIR requires detailed ongoing consideration for the organisation to

align itself in this area with the challenges ahead and to optimise its investments in the technology and the information needs of staff, stakeholders, clients and in the national policy arena.

Developing national excellence in manufacturing is a critical requirement for economic growth in South Africa, underpinning a globally competitive manufacturing sector. However, years of isolation and inward focus have acted to erode the technology base of South African industry which the CSIR, as a prime technological resource, can help redress. In



turn, however, this will require the CSIR to review, *inter alia*, its approach and impact to date, its investments and resourcing strategies, and its alliancing/partnering models. In line with this commitment the CSIR, in March 1996, and with strong encouragement by Government, became associated with a joint venture between the Manufacturing Group of the University of Warwick (UK) and the locally established Morgan Education Technologies. This associa-

tion will build on the CSIR's technical manufacturing expertise and offers a complementary range of specialist services into the manufacturing industry.

In conclusion

The role of science and technology as integral to national economic prosperity is widely accepted. Many centres of excellence exist in the South African science and technology system and the country possesses skills that are truly world-class. Identifying areas where South Africa could make a strong contribution presents an exciting challenge, and organisations like the CSIR are uniquely placed to remain at the frontiers of knowledge in many areas of science and technology in order to meet this challenge. The CSIR's core business processes and management and information systems will allow the organisation to continue its drive towards high performance and quality outputs. Responsiveness and a strong performance orientation have become increasingly characteristic over the years since the first wave of organisational transformation in 1986, and have created a sound platform for further transformation, enhancing confidence in the CSIR's ability to rise to the challenges reflected in its corporate strategy and organisational priorities. Rigorous management of income and expenditure will help

secure the financial health of the organisation in the years ahead.

These fundamentals will ensure that the CSIR is indeed capable of providing effective technology solutions and information to support sustainable development and economic growth for South Africa.

We would, in closing, like to sincerely thank all of those who have made 1995/96 a successful year on which to report: Board members, management and staff, trade union and especially, clients and stakeholders.

Board approval

The annual financial statements of the CSIR for the year ended 31 March 1996, as set out on pages 10 to 36 of this report, have been approved by the CSIR's Executive Management Board and by the CSIR's Board at the Board meeting held on 12 June 1996.

These statements are signed on behalf of the CSIR Board by:

GG Garrett

President

WP Venter

Chairman

I n c o m e s t a t e m e n t

for the year ended 31 March 1996

	Notes	GROUP		CSIR	
		1996	1995	1996	1995
		R'000	R'000	R'000	R'000
Turnover	2	562 869	497 584	562 869	497 584
Other income		149	3 805	149	3 805
Proceeds on disposal of fixed assets		5 381	324	5 381	324
Total operating income		568 399	501 713	568 399	501 713
Expenditure					
Employees' remuneration		291 282	269 856	291 282	269 856
Depreciation	5	23 888	25 018	23 888	25 018
Operating expenses		249 077	234 938	244 729	234 934
Total expenditure		564 247	529 812	559 899	529 808
Net operating surplus/(deficit) for the year before investment income	3	4 152	(28 099)	8 500	(28 095)
Income from investments	6	34 898	29 099	34 885	31 706
Net surplus for the year		39 050	1 000	43 385	3 611
Accumulated funds at the beginning of the year		431 661	430 661	417 189	413 578
Accumulated funds at the end of the year		470 711	431 661	460 574	417 189

B a l a n c e s h e e t

at 31 March 1996

	Notes	GROUP		CSIR	
		1996 R'000	1995 R'000	1996 R'000	1995 R'000
CAPITAL EMPLOYED					
Accumulated funds		470 711	431 661	460 574	417 189
Long-term liability	12	7 466	–	–	–
Total capital employed		478 177	431 661	460 574	417 189
EMPLOYMENT OF CAPITAL					
Fixed assets	5	198 160	188 332	198 004	188 332
Investments	7	36 968	35 252	35 000	35 000
Interest in subsidiaries and associate companies	4	1 005	–	27 220	27 220
Net current assets		242 044	208 077	200 350	166 637
Current assets		355 025	346 634	306 703	304 696
Debtors and advances	8	93 877	72 530	93 439	72 528
Stock and contracts in progress	9	22 972	48 172	22 937	48 172
Cash and short-term deposits		238 176	225 932	190 327	183 996
Current liabilities		112 981	138 557	106 353	138 059
Advances received	10	5 732	37 259	5 414	36 770
Creditors and provisions	11	107 249	101 298	100 939	101 289
Total employment of capital		478 177	431 661	460 574	417 189

C a s h f l o w s t a t e m e n t

for the year ended 31 March 1996

	Notes	GROUP		CSIR	
		1996 R'000	1995 R'000	1996 R'000	1995 R'000
Cash generated from operating activities		3 479	6 280	1 916	8 787
Cash generated by/(utilised in) operations	A	25 202	1 941	29 298	(678)
Cash (utilised)/generated by a (increase)/decrease in working capital	B	(21 723)	4 339	(27 382)	9 465
Cash generated from/(utilised in) investment activities		1 299	(1 643)	4 415	964
Income from investments (note 6)		34 898	29 099	34 885	31 706
Fixed assets acquired	C	(36 007)	(31 066)	(35 851)	(31 066)
Proceeds on disposal of fixed assets	D	5 381	324	5 381	324
Investments in subsidiary acquired		(1 968)	–	–	–
Subsidiary acquired		(1 005)	–	–	–
Cash generated		4 778	4 637	6 331	9 751
Increase in loans to associate companies		–	317	–	317
Increase in long-term liabilities		(7 466)	–	–	–
Increase in cash and cash equivalents		12 244	4 320	6 331	9 434
Increase in fixed deposits		–	10 000	–	10 000
Increase/(decrease) in cash and short-term deposits		12 244	(5 680)	6 331	(566)
Cash utilised		4 778	4 637	6 331	9 751

Notes to the cash flow statement

for the year ended 31 March 1996

	GROUP		CSIR	
	1996 R'000	1995 R'000	1996 R'000	1995 R'000
A. Cash generated by/(utilised in) operations				
Net operating surplus/(deficit) before investment income				
	4 152	(28 099)	8 500	(28 095)
Adjusted for:				
Depreciation	23 888	25 018	23 888	25 018
(Profit)/Loss on disposal of fixed assets	(3 090)	2 104	(3 090)	2 104
Share of associate companies' losses	–	2 918	–	295
Adjustment relating to associate company now consolidated	252	–	–	–
	25 202	1 941	29 298	(678)
B. Cash (utilised in)/generated by a (increase)/decrease in working capital				
Debtors and advances	(21 347)	3 465	(20 911)	8 317
Stock and contracts in progress	25 200	(17 321)	25 235	(17 321)
Advances received	(31 527)	5 380	(31 356)	5 654
Creditors and provisions	5 951	12 815	(350)	12 815
	(21 723)	4 339	(27 382)	9 465
C. Fixed assets acquired				
Land and buildings	4 079	4 721	4 079	4 721
Equipment	31 244	26 137	31 088	26 137
Vehicles	684	208	684	208
	36 007	31 066	35 851	31 066
D. Proceeds on disposal of fixed assets				
Book value of assets disposed of	2 291	2 428	2 291	2 428
Cost	21 941	18 247	21 941	18 247
Accumulated depreciation	19 650	15 819	19 650	15 819
Profit/(Loss) on disposal	3 090	(2 104)	3 090	(2 104)
	5 381	324	5 381	324

Notes to the annual financial statements

for the year ended 31 March 1996

1. Principal accounting policies

The annual financial statements are prepared on the historical cost basis, in accordance with generally accepted accounting practice and incorporate the following principal accounting policies, which have been consistently applied in all material respects.

1.1 Basis of consolidation

The annual consolidated financial statements incorporate the annual financial statements of the CSIR and its subsidiaries. The operating results of the subsidiaries are included from the effective dates of acquisition and up to the effective dates of disposal. All significant inter-company transactions and balances have been eliminated.

Premiums arising on the acquisition of subsidiaries are written off on acquisition and are only recognised as an asset if future income is anticipated. In this situation, the goodwill is amortised to income on a systematic basis over its useful life.

1.2 Associate companies

Associate companies are those companies in which the group has a significant influence and which it intends to hold as long-term investments. Associate companies are accounted for by the equity method from their most recently audited financial statements or unaudited management information as at 31 March 1996.

1.3 Research and development

Research costs are charged against income as and when incurred. Development costs of clearly defined products, of which the future technical feasibility and commercial viability has been proven to the satisfaction of the Board, are capitalised (refer note 1.5.3). The extent of capitalisation is limited to an amount equal to the present value of expected net future income.

1.4 Foreign currencies

Assets and liabilities in foreign currencies are converted to South African rand at the rate of exchange ruling at the year-end date or rates stipulated in forward exchange contracts. Conversion differences are dealt with in the income statement. Transactions during the year are converted to the South African rand at the rate of exchange ruling at date of payment, unless forward exchange contracts have been secured. Forward exchange contracts are secured for all material foreign liabilities.

1.5 Fixed assets and depreciation

1.5.1 Land and buildings

Land and buildings are stated at cost. Buildings are regarded as investment properties and are not depreciated. Provision for maintenance is charged against income.

1.5.2 Plant, equipment and vehicles

Plant, equipment and vehicles are stated at cost less accumulated depreciation.

1.5.3 Development expenditure and intellectual property

Development expenditure and intellectual property consist of capitalised development costs as approved by the Board. Capitalisation is limited to the present value of expected net future income (refer note 1.3).

1.5.4 Depreciation

Depreciation is based on cost and calculated on the straight line method at rates considered appropriate to write off book values over the estimated useful lives of the assets except for:

- Assets costing R2 000 or less, which are written off in the year of acquisition.
- Assets specifically acquired for a contract, which are depreciated over the life of the contract.
- Strategic assets of limited commercial application, which are written down to expected future commercial recoverable value at acquisition, with the remaining book value depreciated over the estimated useful lives of the assets.
- Development expenditure and intellectual property, which are depreciated over a maximum period of three years.

The estimated lives of the main categories of fixed assets are as follows:

Plant	– 10 years
Equipment	– 5-10 years
Computer equipment	– 3-7 years
Vehicles	– 5 years
Development expenditure and intellectual property	– 3 years

1.6 Investments

Investments are stated at cost less amounts written off. Investments are written down where, in the opinion of the Board, a permanent diminution in value has occurred.

1.7 Turnover

Turnover comprises:

- The net invoiced value of research, development and implementation contracts excluding value added tax.
- Income acknowledged on contracts in progress as calculated per note 1.8.
- The annual Parliamentary Grant.
- Royalties.

1.8 Stock and contracts in progress

Raw materials and finished goods are stated at the lower of cost and net realisable value. Cost of stock is determined by the average method. Contracts in progress are stated at the lower of cost and net realisable value. Net realisable value is calculated as a percentage of the sales value of work completed, after provision for losses relating to the stage of completion and any foreseeable losses to completion of the contract.

Notes to the annual financial statements (continued)

for the year ended 31 March 1996

	GROUP				CSIR			
	1996		1995		1996		1995	
	R'000	%	R'000	%	R'000	%	R'000	%
2. Turnover								
Parliamentary Grant	260 128	46	233 314	47	260 128	46	233 314	47
Contract income	300 285	53	261 747	52	300 285	53	261 747	52
Private sector	170 888	30	149 166	30	170 888	30	149 166	30
Public sector	47 073	8	49 446	10	47 073	8	49 446	10
National Safety & Security sector	60 952	11	47 465	9	60 952	11	47 465	9
Other sectors (including Africa)	21 372	4	15 670	3	21 372	4	15 670	3
Royalties	2 456	1	2 523	1	2 456	1	2 523	1
Total turnover	562 869	100	497 584	100	562 869	100	497 584	100

	GROUP		CSIR	
	1996 R'000	1995 R'000	1996 R'000	1995 R'000
3. Net operating surplus for the year before investment income				
The net operating surplus for the year before investment income is arrived at after taking the following items into account:				
Auditors' remuneration	859	813	855	809
Audit fees	809	763	805	759
Expenses	50	50	50	50
Net (profit)/loss on disposal of fixed assets	(3 090)	2 104	(3 090)	2 104
Movement in provisions	22	(9 829)	22	(9 829)
Provision for accumulated leave	(525)	1 593	(525)	1 593
Provision for property maintenance	547	(1 736)	547	(1 736)
Provision for redundancy payments	–	(549)	–	(549)
Provision for pension fund contributions	–	(9 137)	–	(9 137)
Interest paid	–	3	–	3
Fees paid for services	49 834	39 185	49 834	39 185
Patent costs	1 488	1 818	1 488	1 818
Legal costs	1 777	4 529	1 777	4 529
Consultants	46 569	32 838	46 569	32 838
Board members' emoluments				
For services on the Board	127	143	127	143
Abnormal item	–	25 000	–	25 000
Payment to CSIR Pension Fund to offset AIPF underfunding				
Acquisition of subsidiary				
Reversal of provision for losses	9 173	–	–	–
Goodwill written off	(10 533)	–	–	–

Notes to the annual financial statements (continued)

for the year ended 31 March 1996

4. Interest in subsidiaries and associate companies

	Issued capital	Effective holding		Financial year-end	Interest of the CSIR	
		1996 %	1995 %		Shares at cost	
Consolidated subsidiaries					1996 R'000	1995 R'000
South African Inventions Development Corporation (SAIDCOR)	27 220	100	100	31 March	27 220	27 220
Included in SAIDCOR:						
Technology Finance Corporation (Pty) Limited (Technifin)	5 200	100	50	30 June	4 400	2 600
Included in Technifin carrying value:						
Quality Electronics Developments (Pty) Limited	1 000	76	38	30 June	751	751

	Issued capital	Effective interest		Financial year-end	GROUP	
		1996 %	1995 %		Carrying amount	
Associate companies					1996 R'000	1995 R'000
Unlisted:						
Impulse Deflection Measurement (Pty) Limited	1 000	25	25	28 February	-	-
Rockradar (Pty) Limited	100	25	25	31 March	-	-
Carrying amount – note 7					-	-

Net indebtedness		Net investment		General nature of business
1996	1995	1996	1995	
R'000	R'000	R'000	R'000	
-	-	27 220	27 220	Investment in and development of research and implementation of technology
-	-	-	-	The acquisition and transfer of technology to industry by licensing new inventions, providing finance to develop technology and venture capital for the exploitation thereof.
254	549	1 005	1 300	Holder of intellectual property in electronic technologies. This subsidiary is not consolidated because the Board of CSIR is of the opinion that it would be of no real value to the users of the annual financial statements in view of the insignificant amounts involved.

CSIR						General nature of business
Cost or valuation		Indebtedness		Provision for losses		
1996	1995	1996	1995	1996	1995	
R'000	R'000	R'000	R'000	R'000	R'000	
-	-	126	126	(126)	(126)	Impulse deflection measurements.
-	-	300	300	(300)	(300)	Exploitation of intellectual property rights.
-	-	426	426	(426)	(426)	

Notes to the annual financial statements (continued)

for the year ended 31 March 1996

5. Fixed assets

GROUP	Depreciation for the year R'000	1996			1995		
		Cost R'000	Accumulated depreciation R'000	Net book value R'000	Cost R'000	Accumulated depreciation R'000	Net book value R'000
Land and buildings	-	115 658	-	115 658	111 854	-	111 854
Development expenditure and intellectual property	3 139	5 254	5 254	-	5 254	2 115	3 139
Equipment	20 586	365 217	283 810	81 407	356 138	283 532	72 606
Vehicles	163	2 616	1 521	1 095	2 199	1 466	733
	23 888	488 745	290 585	198 160	475 445	287 113	188 332

CSIR	Depreciation for the year R'000	1996			1995		
		Cost R'000	Accumulated depreciation R'000	Net book value R'000	Cost R'000	Accumulated depreciation R'000	Net book value R'000
Land and buildings	-	115 658	-	115 658	111 854	-	111 854
Development expenditure and intellectual property	3 139	5 254	5 254	-	5 254	2 115	3 139
Equipment	20 586	365 061	283 810	81 251	356 138	283 532	72 606
Vehicles	163	2 616	1 521	1 095	2 199	1 466	733
	23 888	488 589	290 585	198 004	475 445	287 113	188 332

Land and buildings are unencumbered and full details of the titles are available at the registered office of the CSIR.

	GROUP		CSIR	
	1996 R'000	1995 R'000	1996 R'000	1995 R'000
6. Income from investments				
Interest earned	34 898	32 017	29 035	27 001
Dividend from subsidiary	–	–	5 850	5 000
Share of associate companies' losses	–	(2 918)	–	(295)
	34 898	29 099	34 885	31 706
7. Investments				
Group book value of shares				
Technology Finance Corporation (Pty) Limited	–	2 600	–	–
Loans to associate companies	426	7 251	426	426
Technology Finance Corporation (Pty) Limited	–	6 825	–	–
Impulse Deflection Measurement (Pty) Limited	126	126	126	126
Rockradar (Pty) Limited	300	300	300	300
Provision for losses	(426)	(9 599)	(426)	(426)
Technology Finance Corporation (Pty) Limited	–	(9 173)	–	–
Impulse Deflection Measurement (Pty) Limited	(126)	(126)	(126)	(126)
Rockradar (Pty) Limited	(300)	(300)	(300)	(300)
Investments held by Technology Finance Corporation (Pty) Limited	1 968	–	–	–
Fixed deposit	30 000	30 000	30 000	30 000
* Investment in trade agreement	5 000	5 000	5 000	5 000
	36 968	35 252	35 000	35 000
8. Debtors and advances				
Trade debtors	69 300	57 272	68 862	57 270
Prepaid expenses	3 270	1 966	3 270	1 966
Other	21 307	13 292	21 307	13 292
	93 877	72 530	93 439	72 528

* The assets held in the trade agreement will be evaluated upon fulfilment of suspensive sale conditions when the difference between cost of R5 million and book value will be written off.

Notes to the annual financial statements (continued)

for the year ended 31 March 1996

	GROUP		CSIR	
	1996 R'000	1995 R'000	1996 R'000	1995 R'000
9. Stock and contracts in progress				
Stock	4 726	135	4 691	135
Contracts in progress	18 246	48 037	18 246	48 037
	22 972	48 172	22 937	48 172
10. Advances received				
Advances on contracts received from clients	5 732	37 259	5 414	36 770
11. Creditors and provisions				
Trade creditors	44 793	39 543	44 793	39 543
VAT payable	4 387	3 708	4 387	3 708
Provision for self-insurance	7 501	7 000	7 501	7 000
Provision for accumulated leave	17 108	17 633	17 108	17 633
Provision for property maintenance	7 213	6 666	7 213	6 666
Provision for redundancy payments	4 213	4 930	4 213	4 930
Other	22 034	21 818	15 724	21 809
	107 249	101 298	100 939	101 289
12. Long-term liability				
IDC	7 466	-	-	-

The interest-free loan is repayable annually commencing 30 June 1996 in amounts equal to 45% of the net royalty income and/or the net deemed royalty income from specified projects. The loan repayment will be terminated at the earlier of 30 November 2002 or the date upon which the payment exceeds the loan amount.

13. Retirement benefits of employees

CSIR Pension Fund

The Fund is registered in terms of the Pension Funds Act, 1956 and is a defined contribution plan. The CSIR liability to the Fund is limited to paying the employer contributions. Life cover and dependants' pensions are fully secured by a continued income and life insurance policy.

Employer contributions of R20,3 million (1995: R10,7 million) and employee contributions of R9,9 million (1995: R5,2 million) were paid over during the year. Employer contributions are charged against income.

Mine Officials Pension Fund and Chamber of Mines Pension Fund

At the time of the merger with the Chamber of Mines Research Organisation in 1993 certain COMRO employees elected to remain members of the Mine Officials Pension Fund and Chamber of Mines Pension Fund. In terms of the agreement with the Chamber of Mines this election holds no liability for CSIR other than paying the monthly employee contributions.

In respect of the employees who have formally converted their secondment to a CSIR appointment, employer contributions of R2 million (1995: R207 196) and employee contributions of R784 000 (1995: R82 136) were paid over during the year.

Associated Institutions Pension Fund and Temporary Employees Pension Fund

These Funds are defined benefit plans. The formula used to determine pensions is based on the pensionable earnings of the final year, and the aggregate period of uninterrupted membership.

The CSIR has 74 employees who are members of the Associated Institutions Pension Fund and 10 employees are members of the Temporary Employees Pension Fund. Both funds are controlled by the State which has assumed responsibility for the unfunded portions of these Funds.

Employer contributions of R434 000 (1995: R11,7 million) and employee contributions of R1,2 million (1995: R4,2 million) were paid over during the year to the Associated Institutions Pension Fund and Temporary Employees Pension Fund. Employer contributions are charged against income.

Post-retirement medical benefits

In the past, the CSIR has, as has been common practice, not made provision for the future liability arising from its obligation to provide for the cost of medical benefits to retired employees.

The results of a recent actuarial valuation of the future cost of medical benefits due to retired employees have indicated a total liability of approximately R240 million. The CSIR Board is currently addressing this matter and will decide on the appropriate action.

In terms of sound accounting practice the following information is provided:

Up to and including the current financial year, no post-retirement medical benefits for pensioners has been provided for. The CSIR is presently responsible for the pensioners' contribution to the medical scheme. The accumulated liability is recognised as R240 million. The actuarial valuation was carried out in May 1996.

Notes to the annual financial statements (continued)

for the year ended 31 March 1996

14. Insurance and risk management

The insurance and risk management policies adopted by the CSIR are aimed at obtaining sufficient cover at the minimum cost to protect its asset base, earning capacity and legal obligations against unacceptable losses.

All fixed assets are insured at current replacement value. Risks of a possible catastrophic nature are identified and insured while acceptable risks of a non-catastrophic nature are self-insured. Self-insurance has been instituted where the cost to benefit relationship exceeds the risk and the incidence of losses are of a minor and infrequent nature. Self-insured risks are reviewed on an annual basis to ensure cover is adequate. An amount of R7,5 million is held in a self-insurance fund to cover these risks. This amount is included in creditors and provisions in the balance sheet. No major losses were experienced during the year under review. Claims of a general nature were adequately covered.