

CSIR Strategic Contract R&D

Strategic and Operational Plan for the 2009/10 to 2011/12 Planning Cycle

Portfolio	Primary responsibility
Contract R&D	Berenice Lue Marais

The Preamble

The Planning Guidelines for the 2008/09 to 2010/11 planning cycle relevant to the Contract R&D Portfolio have been taken into account.

The CSIR Contract R&D Portfolio plays a dual role:

- providing a portfolio leadership, monitoring, and advisory role to CSIR Units and Centres and CSIR Executive, and
- providing service in a support role to CSIR Units and Centres, and CSIR Executive, based on the agreed strategies.

The CSIR Contract R&D Strategic and Operational Plan has been designed to reflect both dual roles. The emphasis within the Portfolio in terms of the dual roles is reflected.

The Plan specifies a number of KPIs to be achieved. Such KPIs have been derived from CSIR strategies and are linked to KPIs of the Units and Centres.

The plan of the Portfolio takes into account the Plans of the CSIR Units and Centres handed in by 21 November 2008. In a number of cases, CSIR strategies for various focus areas have been developed and have formed the basis of planning.

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The Executive Summary

- Summarize the overall strategic trajectory that the Portfolio intends to adopt over the medium term planning horizon

The CSIR Contract R&D policy was approved by the CSIR Board in February 2008. The Contract R&D Plan outlines the vision, strategic priorities and aims of the Portfolio.

The Contract R&D Plan sets out the CSIR strategy for engagement with the public and private sectors and their respective local, African and international segments. It also indicates a new emphasis on CSIR engagement with State Owned Enterprises (SOEs) and funding agencies. The Plan is intended to guide the CSIR in its efforts to foster scientific and industrial development in the national interest in cooperation with principals from the public and private sectors and ensure delivery against its mandate.

The plan is based on the development agenda of South Africa, the role of the CSIR within the National System of Innovation (NSI), the DST Ten Year Plan, and the National Industrial Policy Framework (NIPF)¹. The strategic issues raised in the findings of the 2008 CSIR Customer/Stakeholder Survey have been taken into account and incorporated into the Strategy.

A robust and sustainable contract R&D portfolio is essential to fulfil the CSIR mandate and its role within the NSI. Therefore, the vision, strategic priorities and aims have been clarified.

- Summarize the one to five key implementation initiatives to be taken during 2009/10 – identify the intended key outcomes and state whether budgets are available.

The key initiatives and actions include:

- establish the CSIR Contract R&D Panel;
- institutionalise the strategic relationship management process for key contract R&D partnerships;
- promote the CSIRs collaborative research ability and multi-disciplinary approach as part of the CSIR generic value proposition;
- develop special approaches for SOEs; and
- develop CSIR sector-based value propositions.

¹ The CSIR Contract R&D Background Document contains the Contract R&D analyses and supporting documentation and is available upon request.

The intended outcomes include:

- a balanced contract R&D portfolio across the RDI value chain;
- significant strategic partnerships;
- a CSIR that is seen as the preferred supplier of contract R&D for key actors in the public and private sectors, SOEs and funding agencies;
- improved service delivery and implementation in the public sector;
- recognised CSIR contribution to the sustainable growth of selected economic sectors; and
- significant external income contributing to the financial sustainability of the CSIR.

Implementation of the key initiatives and actions outlined are dependant on approval of the associated Contract R&D Portfolio Budget 2009/10.

- Complete Tables 1 and 2 (key performance indicators) providing the one year and three year targets that indicate successful achievement of the strategy and plans. Table 1 covers the strategic role and Table 2 covers the support role, as described in the Preamble to the Planning template.

Table 1 Main and supporting key performance indicators for strategic roles of Portfolios

Priority Area	Relevant Main and supporting KPIs as presented in the CSIR Plan ²	“Meets all requirements” target 2008/09 ³	Forecast 2008/9 ⁴	“Meets all requirements” target 2009/10	“Meets all requirements” target 2011/12	“Benchmark” performance level ⁵
Public Sector	- Strengthen strategic partnerships with key departments	2	Achieved	2	-	-
	- Facilitate MoAs with Key Departments	2	Achieved	1	-	-
	- Oversee AMTS IU	Oversee HR & Budget	Achieved	Manage transition to TIA	-	-
	- Coordinate CSIR response to NIPF	NIPF response plan in place	Achieved	2 Units involved	-	-
Private Sector	- Strengthen and facilitate CSIR Strategic Contract R&D Partnerships	2	Achieved	2	-	-
State Owned Enterprise	- Strengthen and facilitate CSIR Strategic Contract R&D Partnerships	Not Applicable	Stakeholder survey	SOE Plan	-	-
Funding Agencies	Not Applicable	Not Applicable	-	CSIR EU FP support	-	-
Portfolio Leadership	- Contract R&D Portfolio management & reporting	2	Achieved	2		
	- Professional Development	External Recognition	Achieved	External Recognition		

² Main KPIs are presented in bold and supporting KPIs in a normal typeface.

³ Provide only for KPIs included in 2007/08 unit plans

⁴ Provide forecasts for all KPIs (important baseline for setting targets), but only where they are specifically applicable. If not, indicate “n/a”

⁵ Unit specific benchmarks should be proposed

Table 2 Main and supporting key performance indicators for support roles of Portfolios to cover normal Management issues

Priority Area		Main and supporting KPIs	“Meets all requirements” target 2008/09 ⁶	Forecast 2008/09 ⁷	“Meets all requirements” target 2009/10	“Meets all requirements” target 2011/12	“Benchmark” performance level ⁸
Operational excellence	Service quality and delivery	Satisfaction of internal customers ⁹ <ul style="list-style-type: none"> Contract R&D Forum OPCO 	Effective Contract R&D Forum and OPCO inputs <ul style="list-style-type: none"> Contract R&D reports quality presentations 	Achieved	Effective Contract R&D Forum and OPCO inputs <ul style="list-style-type: none"> Contract R&D reports quality presentations 	-	-
		Adherence to service quality standards ¹⁰ <ul style="list-style-type: none"> EBAS Communications 	75%	Achieved	CSIR Standard	-	-
Human Resource Management	Quality of CSIR human resource environment	Total number of staff	8	6	7	-	-
		% of staff who are black	3	3	4	-	-
		% of staff who are female	4	5	5	-	-
		Proportion of support professionals ¹¹ who are black (%)	3	4	4	-	-
		Proportion of support professionals who are female (%)	4	5	5	-	-
		Number of staff with PhD level qualifications ¹²	-	-	-	-	-
		Number of studentships supported ¹³	1	0		-	-

6 Provide only for KPIs included in 2007/08 unit plans

7 Provide forecasts for all KPIs (important baseline for setting targets), but only where they are specifically applicable. If not, indicate “n/a”

8 The CSIR benchmarks will be provided, or unit specific benchmarks should be proposed

9 Support units to provide an indication on how this KPI will be measured in the Support unit. This will vary from department to department.

10 Support units to provide an indication on how this KPI will be measured in the Support unit. This will vary from department to department.

11 Staff who have a three year diploma or degree, or higher

12 Include permanent staff, studentships and post docs

Priority Area		Main and supporting KPIs	“Meets all requirements” target 2008/09	Forecast 2008/09	“Meets all requirements” target 2009/10	“Meets all requirements” target 2011/12	“Benchmark” performance level
		Number of interns supported ¹⁴	1	0	1	-	-
		Formal training days attended by managers in service units	12	5	12	-	-
		Formal training days attended by staff in service units	7	5	7	-	-

Priority Area		Main and supporting KPIs ¹⁵	“Meets all requirements” target 2008/09 ¹⁶	Forecast 2008/09 ¹⁷	“Meets all requirements” target 2009/10	“Meets all requirements” target 2011/12	“Benchmark” performance level ¹⁸
Financial sustainability	Cost optimisation	Total cost of providing support services¹⁹	R2.087m	R2.087m	R1.257m	-	-
Corporate governance and Citizenship	Quality & operational excellence	Certification of organisation to relevant quality standards²⁰	-	-	-	-	-
	Information Technology platform	Implementation of Open Source software	As required	As required	As required	As required	As required
	Black Economic Empowerment	BBBEE Overall Performance (CSIR level KPI)	As required	As required	As required	As required	Level 2

13 Candidates engaged full time on Masters or PhD level studies whilst employed by the CSIR on a fixed-term contract to work on a research project for the purpose of fulfilling their academic requirements. Studies may be partly or fully funded by the CSIR.

14 The Internship Programme is an experiential learning programme designed for graduates to gain work experience in line with their studies. The programme has a defined period of one year and graduates contribute to R&D outputs at the CSIR while acquiring core research and professional skills. Include interns not paid via the CSIR system (e.g. DST and dti interns) to provide a complete picture

15 Main KPIs are presented in bold and supporting KPIs in a normal typeface.

16 Provide only for KPIs included in 200708 unit plans

17 Provide forecasts for all KPIs (important baseline for setting targets), but only where they are specifically applicable. If not, indicate “n/a”

18 The CSIR benchmarks will be provided, or unit specific benchmarks should be proposed

19 Complete templates as provided by Finances

20 Unit specific standards where applicable

Priority Area		Main and supporting KPIs	“Meets all requirements” target 2008/09	Forecast 2008/09	“Meets all requirements” target 2009/10	“Meets all requirements” target 2011/12	“Benchmark” performance level
	Employment Equity	Percentage of all employees in grades C1 and C4 who are black*	1	1	2	-	68%
		Percentage of all employees in grades D1 to D4 who are black*	1	1	2	-	63%
		Percentage of all employees in grades E1 to F1 who are black*	1	1	1	-	43%
	Preferential Procurement	Year on year improvement in preferential procurement spend	-	-	-	-	>50% preferential procurement spend
	Corporate Governance	Energy Efficiency (CSIR level KPI)	-	-	-	-	1.2% reduction in energy usage
		Environmental stewardship	-	-	-	-	Maintain ISO 14001 accreditation
		Disabling Injury Frequency Rate (DIFR)	-	-	-	-	<1.0 disabling injuries

1. The Strategic Context

1.1 Vision, Mission and Value Proposition

- Complete **Table 3**. Provide the vision and mission of the Portfolio. Describe the Unit's value proposition and explain its reason for existence.

Table 3 Vision, mission, value proposition and reason for existence

Vision: <ul style="list-style-type: none">• To have a robust and sustainable contract R&D portfolio, which enables the CSIR to fulfil its mandate and its role within the NSI.
Mission: <ul style="list-style-type: none">• To have the optimal quality and high value Contract R&D Portfolio congruent with the organizational strategy.• To optimize the CSIR Strategic Contract R&D portfolio by enabling the organization to optimise its resources, core skills, and competencies in support of national goals by leveraging resources and capabilities from the national, regional, and global market.• To leverage public, private, and international partnerships in support of cutting-edge science, engineering and technology.
Value Proposition: <ul style="list-style-type: none">• The Contract R&D Unit is in a unique position to add value, enable impact, and to optimize the CSIR Contract R&D Portfolio through its critical mass of multi-disciplinary staff.• Our competitive advantage is the broad understanding, knowledge, experience, and network of relationships the several sectors.• As part of the CSIR R&D Core, the Contract R&D Group is uniquely placed to facilitate access to government, industry and international sectors – we have a good understanding of government policies and implementation strategies, as well as the science and technological competences of the CSIR. We therefore play a leading role in translating these into the national development agenda in collaboration with the public, private and international sectors.
Reason for Existence: <ul style="list-style-type: none">• The CR&D Unit is strategically positioned with regard to its internal stakeholders and external partners through a strategic R&D Contract management and partnering interface, supported by science and technology competencies. This is designed to enable clear understanding of the national imperatives and the needs of the industry to optimise the impact of our R&D outputs.

1.2 The Mandate and Strategic Priorities

Our vision is to have a robust and sustainable Contract R&D portfolio, which enables the CSIR to fulfil its mandate and its role within the NSI. This will be done in partnership with local, African and international role players in the public and private sectors, SOEs and funding agencies. The Contract R&D portfolio will contribute to financial sustainability, and ensure that CSIR remains relevant and on the forefront of technological innovation.

The CSIR Contract R&D Portfolio Plan adheres to the mandate of the CSIR, i.e. to perform directed and multidisciplinary research and technological innovation, fostering industrial and scientific development, in cooperation with the public and private sectors and to improve the quality of life of South Africans.

Furthermore we are aligned with, and endeavour to support, the CSIR strategic priorities:

- building and transforming human capital;
- strengthening the SET base and performing relevant R&D;
- transferring technology and skilled human capital; and
- maintaining financial sustainability and good governance.

1.3 The Aims

- Briefly review the strategic health of the portfolio, specifically considering the need for strategic development and implementation, the capacity to deliver the service at the quality levels desired, and cost optimisation issues.

The implementation of the CSIR B60 strategy demanded a change to focus activities on R&D that are aligned with the mandate. This called for a healthier balance of activities along the Research Development and Innovation (RDI) value chain, and a more defined and explicit strategy for contract R&D.

The intended outcomes of the CSIR Contract R&D Strategy include:

- a balanced contract R&D portfolio across the RDI value chain;
- significant strategic partnerships;
- a CSIR that is seen as the preferred supplier of contract R&D for key actors in the public and private sectors, SOEs and funding agencies;
- improved service delivery and implementation in the public sector;
- recognised CSIR contribution to the sustainable growth of selected economic sectors; and
- significant external income contributing to the financial sustainability of the CSIR.

An efficiently implemented Contract R&D Plan will ensure CSIRs contribution to industrial development, bring about new technological advances, technology transfer and commercialisation; and support financial sustainability.

1.4 Key Issues to be Addressed

- Complete Table 4. Summarise the key challenges and opportunities that the Portfolio needs to address over the medium-term horizon.

A number of strategic issues to be addressed that collectively seek to strengthen the CSIR Contract R&D Portfolio, as well as key findings of the CSIR Customer/Stakeholder Survey have been taken into account, as shown in Table 4.

Table 4 CSIR Contract R&D key issues

Key issues to be addressed
<ul style="list-style-type: none">• Establish the CSIR Contract R&D Panel• Institutionalise the strategic relationship management process for key contract R&D partnerships• Promote the CSIRs collaborative research ability and multi-disciplinary approach as part of the CSIR generic value proposition• Develop CSIR sector-based value propositions• Promote CSIRs role in shaping South Africa's scientific agenda• Define and structure strategic contract R&D initiatives with the primary intent being to enable the CSIR to conduct research that is both endorsed by the mandate and is an integral part of the South African government's science and technology strategy• Leverage the national strategies and initiatives in support of the Contract R&D Strategy• Package and communicate CSIR successes in an appropriate format for customer segments• The emerging B-BBEE and IP legislation are important developments that have challenging strategic and operational implications for the portfolio• Develop the appropriate skills, competencies and demographics in line with the CSIR Human Capital Development Strategy, guided by the needs and requirements of the specific context within which the Contract R&D portfolio operates

2. Strategic and Operational Plan 2009/10 to 2011/12

2.1 Situational Analysis

The CSIR Contract Research and Development (R&D) Policy was approved by the CSIR Board in February 2008. The policy provides guidelines on the CSIR approach to contract R&D. In essence, the CSIR undertakes contract R&D that complements the CSIR strategic priorities and research and innovation activities²¹, subject to acceptance of a formal contract.

The CSIR Contract R&D Plan is based on the development agenda of South Africa and the role of the CSIR within the National System of Innovation (NSI). It takes cognisance of the DST Ten-Year Innovation Plan, relevant national strategies and the National Industrial Policy Framework (NIPF).

The Parliamentary Grant provides the means to develop the S&T base upon which offerings to the market are made and R&D outputs and outcomes are realised. A robust contract R&D portfolio is essential to fulfil the CSIR mandate and its role within the NSI. A number of strategic interventions have been outlined that collectively seek to strengthen the CSIR contribution to, and interaction with, the public and private sectors and sub-sectors including local, African and international, State Owned Enterprises (SOEs) and funding agencies. Strategic issues including the findings of the 2008 CSIR Customer/Stakeholder Survey and have been taken into account and incorporated into the Plan.

²¹ Frascati/CSIR Definitions of Research and Innovation Categories

A robust and sustainable contract R&D portfolio is essential to fulfil the CSIR mandate and its role within the NSI.

2.2 The Key Sectors

The CSIR Contract R&D Plan focusses on the public and private sectors. Each of these can be segmented into local, African and international markets. State owned enterprises have been added as a segment due to their increasing role in socio-economic development and because of their programmes to build the local supplier base through the Competitive Supplier Development Programme (CSDP). Funding agencies are included due to their increased role in funding research and development, particularly through the emergence of the Technology Innovation Agency (TIA).

The schematic in Figure 1 illustrates the key sectors and sub-sectors of the Plan.

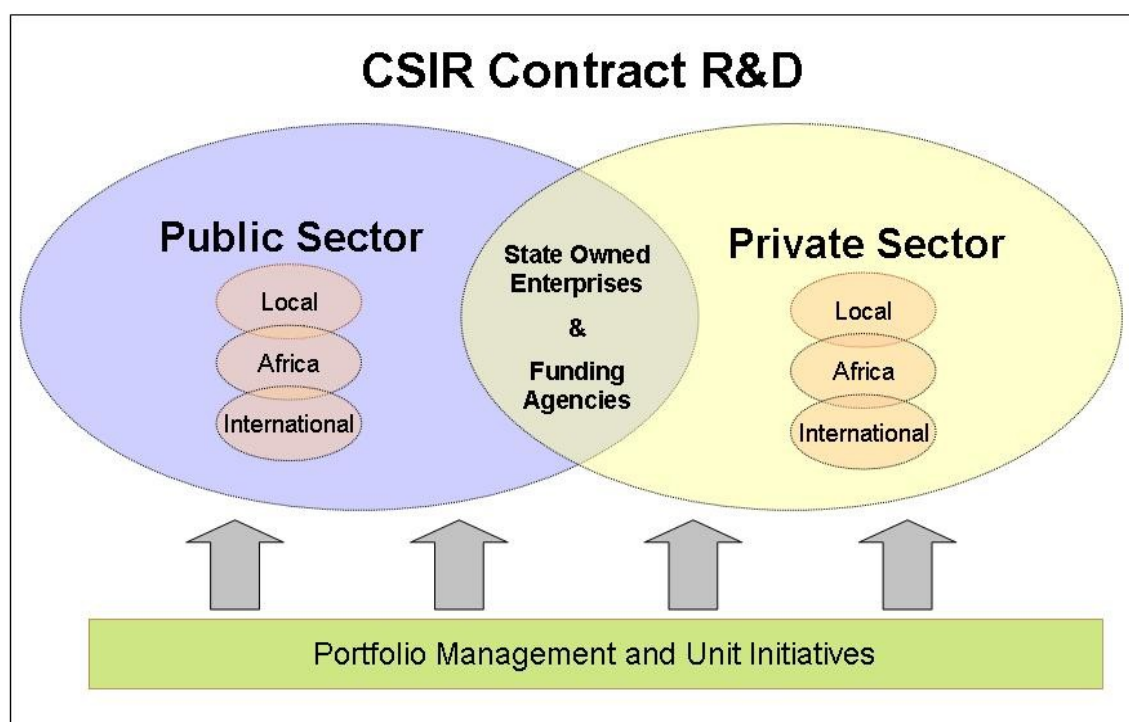


Figure 1 The main pillars of the CSIR Contract R&D Plan

2.2.1 The Public Sector

Public sector contract R&D provides the opportunity for the CSIR to demonstrate relevance, application, and the benefit of its offerings in the public domain. It enables the CSIR to share its scientific and technical expertise and make a meaningful contribution on a larger scale to

society. It provides an opportunity to contribute science and technology leadership for local, national and global needs. In this way, it provides researchers with understanding of real-world challenges and technology implementation realities, which leads to more successful technology transfer and impact.

2.2.1.1 Local

Locally, the various government departmental Medium Term Expenditure Frameworks (MTEFs) inform the CSIR Contract R&D Plan. A concerted effort is being made to ensure CSIR alignment with the goals of the MTEF, as they give rise to significant contract R&D opportunities. Increases in sector-specific research expenditure are expected from many line departments, offering opportunities for growing public sector funding for contract R&D work. The CSIR will also support provincial and metropolitan structures by providing contract R&D offerings focussed on improving service delivery and implementation at local scale.

2.2.1.2 Africa

The CSIR aims to contribute to Africa's development in line with the AU framework through strategic contract R&D partnerships with relevant international development agencies. It will undertake strategic contract R&D engagement and opportunities, and it will remain involved in the NEPAD S&T Consolidated Plan of Action and S&T bilaterals.

2.2.1.3 International

International contract R&D within the public sector enables the CSIR to contribute to the global pool of knowledge, access opportunities for strengthening the SET base and contribute to financial sustainability. It also acts as an important benchmark of relevance and quality. The European Union (EU), the USA, China, France and the UK are the top foreign countries from which the CSIR has secured contract R&D. Effort will go into building on this track record and expanding CSIRs reach.

2.2.2 The Private Sector

It is a CSIR objective to support the private sector with competitive R&D that fosters industrial development aligned with our mandate. This requires a strategy that ensures that CSIR undertakes a significant portion of private sector Contract R&D which is balanced across the RDI Chain. CSIR will develop sector-based value propositions to position its competencies in specific sectors. This will be achieved by developing strategic partnerships with key players with whom we can undertake significant research that contributes to national priorities and improvement in quality of life. An additional objective is to strengthen

the CSIR contribution to, and interaction with, the private sector, and for the CSIR to demonstrate activities relating to its industrial development contribution.

2.2.2.1 Local

The CSIR aims to obtain more of the South African private sector R&D spend through its revised Strategic Private Sector Contract R&D value proposition. This entails increasing the portion of available business expenditure on Research and Development (BERD) spend and, in turn, increasing the CSIR share from the current 2,4% of BERD level²².

2.2.2.2 Africa

The private sector is regarded as the engine of growth in Africa. It is recognised that technological innovation and technology transfer activities are required to achieve this growth. The CSIR will support local private companies and multinationals in Africa, and take advantage of opportunities provided by country bilateral and multilateral agreements. CSIR will provide services to the African private sector across the value chain and thereby contribute to industrial development as outlined by the Council of African Ministers on Industry (CAMI).

2.2.2.3 International

The key challenge within the international sector is to increase strategic contract R&D initiatives with multinationals and more private sector companies.

2.2.3 State Owned Enterprises

SOEs have the specific role of achieving strategic public objectives in those areas of the economy where purely private sector participation would cause compromise, given the private enterprise focus on achieving market-related returns on capital. Given the special character of the SOE, the CSIR is paying special attention to the Competitive Supplier Development Programme (CSDP).

2.2.4 Funding Agencies

Funding agencies have been added as an important component of the Contract R&D Strategy, due to their increasing role in funding research and development across the innovation chain, and the emergence of the Technology Innovation Agency (TIA).

22 The CSIR Private Sector Analysis, CSIR Contract R&D Unit, 2007

2.3 Key Initiatives 2009/10

- Describe the key initiatives that will be implemented in the portfolio to support fulfilment of its strategy by completing **Table 5**.

Table 5 Contract R&D Strategic Focus Areas and Key Initiatives

Strategic Focus Area	Strategic objectives to be achieved by 2010/11	Key initiatives to be implemented by the Unit to support fulfilment of its Strategy 2009/10
Unit Specific Strategic Focus Areas (specify)		
Public Sector	Local	<ul style="list-style-type: none"> - Support CSIR Units to promote CSIRs broad portfolio and depth of expertise, collaborative research ability and multi-disciplinary approach in addressing national priorities - Develop strategic partnerships by putting in place Memoranda of Agreement (MoA) with key line departments to provide multidisciplinary contract R&D and scientific leadership through the MTEF cycle - Enable CSIR Units to enhance the quality and impact of CSIR contract R&D with the public sector, while ensuring alignment with and support for national priorities and related initiatives (such as the World Cup 2010) - Enable CSIR Units to contribute to key sectors identified in the Industrial Policy Action Plan (IPAP) through the dti/CSIR Institutional Framework of Cooperation - Enable CSIR Units to provide scientific leadership in the technology transfer of existing technologies at the provincial and metropolitan level
	Africa	<ul style="list-style-type: none"> - Position CSIR Units to secure strategic contract R&D through key programmes and relevant international development agencies; - Enable CSIR Units to support the NEPAD S&T Consolidated Plan of Action and to develop S&T sector plans; - Involvement in other regional activities that support the broader objectives of NEPAD (WAITRO, ST-EAP, RRA, GRA)
	International	<ul style="list-style-type: none"> - Leverage the solid CSIR track record and position the CSIR as a global player with other leading players through collaborative R&D; - Communicate CSIR successes and grow relationships to provide multidisciplinary offerings; - Optimise CSIR involvement in the EU Framework Programmes (FP) and Support Actions by communicating our participation in about 30 collaborative research projects that we are currently engaged in under the FP banner; and - Implement the Science and Technology Europe Africa Programme (ST-EAP), which serves as a platform for the advancement of EU-Africa S&T co-operation.
Private Sector	Local	<ul style="list-style-type: none"> - Leverage the national strategies and initiatives in support of the Private Sector Plan; - Recognise the indirect and non-private sector contribution to fostering industrial development; - Recognise intellectual property, royalties and technology transfer activities in CSIR annual reporting on the private sector - Improve the ratio of the private sector spend to science councils (SCs) and tertiary education institutions (TEIs) through collaboration - Facilitate opportunities for the development of local supplier capacities that the CSIR can support, in support

Strategic Focus Area	Strategic objectives to be achieved by 2010/11	Key initiatives to be implemented by the Unit to support fulfilment of its Strategy 2009/10
		of the SOE CSDP
	Africa	<ul style="list-style-type: none"> - Facilitate opportunities for: <ul style="list-style-type: none"> - Contract R&D - Consulting and Analytical Services - Enterprise Creation for Development
	International	<ul style="list-style-type: none"> - Target selected local large and/or Multinational Corporations that have strategic interests relevant to the CSIR mandate - Communicate and promote CSIR successes per segment - Participate in innovation think tanks - Increase international contract R&D opportunities with targeted multinationals, such as Boeing, Airbus, and Syngensis.
State Owned Enterprises	Promote and provide integrated multidisciplinary capabilities to develop key solutions and products to support large infrastructure investment, addressing issues of economic growth and social development, particularly in service delivery	<ul style="list-style-type: none"> - Promote strategic relationship management with selected key SOEs, such as Eskom, Transnet, SANRAL, Denel and SANEDI - Facilitate CSIR support to the Competitive Supplier Development Programme - Leverage CSIRs understanding of national strategies and initiatives in support of SOE projects and illustrate CSIRs track record and successes in managing complex collaborative multi-party initiatives
Funding Agencies	Put in place relationship management systems for key agencies, such as the TIA	<ul style="list-style-type: none"> - Package and communicate per customer segment - Establish, manage and monitor CRM processes
Strengthening the service quality and delivery capacity		
Support to Units as required	<ul style="list-style-type: none"> - Consolidated and integrated reporting on organisational performance against planned targets - Customer/Stakeholder Segmented Events 	<ul style="list-style-type: none"> - Report on operational performance in respect of the Contract R&D Portfolio on a monthly and quarterly basis - Monitor the strategic profile and health of the CSIR Contract R&D portfolio and report on a quarterly basis - Support Units and incorporate feedback into relevant CSIR fora
Enhancing cost effectiveness and maintaining good Corporate Governance		
Effective management of the CR&D Unit	<ul style="list-style-type: none"> - Effective Contract R&D Unit in place 	<ul style="list-style-type: none"> - Resource Unit with appropriate capacity - Ensure adequate budget to provide effective service levels - Appointment and management of human resources - Financial management

2.4 Specific Other Priorities of the Portfolio

- Provide any specific strategic priorities or issues that are not covered in the previous sections.

Table 6 Specific other priorities of the portfolio

Strategic Focus Area	Strategic objectives to be achieved by 2010/11
AMTS IU	- Management and transition to TIA
Professional Development	- GIBS - CILLA
Board Representation	- Ethics Institute of South Africa - SARS - SANAS
Steering Committees	- CSIR Sciencescope - CSIR BBBEE Advisory committee - SASOL Steering committee - SYNGENTA Steering committee - CSIR Excellence Award Panel - CSIR Conference Technical Committee
Mentorship and Coaching (internal)	- CR&D Unit, DPSS, AMTS, Cilla
Human Capital Development (external)	- PhD Reviewer (India) - MSc Reviewer (Eskom)

3. Operational Excellence and Service Quality

- Complete Table 7. Portfolio operational excellence and service quality mechanisms.

Table 7 Operational excellence and service delivery

Operational excellence and service delivery	
Quality Management System	- As per EHS standard
Enhance service delivery and review of business processes	- Contract R&D Forum - Contract R&D Portfolio Reporting
Optimise effectiveness and efficiency	- Contract R&D Panel - KPI Quarterly Reporting - CSS - OPCO
Appropriate use of resources:	- KRAs and Performance Review - As per approved organogram
1) Resources of skills available	- As per approved organogram
2) Resources of skills to be added	- As per approved organogram

3.1 Finances and Corporate Governance

- Complete **Tables 8 (Income Statement) and 9 (Income from External Sources)** and **Appendix A (Risk Management Plan)**. The Finances department will provide unit or department specific income statements.

Table 8 Income Statement

	BUDGET 2008/2009	BUDGET 2009/2010	VARIANCE
INCOME	1,156,700	2,583,384	123%
External Contracts ●	1,156,700	2,497,483	116%
Public Income	430,000	769,483	79%
Private Income	0	0	100%
International Income	726,700	1,728,000	138%
Internal Income ●	0	85,901	100%
EXPENSES	3,243,226	3,839,971	18%
Manpower ●	2,183,539	2,181,572	0%
Running Costs ●	1,033,805	1,642,376	59%
Depreciation ●	25,882	16,023	-38%
MARGIN BEFORE INVESTMENT INCOME & BONUS	-2,086,526	-1,256,586	-40%
INVESTMENT INCOME	0	0	100%
Interest due to OU / (Due by OU)	0	0	100%
BONUS INCENTIVE SCHEME	0	0	100%
NET MARGIN	-2,086,526	-1,256,586	-40%
HEADCOUNT	5	6	
1 x BONUS TARGET		190,786	
BONUS THRESHOLD			
Key indicators			
Increase/(decrease) in Manpower		-1,967	0%
Increase/decrease in Running		608,571	59%
Increase in Total Cost		596,745	18%
Increase in Headcount		1	20%
Increase in Levy/PG request		-829,940	-40%
Total Levy/PG required		1,256,586	

Table 9 Income from external sources (Including VAT)

Income from external sources					
Allocation Area	Budget 2008/09	Forecast 2008/09	2009/10	% change	Comments
EU ST-EAP	EUR216k R2 592 000	EUR216k R2 592 000	EUR144k R1 728 000	20%	20% of budget due in 2009/10. (Exchange rate of EUR1/R12)
DST ST-EAP Co-Funding	R877 211	R7877 211	Roll-over	0%	Roll-over from 2008/09 Budget
WAITRO DST	R500 000	R500 000	R0	100%	Contract roll-over

Income from external sources					
AMTS IU Management	R0	R85 901	R85 901	100%	Subject to date of transfer to TIA

Table 10 Planned investments in initiatives or infrastructure in 2009/10

Description	Source of funds	Investment Rm
<u>Initiatives</u>		
• Public Sector Contract R&D stakeholder event	Contract R&D Budget 2009/10	R150k
• Private Sector Contract R&D stakeholder event	Contract R&D Budget 2009/10	R150k
<u>Infrastructure</u>		
• None		

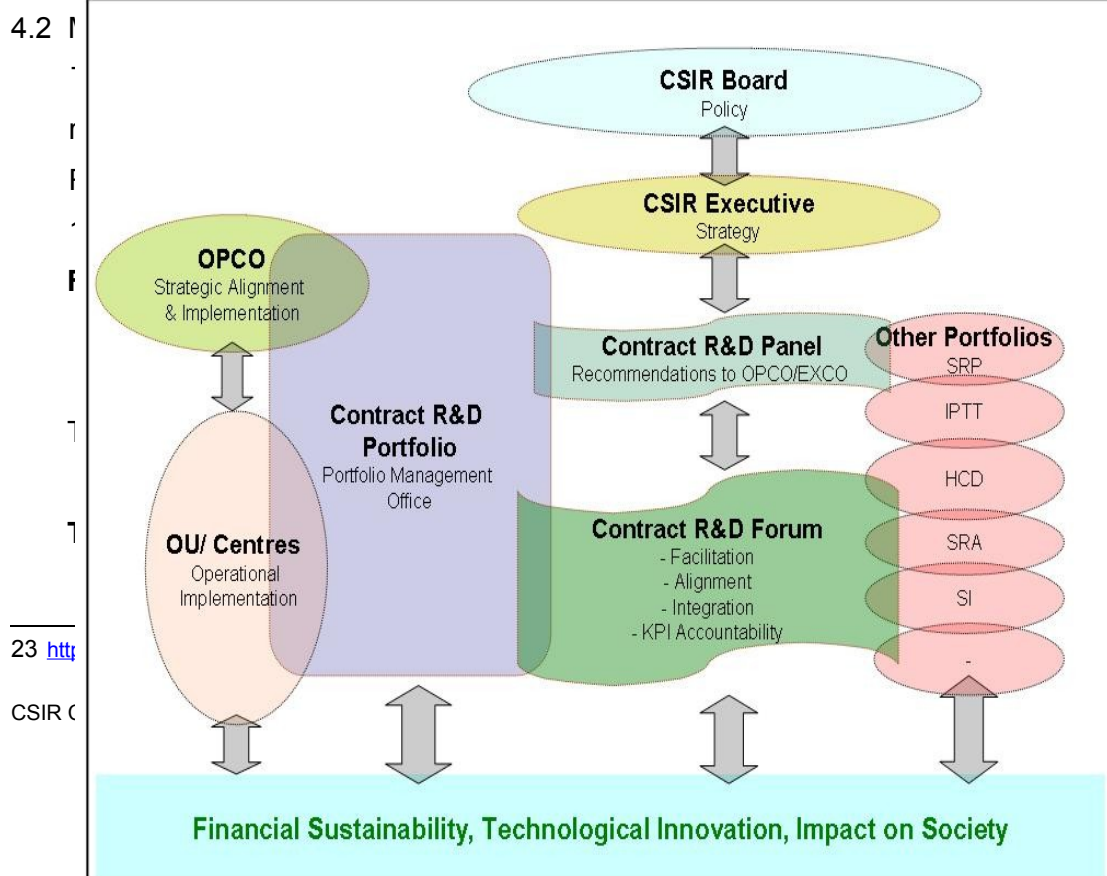
Table 11 Unit plan to support CSIR Open Source initiative

Action	Responsibility	Implementation date
As per CSIR standard	All	As per CSIR guideline

4. The Application Framework

4.1 The Contract R&D Policy

The CSIR Contract R&D Policy was approved by the CSIR Board in February 2008. The policy provides guidelines on the CSIR approach to contract R&D²³.



Structure	Roles and responsibilities
CSIR Board	<ul style="list-style-type: none"> Define policy
CSIR EXCO	<ul style="list-style-type: none"> Provide strategic leadership with regard to CSIR Contract R&D
CSIR GE: Operations	<ul style="list-style-type: none"> Recommend the strategy for approval in consultation with role players and ensures that implementation takes place according to policy
Contract R&D Panel (to be established)	<ul style="list-style-type: none"> Guide the Contract R&D portfolio and to provide thought leadership Advise on policy and strategy, also advising CSIR EXCO Maintain strong links with communities in the CSIR to ensure strong alignment and integration. As an advisory body, it will not manage any institutional structures other than its own subcommittees, but it will provide guidance to the Contract R&D portfolio office
CSIR OPCO	<ul style="list-style-type: none"> Ensure strategic alignment and implementation
Contract R&D portfolio office	<ul style="list-style-type: none"> Develop strategy, portfolio leadership, CR&D Unit management, KPIs, targets and benchmarks
Contract R&D Forum	<ul style="list-style-type: none"> Ensure operational alignment with the Contract R&D Policy and Strategy Facilitate, align and integrate CSIR-wide interventions that involve more than one unit
Unit/centre: Contract R&D Managers or designates	<ul style="list-style-type: none"> Drive, coordinate and facilitate Contract R&D plans and execution Drive Contract R&D KPI delivery at unit level Responsible for driving key strategic R&D initiatives Plan, manage, review and monitor unit delivery in terms of Contract R&D Ensure compliance through: <ul style="list-style-type: none"> Use of contract routing forms and Internal audit in accordance with the annual audit plan as approved by the Audit and Risk Committee of the CSIR Board

4.3 Monitoring and Evaluation

A number of KPIs to measure the response of the organisation are outlined annually in the KPI section of the CSIR Operational Plan. Other qualitative and quantitative monitoring criteria to be considered by the Contract R&D Panel are outlined in Table 13.

Table 13 Proposed Qualitative and Quantitative monitoring criteria

Qualitative	
Issue	KPI

Qualitative	
Quality of relationships	- Customer satisfaction: 80% minimum acceptable standard
Quality of Contract R&D output	- R&D outcomes: as specified in the KPIs
Quality of Contract R&D impact	- To be determined

Quantitative	
Issue	KPI
Contract R&D content (Type of Research Activity)	- ABC research mix: healthy distribution across the RDI value chain
Growth in Contract R&D	- Value of Contract R&D according to SIC (Rm) - Contract R&D growth measure: % Year-on-year Growth
Diversification of revenue streams	- Appropriate Contract R&D to PG ratio - Appropriate public to private sector ratio - Appropriate representation of funding across market segments

5. The Concluding Remarks

A robust and sustainable contract R&D portfolio is essential to fulfil the CSIR mandate and its role within the NSI. A number of strategic interventions have been outlined that collectively seek to strengthen the CSIR contribution to, and interaction with, the public and private sectors, taking into account the local, African, international, SOE and funding agency segments.

Appendix A Risk Management Plan

Ref #	Risk	Effects of risk	Risk Category	Likelihood of occurrence (L,M,H) ²⁴	Impact/Potential Loss (L,M,H,C)	Risk rating	Controls in Description	Control Effectiveness (L,M,H)	Residual Risk (Risk Exposure)	Required Action	Responsible Person	Implementation date
1	Inappropriate allocation of projects into type A, B, C research (Incorrect mix).	(1) Incorrect R & D mix will jeopardise the quality of S & T base (2) Hire wrong research staff (3) Unbalanced reward & recognition of researchers (4) Unbalanced R & D output.	Business	H	C	6	1. Frascati definitions 2. CR&D reporting 3. Practice note issued. Currently in PeopleSoft	M	4	Continuous monitoring and reporting	Group Manager: Contract R&D	ongoing
2	Poor key account management	(1) Lack of customer satisfaction (2) Lack of service delivery which in turn will lead to poor quality R & D outputs. (3) Incorrect reward & recognition	Business	M	C	5	1. CSIR Contract R&D Plan 2. Contract R&D KPIs 3. Continuous reinforcement of CRM	M	3	Institute relationship management systems for key accounts e.g. Eskom, Transnet (Subject to approval)	Group Manager: Contract R&D	FY 2009/10
3	Failure to elevate customer relationships to strategic contract R & D partnerships addressing major	(1) Failure to establish strategic relationships with line departments (2) Failure to attract the CR&D of the right kind from the public sector. (3) Limit Units to engage in R & D that has lasting national impact.	Operational risks	M	C	5	1. Strategic engagement between CSIR OUs and respective line departments	M	4	1. Institutional frameworks of cooperation to be put in place to agree upon research strategies and key initiatives at line department level (There is a dependency on DST to implement and manage the S&T framework)	Contract R&D Managers	ongoing

²⁴ L (Low) = unlikely to occur; M (Moderate) = occurrence not entirely unexpected; H (High) = will probably occur during the year

Ref #	Risk	Effects of risk	Risk Category	Likelihood of occurrence (L,M,H)	Impact/Potential Loss (L,M,H,C)	Risk rating	Controls in Description	Control Effectiveness (L,M,H)	Residual Risk (Risk Exposure)	Required Action	Responsible Person	Implementation date
	R & D issues. No formalised strategic engagement process. E.g. DME											
4	Contract disputes.	(1) legal costs & damages (2) Loss of IP (3) Loss of reputation	Business Risk	M	C	5	1. Contract routing form 2. Support from legal services in drafting of contract 3. Implementation of the CSIR contracting policy	H	2		As per the approval framework	ongoing
5	Reliance on small number of large clients.	(1) Adverse impact on financial sustainability. (2) Reputational Risk (3) Quality of contract R & D Portfolio.	Business	M	C	5	1. Monthly reporting to GE: Operations 2. Contract R&D forum monitoring and remedial actions identified 3. Key stakeholder management	H	3	Reinforcement of Contract R&D Business Plan	Contract R&D Managers	ongoing
6	Inability to secure	(1) Adverse impact on financial sustainability. (2)	Business	M	C	5	1. Monthly reporting to GE: Operations	H	3	Reinforcement of Contract R&D Business Plan	Contract R&D Managers	ongoing

Ref #	Risk	Effects of risk	Risk Category	Likelihood of occurrence (L,M,H)	Impact/Potential Loss (L,M,H,C)	Risk rating	Controls in Description	Control Effectiveness (L,M,H)	Residual Risk (Risk Exposure)	Required Action	Responsible Person	Implementation date
	long term contracts.	Reputational Risk (3) Quality of contract R & D Portfolio.					2. Contract R&D forum monitoring and remedial actions identified 3. Key stakeholder management					
7	Failure of the intra-governmental S & T framework which will limit CSIR ability to secure income streams for R & D for sectoral national departments.	(1) Failure to establish strategic relationships with line departments (2) Failure to attract the CR&D of the right kind from the public sector. (3) Limit CSIR to engage in R & D that has lasting national impact.	Business Risk	M	C	5	1. Strategic engagement between CSIR and DST 2. Strategic engagement between CSIR OUs and respective line departments	M	4	1. Institutional frameworks of cooperation to be put in place to agree upon research strategies and key initiatives at line department level (In place for certain government departments)	Contract R&D Forum	ongoing
8	Lack of internal capacity to translate secured sales into	(1) Loss of revenue (2) Financial sustainability (3) Poor quality (4) Poor service delivery.	Operational Risks	M	M	4	1. Financial reporting income declared 2. Mandatory reporting on PeopleSoft	H	2		OU-Ops Manager/OPCO	ongoing

Ref #	Risk	Effects of risk	Risk Category	Likelihood of occurrence (L,M,H)	Impact/Potential Loss (L,M,H,C)	Risk rating	Controls in Description	Control Effectiveness (L,M,H)	Residual Risk (Risk Exposure)	Required Action	Responsible Person	Implementation date
	revenue.											
9	Staff Changes in who is responsible for approving contracts with CSIR. Lack of continuity and new relationships to be built. E.g. change in DG for DEAT	(1) Delays in contract secured (2) Change in scope of contract	Business	H	M	4	1. Stakeholder management (Mostly in place at Operations level but still lacking at Strategic level) 2. Mandatory red-flag to GE: Operations when risk occurs	M	3		OU-Contract R&D Manager/ Contract R&D Forum	ongoing
10	Lack of delivery by consortium partner	(1) Loss of revenue (2) Financial sustainability (3) Poor quality (4) Poor service delivery. (5) Loss of reputation	Business	H	M	4	1. Monthly reporting to GE: Operations 2. Contract R&D forum monitoring and remedial actions identified 3. Key stakeholder management	M	3		Project Manager	ongoing
11	Delays	Delays in contract	Business	M	M	3	1. Monthly	H	2		Contract R&D	ongoing

Ref #	Risk	Effects of risk	Risk Category	Likelihood of occurrence (L,M,H)	Impact/Potential Loss (L,M,H,C)	Risk rating	Controls in Description	Control Effectiveness (L,M,H)	Residual Risk (Risk Exposure)	Required Action	Responsible Person	Implementation date
	in signing of contracts.	secured will result in CSIR being behind budget in contract secured. (1) Financial sustainability (2) Unutilised capacity in the Units.					reporting on sales secured 2. Contract R&D forum monitoring and remedial actions identified and elevated as appropriate 3. Ensure timely reporting in PeopleSoft				Forum	
12	Insufficient focus attention on innovation and solution delivery.	(1) Losing market share (2) Unbalanced client portfolio (2) Unbalanced contract R & D outputs (3) Will jeopardise the quality of s & T base (4) Hire wrong research staff (5) Unbalanced reward & recognition of researchers. (6) Reputational risk. (7) Not meeting client expectations.	Business Risk	L	H	3	1. Contract R&D KPIs	H	2	Implementation of the CSIR Contract R&D Business Plan	Contract R&D Forum/ GE: Operations	ongoing
13	Loss of key staff at both Unit and Portfolio level	(1) Poor service delivery (2) Reputational risk	Operational Risks	M	M	3	1. Succession planning 2. Performance management 3. Implementation of the HCD Strategy	M	2		CSIR Leadership	ongoing

Ref #	Risk	Effects of risk	Risk Category	Likelihood of occurrence (L,M,H)	Impact/Potential Loss (L,M,H,C)	Risk rating	Controls in Description	Control Effectiveness (L,M,H)	Residual Risk (Risk Exposure)	Required Action	Responsible Person	Implementation date
14	Failure to attract the right type of work from the private sector.	(1) Failure to establish strategic relationships with key private sector actors (2) Failure to attract the R&D of the right kind from the private sector. (3) Limit CSIR ability to engage in world-class R & D .	Operational Risks	M	M	3	1. Identification of key private sector companies to establish strategic partnerships 2. Quarterly reporting of quality of R&D with private sector	H	1	Implementation of Contract R&D Business Plan	Executive	ongoing
15	Inaccurate invoices and debtors statements due to incorrect information in the PeopleSoft CRM	(1) Delays in income declaration (2) Incorrect reporting (3) Poor key account management	Operational Risks	M	L	2	1. Financial management systems in place 2. PeopleSoft CRM	M	1		BLM	ongoing

- The matrix below is used to determine the risk rating

		Consequence / impact on operations			
		L	M	H	C
Likelihood/frequency of occurrence	L	1	2	3	4
	M	2	3	4	5
	H	3	4	5	6

Appendix B CSIR Performance Evaluation Framework

- This table should only be completed after the strategy, plan and KPI targets have been approved by Executive.

Strategic Focus Area	Main or supporting KPI	Target in Performance evaluation framework 2009/10				
		Outstanding	Exceeds stretching targets	Meets all requirements	Needs improvement	Does not meet requirements
CSIR Contract R&D Portfolio						
Contract R&D	Value of contract R&D income supporting national strategies, Rm	65%	60%	50% R464.1m	<15%	<10%
	% Proportion of contract R&D income funded under multi-year strategic agreements	>50%	>40%	30% R289m	<20%	<10%
	Value of private sector contract R&D income (Rm, % of total contract R&D income)	>30%	>20%	12% R115m	<8%	<5%
	Ratio of type A:B:C:D:E activities calculated on contract R&D income	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %
	Customer satisfaction	90%	85%	80%	75%	70%
	Contract R&D Unit					
Public Sector	- Strengthen strategic partnerships with key departments and facilitate MoAs with Key Departments - Support CSIR Units to promote CSIRs broad portfolio and depth of expertise, collaborative research ability and multi-disciplinary approach in addressing national priorities	4	3	2	1	0
	- Oversee AMTS IU (Budget, HR and TiA transition)	Receive acknowledgem ent for role in TIA transition	Provide leadership in TIA transition	Manage transition to TIA	Poor participation in TIA structures	No participation in TIA structures
	- Lead CSIR response to National Priorities (NIPF, NEPAD)	4 Units involved	3 Units involved	2 Units involved	1 Unit involved	0 Units involved
Private Sector	- Strengthen and facilitate CSIR Strategic Contract R&D	4	3	2	1	0

Strategic Focus Area	Main or supporting KPI	Target in Performance evaluation framework 2009/10				
		Outstanding	Exceeds stretching targets	Meets all requirements	Needs improvement	Does not meet requirements
	Partnerships					
State Owned Enterprise	- Strengthen and facilitate CSIR Strategic Contract R&D Partnerships	Facilitate 2	Facilitate 1	SOE analysis	Did not assist any Unit	No effort made
Portfolio Leadership	- Contract R&D Portfolio Reports - Portfolio Management	4	3	2	1	0

Appendix C Phased targets

- This table should only be completed after the unit strategy, plan and KPI targets have been approved by Executive.

Priority area	Main or supporting KPI	Target for “Meets all requirements” performance 2009/10				Target/ Benchmark Performance Level
		Jun 09	Sep 09	Dec 09	Mar 10	
Contract R&D Portfolio						
Quality of contract R&D	Value of contract R&D income supporting national strategies, Rm	R116m	R232m	R348m	R464.1m	At least 50% of Contract R&D income
	% Proportion of contract R&D income funded under multi-year strategic agreements	30% R72m	30% R144m	30% R216m	30% R289m	At least 30% of Contract R&D income
	Value of private sector contract R&D income (Rm, % of total contract R&D income)	R28m	R59m	R87m	12% R115m	At least 12% of Contract R&D income
	Ratio of type A:B:C:D:E activities calculated on contract R&D income	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %	A : 20 – 30 % B : 35 – 45 % C : 15 – 25 % D : 10 – 15 % E : 5 - 10 %
	Customer satisfaction	80%	80%	80%	80%	80%
Contract R&D Unit						
Public Sector	- Strengthen strategic partnerships with key departments	Identification	Engagement	Partnership	2	2
	- Facilitate MoAs with Key Departments	Identification	Engagement	Partnership	1	1 Facilitate
	- Oversee AMTS IU	Manage transition to TIA	Manage transition to TIA	Manage transition to TIA	Manage transition to TIA	Manage transition to TIA
	- Lead CSIR response to NIPF, NEPAD	Identification	Engagement	Partnership	2 Units involved	2 Units involved

Contract R&D Unit						
Private Sector	- Strengthen and facilitate CSIR Strategic Contract R&D Partnerships	Identification	Engagement	Partnership	2	2
State Owned Enterprises	- Strengthen and facilitate CSIR Strategic Contract R&D Partnerships	Identification	Engagement	Partnership	SOE response	SOE analysis
Portfolio Leadership	- Contract R&D Portfolio reporting - Portfolio Management	Q1 report	Q2 report	Q3 report	Q4 report	4