REPORT OF THE JOINT GOVERNMENT INDUSTRY TASK TEAM ON THE RESEARCH AND DEVELOPMENT TAX INCENTIVE

Promoting private sector R&D in South Africa

FINAL REPORT TO THE MINISTER OF SCIENCE AND TECHNOLOGY, 15 APRIL 2016

science & technology
Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

BERD	business expenditure on research and development
BRICS	Brazil, Russia, India, China and South Africa
CeSTII	Centre for Science, Technology and Innovation Indicators
DST	Department of Science and Technology
DTI	Department of Trade and Industry
EU	European Union
GDP	gross domestic product
GERD	gross expenditure on research and development
HEI	higher education institutions
ICT	information and communication technology
IP	intellectual property
IPR	intellectual property rights
MCC	Medicines Control Council of South Africa
NRDS	National Research and Development Strategy
OECD	Organisation for Economic Co-operation and Development
R&D	research and development
S&T	science and technology
SARS	South African Revenue Service
SME	small, medium and micro enterprises
SPII	Support Programme for Industrial Innovation
The Act	The Income Tax Act (Act No. 58 of 1962), as amended

THRIP	Technology and Human Resources for Industry Programme
TIA	Technology Innovation Agency
ToR	terms of reference
UK	United Kingdom
USA	United States of America
WTO	World Trade Organization

ACKNOWLEDGEMENTS

The Minister of Science and Technology established a joint government-industry Task Team to review the scheme and advance recommendations related to its operations and competitiveness. This report presents the findings of the Task Team.

As chairperson of the task team I would like to thank the Minister for entrusting this important task to the team.

The report would not have been possible without the inputs and support of all members. The team provided valuable information and debated a number of relevant issues which led to the report's recommendations. Many thanks are due to each and every member of the task team, and their respective organisations for allowing them time and resources for this purpose.

The secretariat is thanked for an excellent job in facilitating the process, preparing documentation and compiling the report.

Finally, members of staff of the Department are thanked for their efforts and readiness in providing necessary information and documentation.

Task Team Chairperson

Professor Anastassios Pouris

……

LIST OF TASK TEAM MEMBERS AND THEIR AFFILIATIONS

Chairperson:	
Prof. Anastassios Pouris	Institute for Technological Innovation (University of Pretoria)
Secretariat:	
Mr Godfrey Mashamba	Department of Science and Technology
Ms Gugulethu Zungu	Department of Science and Technology
Four from the business sector (beneficiary firms):	
Ms Charlotte van Alphen	AngloGold Ashanti
Ms Tosca dos Santos	Telkom SA (SOC) Ltd
Mr Khaya Mjo	Carbon Reduction Technologies (CRT
Ms Nicola Lister	Innovative Pharmaceutical Association South Africa (IPASA)
Four from the consulting firms	
Mr Dov Paluch	Catalyst Solutions
Mr Newton Cockcroft	Deloitte
Mr Mohammed Jada	KPMG
Mr Thomas Smyth	Ernst and Young Advisory Services
Four from the academic, policy research	
Prof. Jan Eloff	Professor in Computer Science at the University of Pretoria
Ms Zanele Monnakgotla	National Advisory Council on Innovation (NACI) and entrepreneur
Ms Claire Busetti	National Advisory Council for Innovation (NACI), SME advocacy and the Southern African Venture Capital and Private Equity Association (SAVCA)
Five from government departments and entities:	
Ms Londiwe Khoza	The National Treasury
Dr Sibongile Gumbi	Technology Innovation Agency (TIA)
Mr Andrew Wes	South African Revenue Service (SARS)
Dr Kerry Faul	National Intellectual Property Management Office (NIPMO)
Mr Imraan Patel	Department of Science and Technology

EXECUTIVE SUMMARY

The Minister of Science and Technology, in an effort to strengthen partnerships between government and the private sector on matters related to research, development and innovation, has established a joint Government-Industry Task Team ("the Task Team") to make recommendations related to the Research and Development (R&D) Tax Incentive.

The objective of the R&D Tax Incentive is to encourage private sector R&D investment in South Africa. It is part of policy measures to improve innovation and competitiveness performance, and thus economic growth.

The Task Team comprised representatives of R&D-performing companies from different sectors, consulting firms, industry associations, relevant government departments and agencies, as well as academia and the policy research community. Its work started in November 2015 and ended in April 2016.

The Task Team was to examine: the pre-approval process; the information required to access the Incentive; eligibility requirements; the need to make the Incentive more accessible to small and medium enterprises (SMEs) and start-up enterprises; the possibility of introducing an appeal process; and global benchmarking to determine whether the Incentive is competitive in terms of rate, qualifying activities and administrative processes.

The Task Team held four sessions during the six months of its existence, as follows:

- 27 November 2015 – to agree on the key issues to be addressed; to consider each of the issues and propose options for addressing them.
- 29 January 2016 – to evaluate each of the options from the first session with a view to formulating an initial set of recommendations for the Minister's consideration.
- 11 March 2016 – to consider comments from the Minister.
- 15 April 2016 – to reach consensus and produce a final Task Team report.

In the first two sessions, in particular, members provided written presentations on the issues identified to allow the Task Team to deliberate. A crucial milestone in the first session was that members agreed on the key issues that needed to be addressed, even though they differed about mechanisms to address them. Subsequent sessions were used to arrive at consensus, where possible. Where consensus was not reached, possible alternatives were offered for the Minister to determine the appropriate course of action. The deliberations were enhanced with presentations on international best practices and the experiences of various stakeholder groups represented in the Task Team.

It must be emphasised that all recommendations are subject to further consultation/evaluation within government before they can be accepted as decision(s) and/or implemented.

The major findings are as follows:

- Tax incentives are popular instruments internationally. During 2015, 28 of the 34 OECD countries and a number of non-OECD economies gave preferential tax treatment to R&D expenditure.

- International studies show that, if appropriately designed, tax incentives can increase private research spending by at least an amount equal to the loss in tax revenue and that social returns of such R&D far outweigh private returns.

- The OECD identifies that R&D intensity in the business sector has a positive correlation with the level of government funding of business R&D.

- The introduction of the 150% tax deduction in South Africa in November 2006 was meant to add to a range of policy tools to stimulate business sector R&D investment as a key driver of national competitiveness. This motivation is still relevant today.

- Department of Science and Technology (DST) reports indicate that about 876 companies participated in the Incentive from November 2006 to February 2015. Of this number, 47,5% are SMEs.

- Approximately R33,1 billion in R&D expenditure is estimated to be supported/leveraged by the Incentive over the period and beneficiary companies have reported that 26 526 R&D personnel were directly involved in the R&D activities.

- The National Treasury, in its February 2016 Budget Review, estimated that just over R6,0 billion in tax revenue was foregone through the R&D tax deductions for the period 2006 to February 2014.[1] Figure 1 (page 10) specifically highlights a peak of R1,2 billion in R&D tax deduction claims for 2010/11. Thereafter, there is a 70% reduction in R&D tax deduction claims in 2012/13, and 38% in 2013/14. Although the figures get revised annually as new claims information is captured, the sharp decline noted is a matter that the Task Team identified as requiring urgent attention and is attributed to the administrative delays and backlogs associated with the pre-approval system.

- The design of the South African tax incentive scheme conforms to international best practice for most criteria. Attention is required in addressing issues of the interpretation of the innovation "hurdle rate" in the South African context, the administrative approach, encouraging R&D collaboration, issues of SMEs, generosity, decision turnaround times, programme evaluation and synergy with other incentives.

The Task Team advanced the following recommendations:

1. Simplify the administrative process and improve the turnaround times on final decision. In more detail, this means a new revised online application form; new guidelines for applicants (including advice related to mergers and changes in group structure within the context of sections 41-47 of the Act, changes in name, etc.); quarterly information sessions; an increased number of internal administrative staff and external experts; identifying and exempting certain activities and companies from expert reviews – for example, clinical trials approved by the Medicines Control Council of South Africa (MCC).

[1] The National Treasury Budget Review updates these estimates annually with the tabling of the Budget Speech.

2. Review the pre-approval process and introduce a more refined retrospective method, which will allow companies to pre-register an intention to do R&D in the coming period and then submit details of the R&D undertaken at year-end (i.e. at the claim stage: the company would have most of the information required and it will be easier for the DST to determine the eligibility of the activities, based on factual information).

3. Alternatives are recommended to alleviate the need for an appeals procedure. Firstly, the introduction of an additional step is proposed to allow applicants to present their information in response to observations of the Adjudication Committee before a non-approval decision can be finalised. Specific escalation mechanisms are proposed for companies to follow before resorting to taking the decision for review by the courts.

   Regarding the argument that the above step will create a further administrative workload and exacerbate the backlog, providing clarity on information requirements (as proposed under recommendation 1) would be sufficient to address the issue.

4. Establish an Independent Advisory Committee to monitor quality of the adjudication process, review expert advice provided to the programme and provide advice to the programme in general.

5. Amend legislation to address the following:

   5.1 The lengthy delays in receiving feedback on applications and consequent prejudice suffered by applicants. Consideration can be given to a once-off amendment to section 11D(2)(a)(iv) and section 11D(2)(a)(v) of the Income Tax Act to help make up the R&D expenditure incurred by companies since October 2012. This will allow for expenditure incurred during the period 1 October 2012 to the end of the taxpayer's year of assessment in which approval is received to be deducted as a once-off cumulative tax deduction.

   5.2 Introduce three new subparagraphs, namely 11D(6)(c), 11D(6)(d) and 11D(6)(e), in order to be more explicit about the eligibility of funding

arrangements that will encourage various forms of R&D collaboration and partnerships.

5.4 Amend section 11D(1) to remove the “uncertainty” clause from the eligibility requirements for software development.

6. Address concerns about the interpretation of the innovation "hurdle rate" criteria requirements by excluding the term "new to the world" and limiting it to "new to the country or company". This should be applied to all applicants, regardless of the nature of their business, and not only to applicants in the software industry.

7. Investigate the feasibility for enabling pre-profit SMEs and start-up enterprises to have a refundable cash credit under section 11D. An alternative is to have a separate R&D regime targeting SMEs.

9. Undertake an impact assessment of the programme.

The recommendations are crucial for the appropriate implementation of the programme, successful partnerships between government and businesses, and maximising the expected impacts of the programme.

1. INTRODUCTION

The Minister of Science and Technology has established a Joint Government-Industry Task Team ("the Task Team") on the Research and Development (R&D) Tax Incentive following a meeting with industry on 21 August 2015. The purpose of the Task Team is to review the issues that were raised during that meeting, with a view to formulating recommendations on measures to advance the R&D Tax Incentive in order to better achieve its aims.

The Terms of Reference (ToRs), which explain the role, composition and the work programme of the Task Team, are attached in Annexure A.

The Task Team comprises representatives of key stakeholder groups, namely R&D-performing companies from different sectors, consulting firms, industry associations, relevant government departments and agencies, as well as academia and the policy research community. Its work started in November 2015 and ended in April 2016.

This is the final report of the Task Team. It covers the work completed by the Task Team in the following sessions:

- 27 November 2015 – to agree on the key issues to be addressed; to consider each of the issues and propose options for addressing them.
- 29 January 2016 – to evaluate each of the options from the first session with a view to formulating an initial set of recommendations for the Minister's consideration.
- 11 March 2016 – to consider comments from the Minister.
- 15 April 2016 – to reach consensus and produce a final Task Team report.

The report is organised as follows:

- Following this introduction, Section 2 provides an overview of the R&D Tax Incentive.
- Section 3 lists the issues that the Task Team dealt with, based on the mandate provided in the ToRs.
- Section 4 presents the context of international practices on R&D incentives.

- Section 5 presents the analysis of issues, as well as an initial set of recommendations.
- Section 6 provides a summary and conclusion.

All recommendations of the Task Team are subject to further consultation/evaluation within government before they can be accepted as decision(s) and/or implemented. The Minister will determine, upon considering the recommendations, what actions are required. Aspects that may have implications for amendments to legislation or actions that require concurrence/implementation by other sections of government will be subject to the established relevant processes. To this end, the 2016 Budget Review, published by National Treasury, included a special mention of the Task Team and, by doing so, facilitated consultation between the DST, National Treasury and the public regarding legislative amendments to section 11D of the Income Tax Act (Act No. 58 of 1962), as amended ("the Act"), proposed in this report, prior to the issuing of the Draft 2016 Taxation Amendments Bill. In this manner, the recommendations requiring legislative amendments can be dealt with during the 2016 round of draft tax law amendments.

2. R&D TAX INCENTIVE IN SOUTH AFRICA

2.1 OBJECTIVE OF THE INCENTIVE

The government offers the R&D Tax Incentive under section 11D of the Act, in order to induce an increased level of private-sector R&D investment in South Africa. Any company that undertakes scientific or technological R&D in the country can apply for the Incentive. Approved companies can deduct 150% of the operational expenditure on qualifying scientific and technological R&D.

The R&D Tax Incentive is part of a package of policy instruments to promote innovation and enhance competitiveness, thus supporting economic growth.[2] Its delivery is a joint responsibility of the DST, the South African Revenue Service (SARS) and National Treasury.

According to the DST, the introduction of the 150% deduction in November 2006 was meant to add to a range of policy tools to stimulate business sector R&D investment as a key driver of national competitiveness (National Research and Development Strategy (NRDS) 2002).[3] This motivation is still relevant today and is reflected in the annual reporting required of the Minister to Parliament[4]. Higher levels of private sector R&D are needed in order to boost productivity through increasing the rate of innovations, i.e. the creation of new and improved products, processes and other important outcomes. The outcomes include the discovery of non-obvious science and technology (S&T) knowledge; creating or developing an invention, functional design, computer program, multisource pharmaceutical

[2] Other instruments include direct grants such as the Support Programme for Industrial Innovation (SPII), innovation funding support through the Technological Innovation Agency (TIA), funding of research in universities and science councils, human capital development, development of scientific infrastructure and institutional platforms for intellectual property (IP) generation and technology transfer, as well as provision of scientific services, etc.

[3] South Africa's National Research and Development Strategy, published in 2002 by the then Department of Arts, Culture, Science and Technology (DACST).

[4] Section 11D(17) requires the Minister to advise Parliament of the direct benefits of R&D in terms of economic growth, employment and other broader government objectives and of the purpose of this Incentive.

product(s) or knowledge essential to their usage; or making significant improvements to any of the above aspects in terms of improved function, performance, reliability and/or quality.

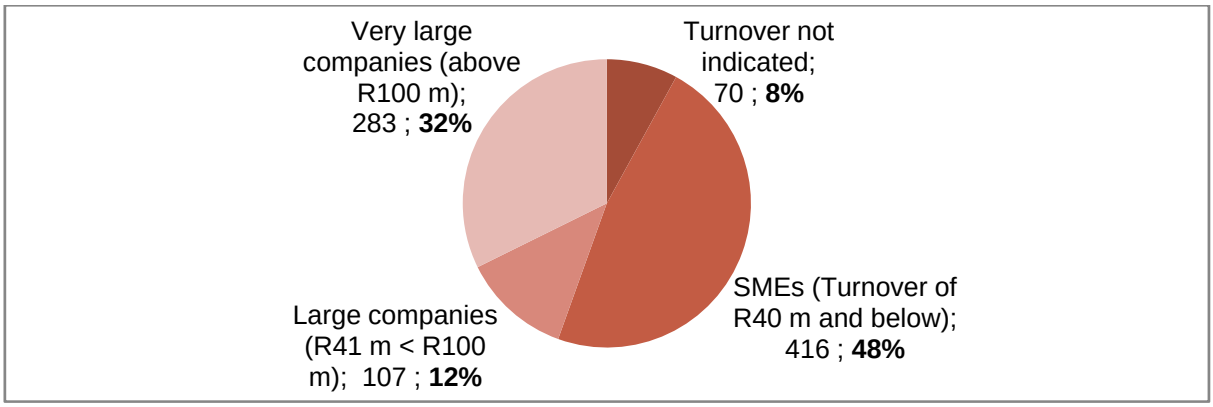
Specific consideration was given to policy research covering international practices, feasibility analyses and consultations across government between 2003 and 2005 on design elements of the Incentive.[5] These included a choice for a tax-based incentive to augment the grant-based incentives; a choice for a neutral incentive addressing all industry sectors and all firm sizes (as opposed to targeting sectors or specific types of R&D); a choice for calculating the tax deduction (or an allowance) on the basis of R&D expenditure; and a choice to incorporate international best practices, learning from countries such as Canada and Australia (that had gained decades of experience with these types of instruments); and the use of the Frascati Manual as the basis for delineating eligible activities and exclusions.

2.2 UPTAKE AND IMPACT OF THE INCENTIVE

By November 2016, the 150% tax regime will have been ten years in operation. DST reports indicate that about 876 companies participated in the Incentive from November 2006 to February 2015. Of this number, 47,5% are small and medium enterprises (SMEs), described as firms with a latest annual turnover of R40 million and below. Very large enterprises, those with turnover of above R100 million, make up 32,3% of the companies. The remainder comprises large enterprises (12,2%) and those that did not disclose turnover size (8,0%).

[5] For further information, see (a) the DST's 2013/14 R&D Tax Incentive Annual Report to Parliament; (b) Ehlobo Advisory Services, October 2005. *Using indirect incentives to increase private sector investment in R&D in South Africa* (consultancy report commissioned by the DST on the feasibility of introducing R&D tax incentives); (c) Pouris 2003. *Towards a South African R&D tax incentives scheme: Fiscal policies and social benefits*. South African Journal of Science (99).

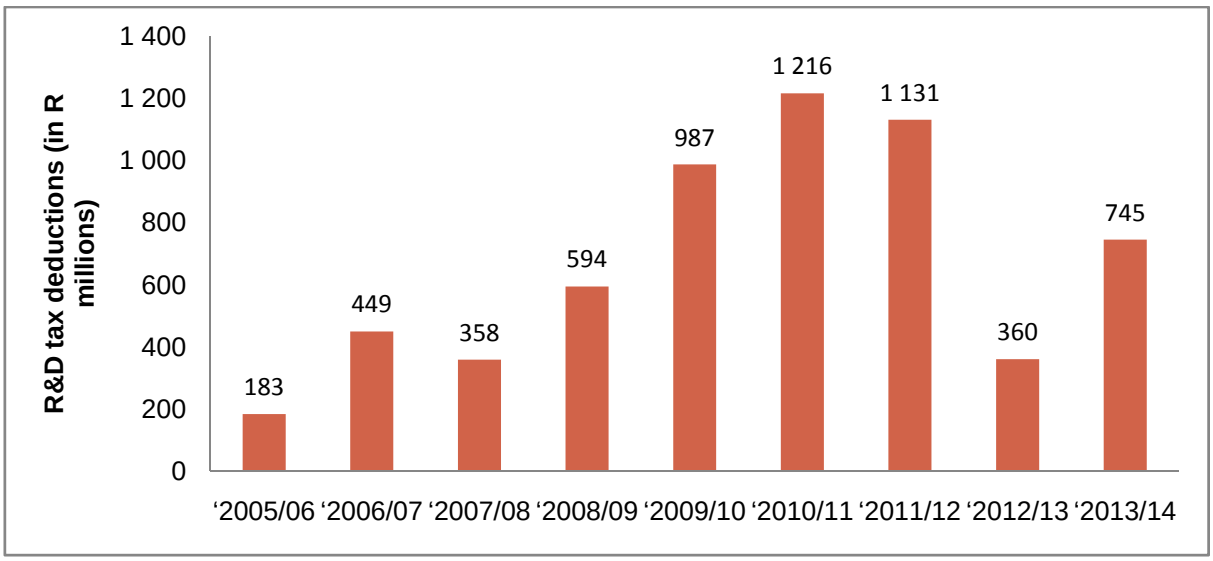
Figure 1: Profile of companies participating in the R&D Tax Incentive



About R33.1 billion in R&D expenditure is estimated to be supported by the incentive over this nine-year period. Beneficiary companies have reported that 26 526 R&D personnel were directly involved in the R&D activities supported by the incentive over the same period.

The National Treasury, in its February 2016 Budget Review, estimated that just over R6,0 billion in tax revenue was foregone through the R&D tax deductions for the period 2005 to February 2015 (Figure 2).[6] The figures represent deductions allowed by SARS on claims by companies for each tax year and are revised annually as new claims are processed.

Figure 2: Tax revenue foregone due to section 11D deductions



[6] Figures include claims made under section 11B, which applied before November 2006.

Figure 2 shows the tax revenue forgone per annum. The R&D tax deductions peaked at R1,2 billion in 2010/11, but decreased thereafter. The decrease is attributed to the administrative delays and backlogs associated with the pre-approval system.[7] Figures indicate decreases of 70% in 2012/13, and 38% in 2013/14, in comparison to 2010/2011. This is a matter that requires urgent attention by the DST and its implementation partners to correct. A number of recommendations in this report have therefore been developed with this in mind.

The Task Team did not have information on the number of claims disallowed at SARS and the associated amounts.

The Task Team notes that the number of applicants in the programme since 1 October 2012 has declined. DST reports indicate that a peak of 305 applications, including retrospective claims and applications under the pre-approval system, was reached in year 2012; a decline in subsequent years reflects a change in the administrative procedure. From October 2012, companies did not have to submit applications every year, but could submit an application with projects spanning several years; in 2014/15 the DST received 221 applications. The impact assessment planned for later in 2016 will assess this issue in detail.

The distribution of uptake per industry sector has remained about the same over the years, with 81,0% of the applicant companies coming from two sectors, namely, manufacturing and the financial intermediation, real estate and business services sector (with the latter dominated by information and communication technology (ICT) activities). This mirrors the structure of business R&D performance in South Africa. Large firms in the manufacturing sector are dominant in terms of number of applications received, the amount of R&D expenditure and also in terms of reported R&D personnel.

[7] National Treasury Budget Review (24 February 2016), Page 139.

There is a concern that increases in business expenditure on research and development (BERD) has been weak over the past decade, despite the availability of the Incentive. Table 1 shows a summary of trends in BERD. [8]

Table 1: Business expenditure on R&D in South Africa

Year	BERD (in R'000)	BERD % of overall R&D spending (GERD) – in %	BERD % of gross domestic product (GDP) – in %
2004/05	6 ,766,361	56.3	0.46
2005/06	8 ,243,776	58.3	0.50
2006/07	9 ,243,165	55.9	0.50
2007/08	10,738,456	57.7	0.51
2008/09	12,332,012	58.6	0.52
2009/10	11,139,237	53.2	0.44
2010/11	10,059,010	49.7	0.37
2011/12	10,464,022	47.1	0.35
2012/13	10,570,726	44.3	0.32
2013/14	11,782,848	45.9	0.33

Source: CeSTII

The business sector remains the largest performer of R&D in South Africa. It therefore has a significant effect on the overall trend of gross domestic expenditure on research and development (GERD), which consists of the sum of all annual investments in R&D in business, university, government and not-for-profit sectors. The weakening contribution of BERD to the GDP indicates that more needs to be done between government and the private sector to achieve more robust increases in GERD.

Private sector companies make strategic choices on R&D investment based on their own evaluation of potential benefits (i.e. private returns). Such investments usually are below the socially optimum levels. Incentives provided by government are

[8] Source: *South African National Survey of Research and Experimental Development* survey series, produced by the Centre for Science, Technology and Innovation Indicators (CeSTII) on behalf of the DST.

meant to alter behaviour, by stimulating additional investments over and above the usual.[9] So far, no assessment has been done in South Africa to determine what would have been the case had this Incentive not been in place (i.e. the counterfactual).

Empirical studies internationally have indicated opportunity losses associated with not having any form of government support to encourage private sector R&D. The reasoning is that the foregone tax revenues in the short term are offset in the long term by benefits from economic activities and efficiencies arising from R&D supported.[10]

To raise GERD to above 1% of GDP and work towards a target GERD of 1,5% of GDP (contained in the Medium Term Strategic Framework 2014-2019) will require a step change in effort from the government, the private sector and international investors in R&D.

[9] Guellec, D. and Van Pottelsberghe, B. The Impact of Public R&D Expenditure on Business R&D, *Economics of Innovation and New Technology* 12, No. 3 (2003): 225–243.

[10] Köhler, C., Larédo, P. M. and Rammer, C. *The Impact and Effectiveness of Fiscal Incentives for R&D*. February 2012. NESTA.

3. ISSUES RAISED DURING THE MINISTER'S MEETING WITH INDUSTRY ON 21 AUGUST 2015

The following issues, which were raised in the Minister's meeting with industry on 21 August 2015, guided the work programme of the Task Team:

- Challenges experienced by companies with the preapproval process. This includes the timing and method of submitting applications and the associated long turnaround times in providing the final decision to applying companies. This system needed to be reviewed, taking into account lessons from other jurisdictions that administer R&D incentives.
- The information requirements by the applying companies needed to be simplified in order to ease the administrative burden for both the government and the companies.
- Aspects of the eligibility requirements, in particular the requirements for "innovativeness", "internal business process" and for the ICT-related activities and software development. Similarly, their interpretation needed to be clarified.
- Improving certainty for firms in successfully claiming the deduction from SARS.
- The lack of an appeal process for non-approved applications.
- The need to enhance the accessibility of the Incentive to SMEs and start-up enterprises.
- Global benchmarking to determine whether the Incentive is competitive in terms of rate, qualifying activities and administrative processes.

4. INTERNATIONAL PRACTICES OF R&D INCENTIVES AND KEY SUCCESS FACTORS

This section describes international best practices in the field of R&D tax incentives and identifies the characteristics of the South African scheme that follow international best practices and those that do not.

4.1 WHICH COUNTRIES OFFER R&D TAX INCENTIVES?

An increasing number of governments are offering special fiscal incentives to business to increase spending on R&D. This is because R&D and innovation are considered key to productivity and growth performance (Romer 1990).

Tax incentives are popular internationally. During 2015, 28 of the 34 Organisation for Economic Co-operation and Development (OECD) countries and a number of non-OECD economies gave preferential tax treatment to R&D spending businesses in many different ways. All the BRICS countries – Brazil, Russia, India, China and South Africa – and other developing countries such as Singapore, Malaysia and Lithuania also offer tax-based R&D incentives.[11]

R&D tax incentives aim to influence business behaviour. OECD (2010)[12] suggests that the major objectives are to increase R&D in order to promote businesses' economic growth, maintain jobs (particularly in times of crisis), contribute to national competitiveness, attract business to particular locations and promote collaborations.

Studies show that appropriately designed tax incentives can increase private research spending by an amount equal to the loss in tax revenue and that social returns to such R&D far outweigh private returns. They can also be used to attract international "footloose" R&D (the internationalisation of R&D) (OECD and World Bank, 2014).[13]

---

[11] Deloitte 2015 Global Survey of R&D Tax Incentives; Ernst and Young Worldwide R&D Incentives Reference Guide 2014–15; KPMG.

[12] OECD (2010) "R&D tax incentives: rationale, design, evaluation" available at: http://www.oecd.org/sti/ind/46352862.pdf.

[13] World Bank and OECD: "Innovation Policy Platform: Fiscal Measures" available at: https://www.innovationpolicyplatform.org/ipp/filters/result-page?topic-filters=12308

Table 2: Countries offering R&D tax incentives

Overview of tax incentives for R&D and innovation, selected OECD and non-OECD economies		
	Expenditure-based (e.g. R&D expenditure, including wages, capital)	**Income-based (e.g. salaries. IP profit, royalties, capital gains)**
With tax arrangements targeting R&D and innovation:		
Corporate income tax (CIT)	(a) Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Costa Rica, Czech Rep, Denmark, Finland, France, Greece, Hungary, Iceland, Israel, Italy, Japan, South Korea, Latvia, Norway, Poland, Portugal, Russia, Slovak Rep, Slovenia, South Africa, Spain, Turkey, UK, US.	(g) Brazil, Belgium, China, Greece, Hungary, Italy, Luxembourg, Netherlands, Spain, UK (patent box) (h) Colombia, South Korea, Poland (R&D reserve)
Payroll withholding and social security taxes	(b) Belgium, France, Hungary, Netherlands, Russia, Spain, Sweden, Turkey.	-
Personal income tax (PIT)	(c) Denmark, Hungary	(i) Colombia, Denmark (foreign researchers and key staff), South Korea (foreign researchers), Turkey (R&D staff)
Value-added tax (VAT) and other consumption taxes	(d) Colombia (imported equipment), China (software, high-tech firms, small firms), Poland (special zones) Russia (special zones, imported equipment, intellectual property rights (IPR) transfer)	-
Other taxes (e.g. land taxes)	(e) France (young firms), Italy (SMEs and young firms), Portugal, Russia (special zones)	-
Without tax arrangements targeting R&D and innovation:	(f) Estonia, Germany, Mexico, New Zealand, Switzerland	-

Sources: *OECD 2014. Science, Technology and Industry Scoreboard; Report by Information Technology and Innovation Foundation (January 2016).*

4.2 HOW MUCH DO COUNTRIES SPEND ON R&D INCENTIVES?

Governments provide support to businesses either through direct measures (e.g. grants and subsidies) or through indirect measures, such as tax incentives. The direct funding of industry research has the advantage of allowing governments to retain control over the nature of R&D conducted. However, direct financing of industry R&D leaves governments open to criticism of picking winners and losers in terms of both the topics/disciplines that receive attention and the individual firms that receive government funds.

Fiscal measures allow markets, rather than governments, to determine the allocation of R&D investments across sectors, firms and disciplines. However, tax-based mechanisms do not typically allow governments to direct business R&D into areas with high social returns (e.g. technological fields with significant spillovers or basic research) or new scientific fields.

The choice of R&D tax incentives and their design[14] depends on country-level variables such as overall innovation performance, overall government support, perceived market failures in R&D, industrial structure, the size of firms, the nature of corporate tax systems and similar factors.

There are two broad approaches used for tax incentives – tax allowances and tax credits. It is interesting to compare the value of the two schemes. For example, the value of a tax allowance varies with the corporate tax rate.

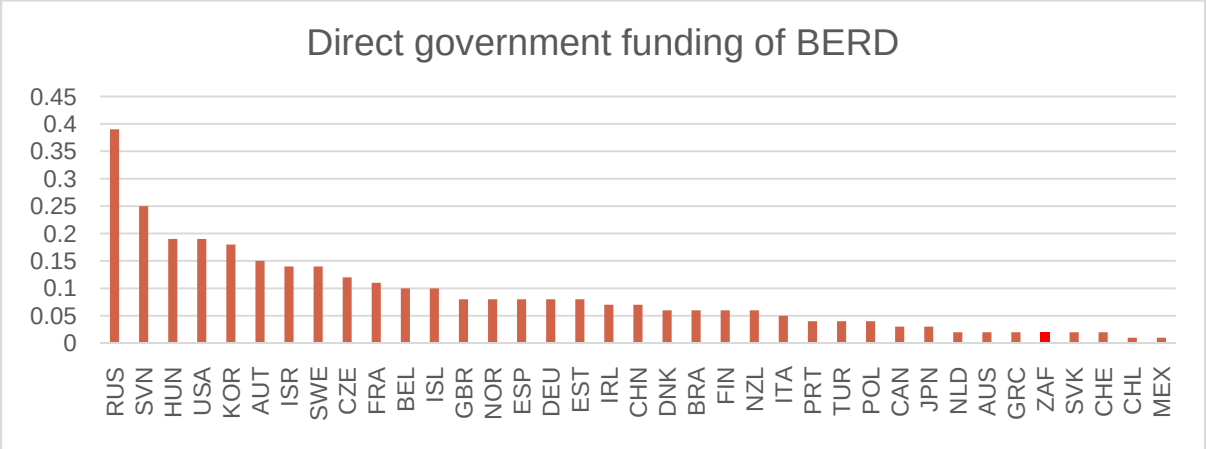
For a South African SME with a tax rate of 28%, the reduction of tax liability for each unit of eligible R&D is 0,14 (i.e. 14 cents for every Rand).

Figure 3 shows the direct government funding of business enterprises as a percentage of GDP for South Africa and a number of other countries. South Africa appears near the bottom of the list (ZAF – ISO Country code).

The South African government support to business is 0,02% of GDP. Russia (top of the list) spends just below 0,4% of its GDP for business R&D.

[14] Design is related to administration, the form of the tax incentive, R&D volume or increment, targeted incentives, the definition of R&D, avoidance provisions and foreign firm eligibility.

Figure 3: Direct government funding of R&D as a percentage of GDP (2013)

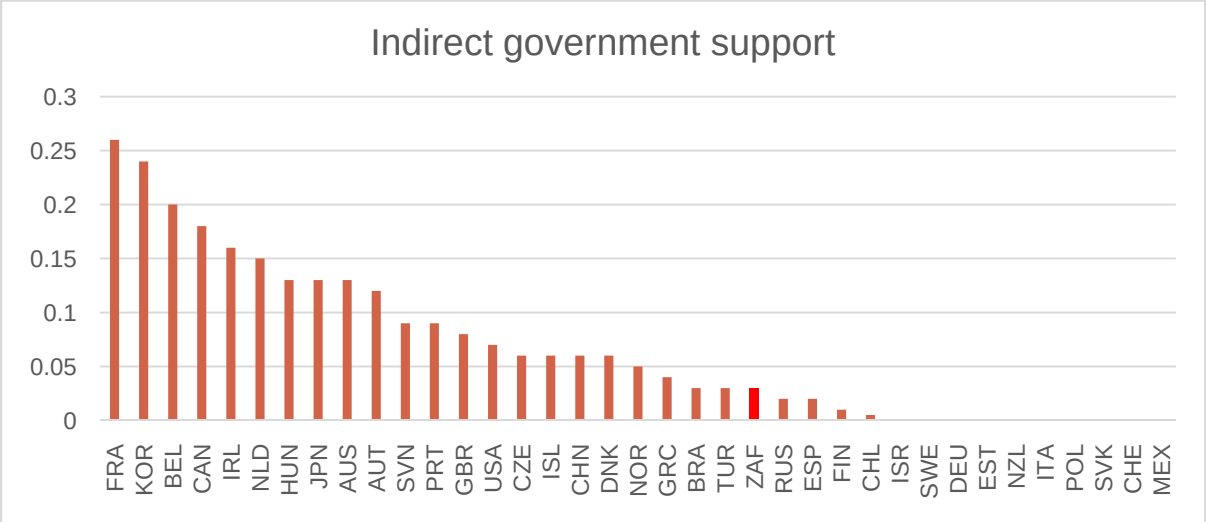


Source: OECD (2015) "R&D Tax Incentive Indicators" accessed at: http://www.oecd.org/science/rd-tax-stats.htm

Figure 4 shows the indirect government funding of R&D as a percentage of GDP. In South Afric,a government spends 0,03% of GDP as indirect funding for business R&D. France appears top of the list with a figure of 0,26% of GDP.

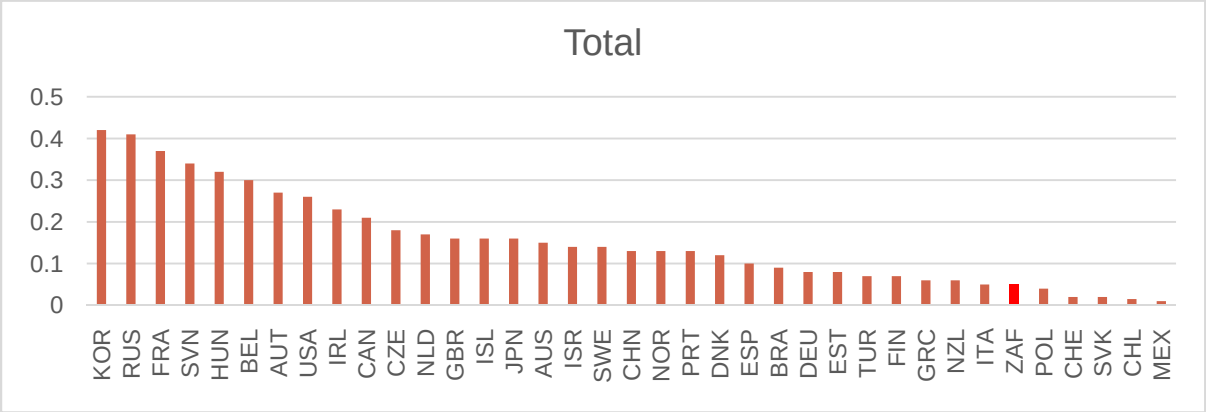
Figure 5 shows the total (direct and indirect) government funding to business as a percentage of GDP. South Africa, with a contribution 0,05%, is among the bottom countries. South Korea and Russia, with figures above 0,4%, are in the lead.

Figure 4: Indirect government funding of R&D as a percentage of GDP (2013)



Source: OECD (2015) "R&D Tax Incentive Indicators" accessed at: http://www.oecd.org/science/rd-tax-stats.htm

Figure 5: Direct and indirect government funding of R&D as a percentage of GDP (2013)

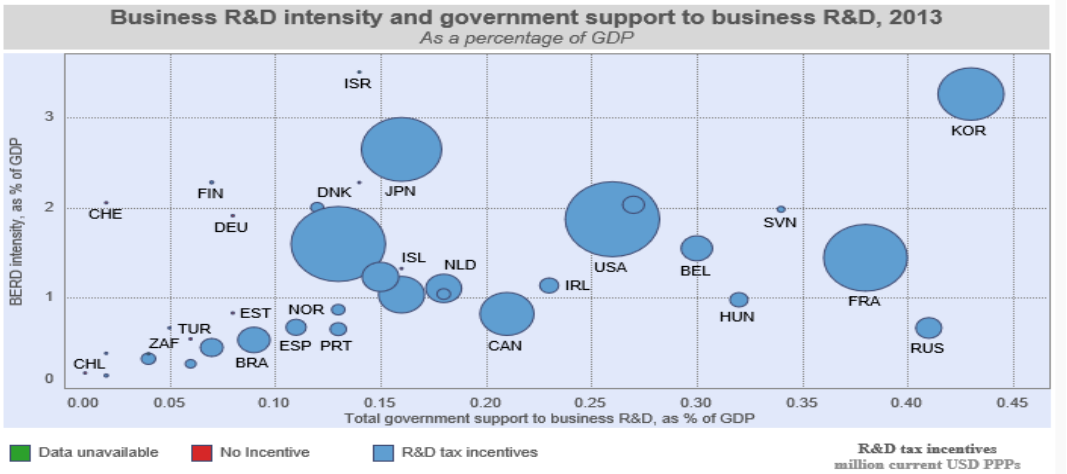


Source: OECD (2015) "R&D Tax Incentive Indicators" accessed at: http://www.oecd.org/science/rd-tax-stats.htm

4.3 WHAT DO COUNTRIES GET IN RETURN FROM R&D INCENTIVES?

Figure 6 shows the BERD intensity as a percentage of GDP and the total government support to business R&D as percentage of GDP. Bubble sizes represent the total amount of support provided through expenditure-based R&D tax incentives in US$ PPP (purchasing power parity). The OECD has indicated that R&D intensity in the business sector has a positive correlation (0,4) with the level of government funding of business R&D.

Figure 6: BERD intensity and government support as a percentage of GDP



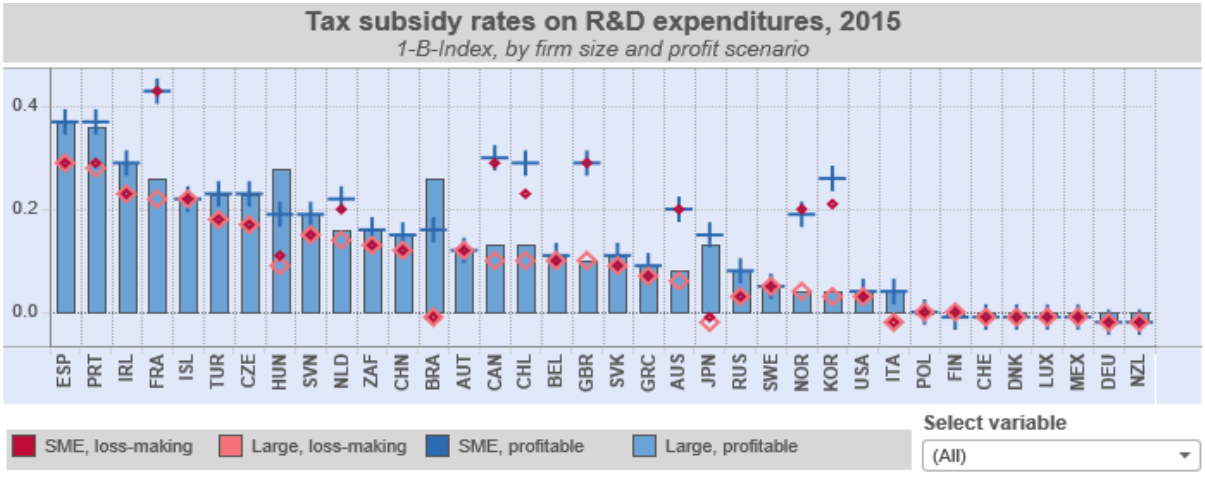
Source: OECD (2015) "R&D Tax Incentive Indicators" accessed at: http://www.oecd.org/science/rd-tax-stats.htm

Figure 7 shows the generosity of R&D tax incentives in South Africa and a number of other countries. Generosity varies according to the design of tax relief measures, as well as business characteristics.

The B-index is the present value of before-tax income necessary to cover the initial cost of R&D investment and to pay corporate income taxes so that it becomes profitable to perform R&D. Algebraically, the B-index is equal to the after-tax cost of an expenditure of one monetary unit on R&D divided by one minus the corporate income tax rate.

The figure shows that, in the profit scenario, the notional level of tax support per additional unit of R&D is largest for France, Portugal and Spain in the case of SMEs, and for Spain, Portugal and Ireland in the case of large enterprises. Some countries allow firms to benefit from tax incentives when they are not profitable enough to use them in the current period through refunds and carry-forward provisions. In Austria and Norway, refunds by authorities allow firms to benefit from incentives as if they were profitable. Such provisions tend to be more generous for SMEs and start up firms vis-à-vis large enterprises, as in Australia, Canada and France. In South Africa, SME support is well below the other countries. In this context it should also be mentioned that, in South Africa, only 25% of assessed companies reported positive taxable income (2014), 45% reported zero taxable income and 30% had assessed losses.

Figure 7: B-index by firm size and profit alternatives



Source: OECD (2015) "R&D Tax Incentive Indicators" accessed at: http://www.oecd.org/science/rd-tax-stats.htm

The relative after-tax cost of R&D is a major consideration for multinational firms with footloose R&D activities. They tend to carry out their R&D activities where it is cheaper and it promises the most benefits. Firms look at a range of country factors when considering locations for R&D. Tax incentives are part of the equation for comparing the net private cost of R&D. Firms also look for tax implications of IP and transfer pricing, availability of inputs and markets, as well as the potential for tapping into existing knowledge networks.

The effectiveness of R&D tax incentives in increasing R&D investment differs across countries and this is dependent upon various factors within their innovation systems. Many countries aim to increase R&D investment overall, with business R&D as a key target. Some countries have set even more ambitious targets for the GERD to GDP ratio, ranging from 1,5% to 4% for the next two to five years. A broad set of policies and instruments helps to make the country more attractive. Countries that have incentives tend to attract and maintain R&D over long periods of time.

One particular advantage of tax-based (or indirect forms of) R&D support is that they are exempted from international agreements (e.g. the World Trade Organization (WTO), and the European Union (EU)). This is not the case with direct grant programmes (termed "direct state aid" in the WTO). This makes the tax-based incentive one of the viable ways that governments can help domestic firms improve competitiveness.

4.4 RELEVANCE OF THE R&D TAX INCENTIVE FOR THE START-UP / SME

A number of countries provide special treatment to SMEs investing in R&D. Australia, France, Canada, Singapore and the United Kingdom (UK) recognise the limited cash flows and tax liabilities of SMEs and thus allow SMEs a refundable tax credit, while only offering large companies a non-refundable/carry-over tax credit. Furthermore, these countries provide more generous R&D tax incentives for SMEs in that the percentage applied to qualifying R&D expenditure to calculate the tax credit is higher for SMEs. For example, for an SME in the UK with a corporate

income tax of 21%, the benefit of the allowance is: 175%-100% (normal deduction)*21% = 0,16 (for each unit or eligible R&D) in reduction of income liability. On the other hand, a 35% tax credit for Canada (up to $3 million) would reduce the corporate tax liability by 0,35 for each unit of eligible R&D. For a South African SME with a tax rate of 28%, the reduction of tax liability for each unit of eligible R&D is 0,14. Although it appears that the support provided to SMEs in South Africa is low, results from cross-country comparisons should be interpreted with care. For example, SMEs are taxed under a special regime in South Africa, using graduated rates as shown in Table 3.

Table 3: Tax rates applicable to SMEs in South Africa

Taxable income	Rate of Tax
Below R67 111	0%
R67 111 to R365 000	7%
R365 001 to R550 000	21%
Above R550 001	28%

Moreover, additional support is also provided to SMEs via direct instruments such as grants provided by other government departments, such as the Department of Trade and Industry (DTI), which provides a grant through the Support Programme for Industrial Innovation (SPII). Therefore, increasing the support available to SMEs should be considered in light of knowledge spillovers and their responsiveness to a particular instrument. For example, if spillovers from the R&D undertaken by the SMEs are higher than the spillovers from larger firms, or if SMEs respond more strongly to a reduction in costs than do large firms, then government should consider increasing the amount of support. Moreover, enhanced support for SMEs could be justifiable by the need to help these firms overcome financial constraints. However, providing a higher subsidy in the form of a refundable tax credit to deal with a capital market imperfection will be less cost-effective if current measures that deal directly with the market failure are ineffective.

4.5 HOW DOES SOUTH AFRICA COMPARE WITH INTERNATIONAL PRACTICES?

A recent report (EC 2014[15]) identified the current state of affairs concerning tax incentives for R&D in 33 countries. The report also undertook benchmarking of the various countries (not including South Africa), based on international best practice in the field. The benchmarking is based on twenty-two principles of best practice, which are divided into three categories:

1. Scope of the instrument: How does the tax incentive work? Which expenditures are eligible?

2. Targeting: Does the instrument target specific types of firms, explicitly or implicitly?

3. Organisational practice: How does the application procedure work and is the tax incentive evaluated?

The overview of R&D tax incentive schemes shows that tax incentives are widespread internationally. Twenty-six EU member states currently have some type of fiscal encouragement for R&D investments[16]. Similarly, the OECD countries covered in the investigation – Canada, the United States of America (USA), Japan, Israel and Norway – offer fiscal advantages for R&D activities as well.

R&D tax credits are the most popular type of R&D tax incentive (21 countries), followed by enhanced allowances for expenditure on R&D (sixteen countries) and accelerated depreciation (thirteen countries).

In past years, tax benefits for income from innovation, patent boxes, etc., have also gained popularity; currently, eleven EU member states offer such an incentive.

Volume-based schemes are more common than tax benefits that apply only to the increment of R&D expenditure. During 2014, only seven countries offered

[15] EC (2014) "A Study on R&D Tax Incentives" Taxation Papers WP 42/2014 European Commission, Brussels.

[16] Within the EU, only Germany and Estonia do not have a tax policy aimed directly at stimulating innovation.

incremental tax incentives in addition to volume based incentives, and in Ireland and the USA the "incremental" part of the design is in the process of being phased out.

Ten countries explicitly target SMEs. Six countries target young companies. In ten countries, tax incentives are also differentiated according to the legal status of firms. For example, some schemes have smaller tax benefits for foreign-owned companies (e.g. Canada). A number of countries put a ceiling on the amount that firms can receive and, in five countries, the generosity of the scheme decreases with the size of a firm's R&D expenditure.

The report reviews a number of evaluative studies (e.g. Kohler at al. 2012, Bloom et al. 2013; Lentile et al. 2009) and identifies that tax incentives are effective for the promotion of R&D. However, it concludes that the impact of R&D tax incentives may be highly sensitive to their design and implementation, but empirical studies on the effects of design and organisational features are scarce. Furthermore, national peculiarities appear to dominate research findings (Zuniga-Vicente et al. 2012), which may mean that evaluations (including the estimation of the costs to government and industry) should be part of the design of the instruments. Table 4 summarises the principles of good practice in the categories of "scope", "targeting" and "organisation".

Table 4: Good practices in tax incentives

Category	Practice	Best practice	Not recommended
Scope	Input related vs. output related R&D tax incentive	Input related	Output related
	Tax credits vs. enhanced allowances	Tax credits	
	Volume-based vs. incremental	Volume-based	Incremental
	Novelty requirement	New to the country (world)	Explicit incentive for imitation
	Expenditure covered	R&D wages	IP costs
Targeting	Region	Common rate for the country	Very specific design elements in different regions
	Legal form	Common rate for all legal entities	Exclusion of firms with foreign owner
	Firm size	No targeting	Targeting at large firms
	Brackets and ceilings	No brackets	Lower rate for small amounts
	Firm age	Young firms	Incumbents
	Field of activity/type of technology	No targeting	Targeting
	Minimum	No minimum	High threshold
	Negative tax	Yes, for young firms	No negative tax
	Carry-over provisions	Yes, for young firms	No carry-over provision
	Collaboration[a]	With public research institutes	Upstream R&D cooperation between large competitors
	Generosity[b]	Ambiguous	Over-subsidizing
Organization	Decision time/refund	Minimum possible	Longer than 1 year
	Electronic application	Yes	No
	One-stop application	Yes	No
	Public consultation	Yes	No
	Evaluation	Yes, planned	No
	Synergy[a]	Complimentary	Overlapping
	Stability[a]	Fixed design and rates for at least 5 years	Large and unexpected changes in the budget

Source: EC (2014) “A Study on R&D Tax Incentives” Taxation Papers WP 42/2014 European Commission, Brussels.

The best practice recommendations and the performance of the South African rating in each criterion are as follows:

Scope:

Input related vs output-related

Best practice: Input-related

Not recommendable: Output-related

South Africa: Best practice

Tax credits vs enhanced allowances

Best practice: Tax credits

Neutral: Enhanced allowances

South Africa: Neutral

Volume-based vs incremental tax scheme

Best practice: Volume-based incentives

Not recommendable: Incremental incentives

South Africa: Best practice

Novelty requirement of the intended outcome

Best practice: New to the world; new to the country

Not recommendable: Explicit incentive for imitation

South Africa: Best practice (see discussion under par. 5.4)

Expenditure covered

Best practice: R&D wages

Neutral: Expenditure on R&D inputs

Not recommendable: IPR costs

South Africa: Neutral

Targeting:

Region

Best practice: No targeting on regions

Not recommendable: Very specific design elements in different regions

South Africa: Best practice

Legal form

Best practice: Common rate for all legal entities

Not recommendable: Exclusion of firms with foreign ownership

South Africa: Best practice

Firm size

Best practice: No targeting on firm size

Neutral: Targeting of SMEs

Not recommendable: Targeting on large multinational firms

South Africa: Best practice

Brackets and ceilings

Best practice: No brackets

Neutral: Ceilings

Not recommendable: Lower rate for small amounts

South Africa: Best practice

Firm age

Best practice: Targeting on young firms

Neutral: No targeting on firm age

Not recommendable: Targeting on incumbents

South Africa: Neutral

Field of activity/type of technology

Best practice: No targeting (according to sector/type of technology)

Not recommendable: Targeting (according to sector/type of technology)

South Africa: Best practice

Minimum expenditure

Best practice: No minimum

Not recommendable: A very high threshold, equivalent to targeting at large firms

South Africa: Best practice

Negative tax

Best practice: Offer negative tax for young firms

Not recommendable: No negative tax

South Africa: Not recommendable

Carry-over provision

Best practice: Offer carry-over provisions

Not recommendable: No carry-over provision

South Africa: Best practice

Collaboration

Best practice: Yes, for collaboration with public research institutes/universities

Not recommendable: Upstream R&D cooperation between large competitors

South Africa: Best practice, but it may need clarification

Organisation:

Stability

Best practice: Fixed design and rates for at least five years

Not recommendable: Large and announced changes in the budget

South Africa: Best practice

Generosity

Best practice: Generosity uncertain

Not recommendable: Over-subsidising

South Africa: Best practice but lower than other countries

Decision/refund time

Best practice: Minimum decision time possible

Not recommendable: More than one year after investment

South Africa: Not recommendable

Electronic application and one-stop agency

Best practice: Yes

Not recommendable: No

South Africa: Best practice (in process)

Public consultation

Best practice: Yes

Not recommendable: No

South Africa: Best practice.

Evaluation

Best practice: Yes, preferably planned and regular

Not recommendable: No

South Africa: Recommended as a practice to be adopted

Synergy

Best practice: Complementary policy instruments

Not recommendable: Overlap between different policy instruments

South Africa: Recommended to enhance complementarity of the incentive with other available programmes

4.6 RECAP OF INTERNATIONAL PRACTICES

In comparative terms, the current incentive design principles match global practices. Three categories of design principles were considered, namely, scope, targeting and organisation.

- In the group "scope", South Africa performs according to international best practice in the five principles.
- In the group "targeting", there are 10 principles of good practice. South Africa is neutral in "targeting of young firms" and it is in the range of "not recommendable" that it does not offer negative tax for young firms. In the other seven principles in this group, South Africa performs according to best practice principles.
- In the group "organisation", there are seven principles of good practice. In four principles South Africa follows best practice, while in the other three principles it is in the non-recommendable zone. The non-recommendable principles are "decision/refund time", "evaluation" and "synergy".

Obviously actions should be taken to rectify the criteria in which South Africa is not performing according to best practice, unless there are particular reasons for the deviation.

In terms of the quantum of support, South Africa supports business R&D to a lesser extent than other countries do in terms of the direct and indirect funding as a percentage of GDP, compared to the rest of the countries on the list. Comparative statistics of the B-index show that other countries provide focused support for small and medium enterprises – something that South Africa does not provide.

While the business expenditure on R&D may be affected by different factors (e.g. the structure of the industry), the low government support undoubtedly is not supportive of the government objective to increase the country's R&D expenditure.

It should be noted that countries follow different approaches in order to reduce the decision/refund time. For example, one creative effort that can be mentioned in this context is that authorities in the Netherlands have nominated a number of companies as "highly trusted" businesses. This status allows these companies to

file claims for the incentive without any further processing of an application. A similar approach was introduced in the UK[17] recently, with appropriate controls to prevent abuse. This practice can be considered in South Africa as well.

The undertaking of regular evaluations of the scheme has the potential to move the other three principles into the category of "best practice".

A number of countries (e.g. Australia) benefit from the establishment of relevant advisory committees. In South Africa, other programmes (e.g. the Technology and Human Resources for Industry Programme (THRIP)) benefit from such structures. The establishment of an advisory committee has the potential to assist the DST in managing an effective and efficient programme.

5. ANALYSIS OF ISSUES

5.1 WAYS TO SIMPLIFY PROCEDURES FOR ACCESSING THE INCENTIVE

In evaluating ways to simplify procedures for accessing the R&D Tax Incentive, the Task Team focused on two issues.

Firstly, addressing the challenges experienced by companies with regard to the preapproval system of accessing the Incentive, simplifying the information requirements and shortening the turnaround times for providing final decisions to applying companies. Secondly, assessing whether the pre-approval system should be retained as a method for administering the R&D Tax Incentive.

The preapproval system was introduced in October 2012 in order to address the complaints from the private sector about the uncertainties involved in claiming the

[17] From November 2015, HM Revenue and Customs (HMRC) in the UK introduced the Advance Assurance option for companies that claim R&D tax relief. If a company carries out R&D for itself or other companies, it could qualify for Advance Assurance. This means that, for the first three accounting periods of claiming R&D tax relief, HMRC will allow the claim without further enquiries.

tax deduction retrospectively. In making comparisons, it was noted that the retrospective system that was in place prior to October 2012 was administratively easier, although companies remained uncertain about the manner in which eligibility was determined and whether they would actually be allowed the deduction, years after spending on R&D.

In its original conception, the preapproval system was welcomed by industry. In this system, scientific and technological experts were going to be used to determine the eligible activities, moving away from a previous process that heavily relied on SARS auditors. Knowing about the approval upfront was going to improve certainty. It was also envisaged that companies could also use the approval in leveraging external funding, addressing an important need of SMEs and start-up enterprises.

This system, however, introduced new challenges, especially given the backlog that was created. A high number of applications (224) that were received between October and December 2012 have been carried over into subsequent years. The long turnaround times in getting a final decision makes it difficult for companies to plan their investment. It also discourages companies with smaller projects to apply. The DST seems to have not made adequate provisions for building the required capacity to administer this system. The current staff complement of six people is too small compared to what is required. Staff capacity needs to be increased if the administrative backlog that has accumulated is to be cleared and to ensure that the DST achieves short turnaround times going forward.

The general practice found in other countries is a retrospective system. There are variations in terms of levels of information requirements and stages in which companies are required to submit certain information about their R&D activities.

A useful practice followed in other countries from which South Africa can learn is one of "pre-registering" by companies to indicate an intention to undertake R&D in the coming period. This helps the authorities to anticipate the volumes and plan processing capacity appropriately. In this same system, companies are only required to submit detailed information about their R&D once the activities have been undertaken and the expenditure is known. This makes it easy for authorities to determine the eligibility of activities based on evidence that companies provide.

Another experience is that countries that are successful in administering these incentives have established appropriate and dedicated institutional capacity to administer them. In Norway, for instance, they concentrate the capacity to process a large number of applications in a short space of time (Norway processes 6 000 in six weeks). In Australia, applicants have 10 months after their financial year end to submit retrospective claims to AusIndustry (a division of the Department of Industry, Innovation, Science, Research and Tertiary Education), which undertakes a review of such claims on a sample basis (i.e. they do not review 100% of all claims submitted). These two examples also make it easy to monitor and report about the R&D tax claims.

With reference to practices in various countries, the following table shows common institutional roles found in the administration of R&D tax incentives:

Table 5: Institutional roles in administering R&D tax incentives

Standard roles	South Africa	Canada	Australia	Norway
Developing criteria for eligible R&D	DST	Industry Canada (Ministry)	The Treasury and the Department of Industry, Innovation, Science, Research and Tertiary Education	Information not available
Assessing eligibility of R&D activities	DST	Canada Revenue Agency (CRA)	Innovation Board (through AusIndustry)	Norwegian Research Council
Confirming the validity of R&D expenditure	SARS	CRA	Australian Tax Office (ATO)	Tax Administration
Allowing the tax deductions	SARS	CRA	ATO	Tax Administration
Overall tax policy oversight	National Treasury	Ministry of Finance	The Treasury	Ministry of Finance

The timing of submitting R&D information is either before (R&D plans and budgets for "registering" R&D activities) or after (actual R&D activities and spending for progress reports and claims). The common approach is to have information submitted after R&D has taken place. The practice of pre-approval applied in South Africa is not common. The common method of submitting applications is online (all of them use online submission systems with information systems that can be linked to the SARS equivalent).

There is also a difficulty at the committee level in assessing pre-approved applications, given that the applicant is required to disclose the likely research outputs before the research has even begun. This is the nature of pre-approval and this is why the complexity of information weighs on both the applicant and the committee, who have only prior work to compare it with. The process, therefore, assumes that all the research would have been pre-planned and that the applicant knows the specific features of the intended R&D output beforehand. It has proven difficult for applicants to know the "patentability" of R&D prior to commencing the work. They may know what benefits they want to achieve (e.g. faster, lighter, etc.), but they may not know what features are required to achieve these benefits. Only "features" are patentable and not "benefits".

The complexity of information requirements and processes increases the need for consultancy services and can reduce/outweigh the potential benefits of the incentive. Although the Task Team could not determine how much it costs companies in South Africa to access the incentive, such costs can be reduced if information requirements (at different stages of the process) are clearer and procedures simplified. As a way forward, the processes and information requirements (for both the application stage and the progress reporting stage) need to be simplified in order to ease the administrative burden for both the government and the companies. The progress report adds a further administrative burden for both the applicant and the government because of repetitions in the nature of information required. The progress report would not be required if the system was retrospective, even though a need for further information may arise for purposes of monitoring and evaluating the incentive.

With the level of clarity provided through regulations for clinical trials and pharmaceuticals, the DST should consider the possibility of accepting the Medicines Control Council (MCC) approval as an indication of eligible activities, and not subject such activities to repeated expert assessments. Consideration should also be given to affording a similar treatment to applicants who undertake field trials in the crop sciences and animal health industries that are regulated by the Agricultural Remedies Act (Act No. 36 of 1947).

Guidance is also required from SARS regarding the information requirements to support the submission of claims. This is because the SARS audit process remains a challenge for applicants.

The Task Team recommends that issues highlighted under this area be addressed in two parts. Firstly, there are issues that require the DST to institute immediate actions to simplify and improve administrative processes. Secondly, it is proposed that plans be put in place to review the preapproval system with the possibility of returning to a more refined retrospective method. In a refined retrospective method, an applicant will still require approval, but it will be towards the end of the project when they can easily articulate the research output. The application would then be adjudicated on the basis of fact and not intention.

Recommendation 1:

It is recommended that the DST continues implementing the actions to simplify administrative processes and improve turnaround times. The Task Team noted the following actions that the DST outlined as measures for immediate implementation. Some of these actions were already underway when the Task Team was established.

- Deploy a new, revised, online application form. The DST envisaged launching the online system by May 2016. This can improve the friendliness of the application form and it will improve progress-tracking for easy status updates to applicants, among other improvements. The form, however, still needs to be simplified further so that applicants/entrepreneurs will find it easy to understand and complete.
- Issue new guidelines for applicants and improve information on the DST website. Ensure the coherence of information provided on these platforms and the SARS Interpretation Note. There must be guidance relating to specific industries, e.g. software development, engineering projects, etc. The DST guidelines to include a new section that provides guidance for companies in dealing with changes in company names, tax numbers and restructuring that occurs between the time of approval and the time of the

claim, and subsequent to the project receiving approval from the Minister over the duration of the project.

- Run quarterly information sessions (roadshows) to assist applicants understand information requirements. Applicants must also be informed that the DST will not acknowledge incomplete application forms. Information on the website and guidelines are also being improved to support this.
- Increase internal administrative staff for incentive administration (e.g. screening, information processing, technical screening, document preparation, etc.). In screening applications, the content will be checked for relevance, in which case it can be passed on to the next stage of the process or sent back for correction by the applicant.
- Appoint additional external experts to assess applications. The DST plans to increase the number to 20 in order to clear the backlog and to use the experts when there is an overflow of work once the backlog is cleared. Terms of the contracts and supervision will be strengthened on matters of efficiency (i.e. deadlines, quality and volumes). The DST has a target to provide the pre-approval decision within 90 days of receiving an application.
- The Minister should consider delegating an appropriate official in terms of section 11D(9) of the Act to sign-off on all applications.

Recommendation 2:

It is recommended that the pre-approval system be reviewed with a view to a more refined retrospective method. Such a new procedure would allow companies to "register" online to indicate that they intend undertaking R&D in the coming period, and then submit details of the R&D undertaken at year-end (i.e. at the claim stage). At the claim stage, the company would have most of the information required and it would be easier for the DST to determine the eligibility of the activities.

However, changing from one system to another will require legislative amendments under section 11D(1) and 11D(2) of the Act. Adequate time must be provided for both the DST and SARS to adjust their internal systems and capacity.

Should the retrospective method be adopted, the progress report form required in terms of section 11D(13) can be used by the DST as a basis for determining the eligibility of the R&D activities. An amendment may be necessary to make this possible.

5.2 HANDLING OF APPEALS

Currently, the legislation does not provide a recourse mechanism to applicants whose projects were not approved. The only recourse available to applicants whose projects were not approved is to approach the courts. A recourse mechanism (which is available in all developed R&D tax incentive regimes) increases trust and transparency in the administration and overall working of the system. Recourse through the courts is not in the best interests of both the applicants and the government due to the time requirements and costs involved.

Long turnaround times in providing final decisions makes this even more complicated. Reducing the turnaround time will lessen the need for appeals, because an applicant would have a chance to reapply, unlike when they receive a decision after two or three years.

If successful, the DST's action to simplify information requirements can partly reduce the need for appeals. Sometimes information required during the application process is not provided because the company does not have the details, as the R&D is still to take place, or the R&D has just begun.

Due to a lack of consensus, alternatives outlined under Recommendation 3 are proposed to address issues in this area. A further step for monitoring the quality of the Adjudication Committee decision is also proposed.

Recommendation 3:

It is recommended that an additional step be allowed for an applicant to present the information, responding to observations of the Adjudication Committee, before a

final non-approval decision can be finalised. This recommendation can be implemented without changing the law.

The suggested escalation that companies can follow before resorting to taking the decision for review by the courts could be as follows:

- Technical merits rejected by the DST, with detailed reasons for the rejection provided by the DST.
- Company formally objects to the rejection, responding to the detailed reasons from the DST.
- The DST considers the reasons and thereafter either (a) requests additional information with a view to accepting the project or getting further clarity, or (b) rejects the project again.
- If (b), then the DST asks the applicant if it would like to send information to the Advisory Committee, which would make the final decision.
- If the applicant still disagrees with the Advisory Committee, the applicant can then exercise its legal rights and approach the courts.

There are views within the committee arguing that this step will create an administrative workload and exacerbate the backlog. An alternative for improving the clarity of information required from applicants (whether under the pre-approval system or the procedure proposed in Recommendation 1 is therefore proposed.

Recommendation 4:

It is also recommended that an independent Advisory Committee be established to review the consistency of Adjudication Committee decisions. This step will serve as a quality assurance measure, helping to enhance the confidence of applicants in the adjudication process. The focus of such a committee will be on the consistency of decisions and quality monitoring of expert advice that is provided to the DST.

5.3 CLAIMING THE TAX DEDUCTION FROM SARS

The current system requires that a company gets approval before it can claim a tax deduction. Delays in providing such approval decisions prejudice the applicants in that they can only receive a deduction after two or three years of R&D expenditure. Companies are skeptical about reopening their tax submission because that often triggers a larger, more detailed audit by SARS. There is also an additional hurdle for companies that have received pre-approval in that they often need to submit revised tax returns or lodge objections to tax returns previously submitted for the past three years, in order to amend their tax returns to reflect the additional 50% tax deduction. The latter is fraught with administrative delays, is cumbersome and unnecessarily triggers automatic audits of taxpayers.

This situation becomes even more complex when a company is doing R&D as part of a global arrangement, for both SARS and the company.

The above challenges, especially the delay in receiving feedback over the past three-and-a-half years, has discouraged some applicants from submitting further applications, and such applicants are prejudiced from not being afforded the opportunity to have R&D projects undertaken during this time (i.e. October 2012 to date) submitted for approval by the Minister, and thus such applicants stand to lose on valid potential R&D expenditure since October 2012 to date. Companies that did not apply (at all) due to uncertainty of the pre-approval process may need to be addressed as well.

Furthermore, companies require guidance and clarification on two other issues. The first one is how to deal with changes in company ownership (mergers and buy-outs in a group context), changes in tax numbers and company names. The second issue is in respect of multiple information submissions required at different times of the process for the progress reports and the SARS claiming process.

In summary, the interface between SARS and the DST should be improved to address uncertainties for approved applicants to successfully claim the deduction. To promote transparency, it is also important that SARS publishes summary updates in aggregated form about the claims processed, in terms of how much in total is being claimed and how much is allowed and disallowed.

Recommendation 5:

It is recommended that the DST consults with SARS on the following proposed actions:

- The issuing of guidelines on information requirements that applicants should prepare when submitting R&D tax deduction claims, and guidance on how companies should deal with changes in company names, tax numbers and restructuring that occur between the time of approval and the time of the claim.
- The possible publishing of summary tables by SARS annually, in aggregated form and per industry, of the amounts claimed, amounts allowed and amounts disallowed under this Incentive.

Recommendation 6:

To address the challenge of the lengthy delay in receiving feedback on applications and the prejudice suffered by applicants, a once-off amendment is recommended in section 11D(2)(a)(iv) and section 11D(2)(a)(v) of the Act to help in catching up on the R&D expenditure incurred by companies since October 2012. This has to go hand-in-hand with the DST clearing the backlog and improving efficiency. The amendment can provide for claims from the date of submission of applications to the DST and for the claim to be allowed as a tax deduction in the year of receiving an approval. Mechanisms for implementing this will require consultation with National Treasury to assess if amendments are required to the Tax Administration Act as well. The following text is proposed:

For section 11D (2)(a)(iv): "*that expenditure is incurred on or after... 1 October 2012".*

For section (section 11D(2)(a)(v) of the Income Tax Act, the following insertions are proposed:

"that expenditure which is incurred on or after 1 October 2012 of the date of receipt of application by the Department of Science and Technology may be deducted as a once-off cumulative tax deduction in the year of assessment in which this amendment is brought into effect or the year in which the pre-approval has been received from the Minister of Science and Technology, provided that no previous section 11D expenditure was claimed by the taxpayer for any period since 1 October 2012 in relation to the approved project and provided that disclosure of expenditure for each respective year of assessment relating to the once-off cumulative tax deduction is disclosed as part of the taxpayer's tax return to SARS".

5.4 CLARIFYING THE ELIGIBILITY CRITERIA

With regard to general eligibility criteria, South Africa matches international practices in terms of R&D definitions and exclusions. The Task Team acknowledges that countries adopt the Frascati Manual as the basis for setting out criteria and allow necessary deviations to cater for country-level requirements. With regard to South Africa, the five core principles used for identifying R&D in the Frascati Manual, namely, novelty, creativity, uncertainty, systematisation and transferability/reproducibility, are adequately catered for in the legislation, and this consistency with the Frascati Manual principles should be maintained.

The concerns, however, are in respect of references made in section 11D(1) to intellectual property (IP) legislation (i.e. patents, designs and copyright), which companies find difficult to comply with under the current pre-approval system. Such requirements can only be easily complied with if the application procedure is retrospective.

There are also concerns in respect of specific text in the legislation and the interpretation of such text in practical usage. Some new ideas were raised to encourage various forms of R&D funding, e.g. collaborations, partnerships and joint ventures.

With this in mind, the Task Team also acknowledges that the use of R&D tax incentives as policy instruments has a history in developed countries. This means

that, when such instruments are adopted in emerging economies like South Africa, consideration should be given to aligning the eligibility criteria with the realities of the industry's stage of development. Arguments along these lines are that the criteria for eligible R&D activities should consider incorporating the following aspects:

- R&D activities undertaken offshore, where there are solid reasons for it. An example of this is found in Australia, where such activities can constitute up to 50% of the total R&D costs, on condition that they are approved by the Australian government. In the era of R&D internationalisation, firms have need for sourcing knowledge where there are domestic technology supply gaps.
- Local adaptation of technology and reverse engineering for local applications.
- A differentiated approach between SMEs and start-up firms, on the one side, and all the other types of firms on the other side.
- A sector targeted approach, wherein certain sectors are given preference in terms of levels of incentives in line with the priorities of government.
- A less strict stance taken in respect of the criteria for the level of novelty, i.e. whether an innovation should be new to the world, new to the country or new to the firm. There are advantages and risks associated with each of these options, both for the firm and for the country. These range from technology advancement, helping to maintain a firm or country competitive position on the one hand, to the deadweight associated with funding activities that would have happened anyway as firms renew in order to catch up to maturing industry standards on the other. Legal requirements of both section 11D(17) and 11D(1)(c) should be taken into account to help focus the interpretation of 11D requirements to support R&D that has potential of growing the economy or creating employment, even though such R&D would only be new to the firm.

Table 6: Advantages and risks associated with criteria on level of novelty

	Advantages		Risks for providing funding support	
	For firms	For the country	For firms	For the country
New to the world	✓✓✓	✓✓✓	_	_
New to the country	✓✓	✓✓	X	X
New to the firm	✓✓	✓	_	XX

Contrasting views are that the criteria for R&D must be implemented in accordance with the Frascati Manual, with very minimal tinkering. The view is that R&D by its nature is aimed at generating new findings and is based on original concepts and their interpretations, which is why it is largely uncertain about its final outcome(s). An R&D activity may lead to a particular result or fail to achieve it, but expenditure incurred can still be claimable under the Incentive. Arguments along these lines are that the government support for private sector R&D is meant to overcome the risk of uncertainty involved in R&D, and in doing so encourage R&D in ways that enhances social and financial returns.

Using the Incentive to target certain sectors is not recommended, because of the negating distributional effects of giving preference to one sector; according to compelling arguments in the literature, this can make things worse for other sectors.

There are also possible layers of complexity that can be created in the very process of prioritising sectors. Arguments against this are that criteria for scientific and technological R&D can be applied across a range of sectors without discriminating. Top-up level of support can be provided through other incentives targeted at industries, which are available in the DTI and government agencies. There is consensus that clarification on eligibility requirements for areas that present challenges, e.g. software development, should be provided through regulations. This has been done successfully with clinical trials and pharmaceuticals, where clarity has been provided through regulations in terms of eligible activities and exclusions.

The text in the legislation on "innovativeness" is seen by industry as presenting an additional hurdle over and above the requirements for undertaking scientific and technological R&D. The text appears in three areas:

- In section 11D(1)(b)(ii)(bb), requiring functional design to be *"innovative in respect of the functional characteristics or intended uses of that functional design".*
- In section 11D(1)(b)(iii), requiring a computer program to be *"of an innovative nature".*
- In section 11D(1)(c), requiring that R&D be for purposes of *"making a significant and innovative improvement".*

From industry's side, it is felt that the requirement for innovativeness is also interpreted too strictly in the adjudication process, setting the bar too high and resulting in some of the activities that would qualify in similar incentives in other countries being rejected in South Africa. This requirement is also thought to be a source of inconsistencies and subjectivity. No definite recommendation was formulated to address the "innovative" requirement, but it would depend on the policy stance of government in terms of how strict the requirement should be interpreted to achieve the desired policy outcomes. This should also take into account the purpose of the legislation, which could be found in section 11D(17) of the Act.[18]

Further suggestions were made regarding ways to extend the Incentive to encourage R&D partnerships and R&D collaborations, both locally and across borders. The growing trend internationally of private sector funding for R&D in public institutions (i.e. the higher education institutions (HEI) and research institutions sectors) and various arrangements for R&D organisations demonstrates the potential for stimulating such arrangements.

For example, if a company currently contracts with an HEI to conduct specific R&D, such a company would, provided that it complies with the requirements of section 11D(6)(a), be able to claim such costs under section 11D. If, however, a company

[18]Section 11D(17) requires the Minister to advise Parliament of the direct benefits of R&D in terms of economic growth, employment and other broader government objectives.

was to fund a project by a HEI, but such company was not able to "determine or alter the methodology of the research" (section 11D(6)(a)), such company would not be able to claim any amounts in terms of section 11D. Similar to the example where a company funded HEI R&D without the ability to control or alter the methodology of the research, there are organisations that conduct R&D on behalf of their members and where such industry-specific R&D is funded by the members. As above, the companies funding the R&D would be able to claim any amounts in terms of section 11D.

Currently, uncertainty in section 11(D)(1) appears to be interpreted in the context of the final outcome. A suggestion is that the DST should widen its interpretation of uncertainty to take into account the process, timelines and nature of inputs required to achieve an outcome.

Recommendation 7:

It is recommended that the existing criteria in section 11D(1) be adjusted in order to ensure consistency with the Frascati Manual R&D definitional principles. Where deviations are made, they should be assessed carefully for implications. This recommendation does not prevent the government from issuing regulations and guidelines to provide clarification on how the criteria are to be applied for specific activities and situations.

Recommendation 8:

It is recommended that the interpretation of a requirement on innovativeness be relaxed to allow a certain level of adaptation of technologies that are new to the country (and not necessarily new to the world). Government policy intentions need to be clarified. If the government intends to encourage a critical mass of innovative activities, a recommendation for "new to the firm" is proposed, provided that the knowledge will "not be generally available in the public domain".

Recommendation 9:

Three amendments can be considered for the incentive to encourage various forms of R&D collaboration and partnerships.

It is recommended that a possible amendment to the text in section 11D(4) dealing with funding arrangements could include a new subparagraph 11D(4)(e), stating the following

"(e) To the extent that the other person who alters and controls the methodology of the research is (i) an institution, board or body that is exempt from normal tax under section 10(1)(cA); or (ii) an industry organisation that cannot deduct any amount in terms of this section".

Possible text recommended for section 11D(6) includes a new subparagraph 11D(6)(c), stating the following:

"(c) A person shall be deemed to carry on research and development if that person funds the research and development activities of another entity that cannot deduct any amount in terms of this section."

Possible text recommended for section 11D(6) includes a new subparagraph 11D(6)(d), stating the following:

"(d) A person shall be deemed to carry on research and development if that person enters into a collaboration agreement or cost-sharing agreement with another person and is able to direct and control its respective research and development activities."

The latter will enable companies that collaborate on an R&D project to benefit from the Incentive. Although this is possible under current provisions, it is important that it is explicitly stated under section 11(D). This is in cases where two or more companies collaborate and they respectively control individual parts of the R&D process in South Africa, then each party should be able to claim their individual respective R&D costs as part of the collaboration or cost-sharing agreement.

5.5 ISSUES IMPACTING ON THE ELIGIBILITY OF SOFTWARE DEVELOPMENT ACTIVITIES

A high rate of rejections of applications with ICT-related activities indicates misalignment between the intention and the activities actually taking place in the industry. There is also the possibility of a strict interpretation of the law (also refer to the discussion under par. 5.4 above).

The treatment of ICT-related activities for the R&D Tax Incentive has created challenges, not only in South Africa, but also in various other jurisdictions. The borderline nature of ICT-related activities and software development is also acknowledged in the Frascati Manual. This is why some countries (Malaysia, the USA, etc.) have adopted rules specific for such activities. Country-level policies with regard to the envisaged role of ICT innovations inform such criteria.

Analysis provided by the DST shows that some of the non-approved firms, which genuinely require funding support to scale up, introduce ICT-related innovations without necessarily engaging in R&D, as defined in section 11D of the Act. This, according to the DST, highlights a crucial gap in government support for industry innovation that is difficult to address under the current provisions of section 11D.

Typical arrangements found in ICT-related applications are the following:

- Internal development of proprietary software.
- Customisation of proprietary software to meet new need(s).
- Customisation of third party off-the-shelf software.
- Purchase and installation of off-the-shelf software.
- Upgrading or integrating a new functionality into the existing system (own or off-the-shelf).
- Maintenance of already installed systems (internally or at client site).

Software development can be a core activity or a supporting activity of an R&D project. When looking at the dominant purpose of ICT-related projects in the application, the following are common:

- To support internal administrative functions.

- To support core operations, e.g. manufacturing or the delivery of a product or service to the end customer, including deploying the technology within the own group of companies.
- To (re)sell/license to clients.
- To integrate/embed as a core aspect of a final product, etc.

A key observation of the Task Team is that a requirement for uncertainty in software development appears counterintuitive – the moment there is "uncertainty" in an ICT project, such a project can actually be cancelled from the business point of view. This is because most ICT projects are predicated on an envisioned practical application. A suggestion has been made to remove this requirement for ICT. Another limitation is the multiple interpretation by different role players, i.e. the applicant, consultants, the adjudication committee, etc., of the requirement for innovativeness.

A restriction on "connected person" transactions under section 11D(1) proviso (b) prevents multinational companies from outsourcing software development R&D to South Africa. If this restriction is qualified by permitting transactions that are "consistent with the arm's length principle", the outcome will be different and will encourage more multinationals to outsource their R&D to South Africa.

An intention by the DST to initiate a separate process for reviewing available support for ICT related activities is welcome. Such a process should take into account that there are specific objectives that the R&D Tax Incentive can help achieve, which are contained in the recommendations of the Task Team.

Recommendation 11:

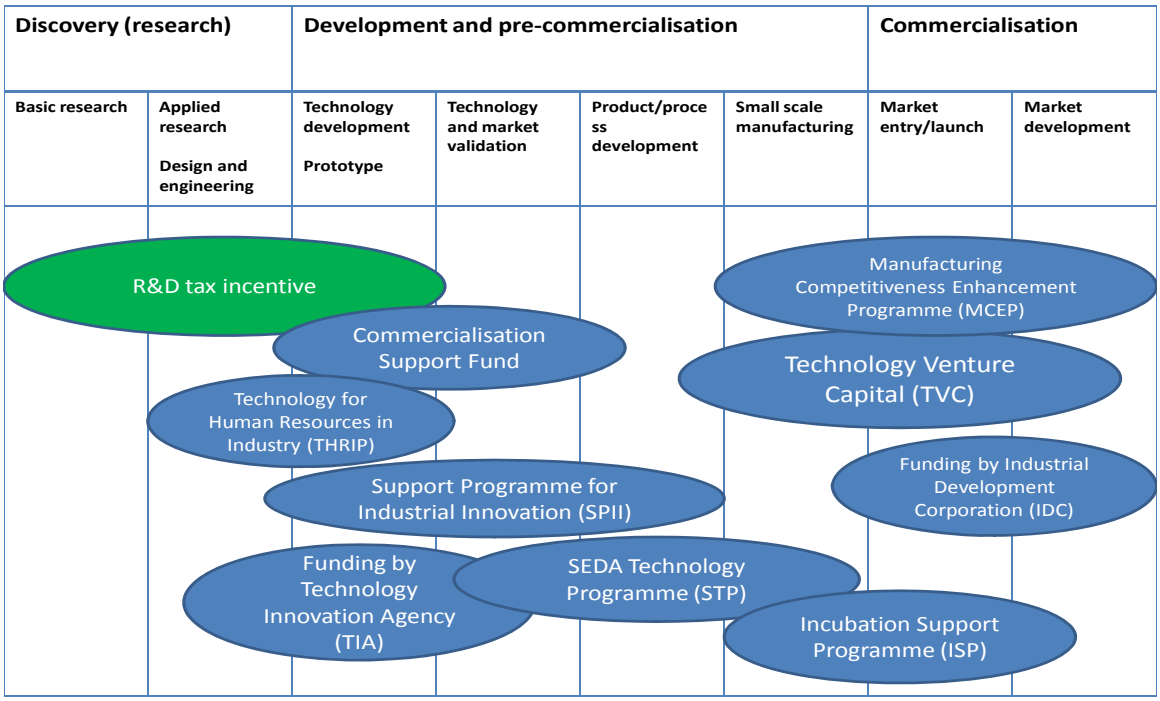
It is recommended that clearer guidance be provided on how uncertainty relates to software development. Should this action be ineffective in addressing the challenge, it may be necessary that section 11D(1) be amended to remove the requirement for "uncertainty" from the eligibility criteria for computer programs – i.e. software development. It will also be useful for the DST to issue further guidance through regulations or guidelines in terms of how the criteria will be applied in practice.

5.6 ACCESS BY SMEs AND START-UP FIRMS

Two challenges have been identified concerning the utility of the Incentive for SMEs and start-ups. Firstly, they struggle to raise initial finance for R&D from both internal and external sources. Secondly, a system of claiming the R&D tax deduction after spending on R&D makes it difficult for SMEs to access the Incentive; they have a high chance of being in a financial loss/pre-profit position, preventing them from claiming a tax deduction should it be approved.

With reference to a discussion about the innovation support gap in par. 5.5 above, the process of mapping the incentives for R&D and innovation that is underway between the DST and the DTI has indicated that targeted support for technology innovation in SMEs is required. Consultations are necessary with Department of Small Business Development (DSBD) to align and upscale instruments available within departments and agencies in this regard.

Figure 8: Available support measures for SME R&D and innovation



An argument for difficulties of loss-making businesses in claiming was also raised for large businesses. This argument has been raised in relation to the mining industry, which has been under pressure over the past three to five years. The practices in the UK, Canada and Australia allow different forms of cash credits (refundable and non-refundable) for both large and small businesses. The Task Team, however, could not prioritise this concern for large businesses. It was considered that the case for this is more compelling in SMEs and start-ups. In Singapore, for example, they have set a cap on the amount of the refundable credit in order to limit the level of government commitment on these, and currently there is an increased enhanced deduction (400%) up to US$1,2 million of qualifying eligible R&D expenditure.

Recommendation 12:

It is recommended that the feasibility for enabling pre-profit SMEs and start-ups to have a refundable cash credit under section 11D be investigated. An alternative is to have a separate R&D regime targeting SMEs. Both the alternatives require that analysis be done to understand the gaps.

The implications of this recommendation need to be assessed carefully for its unintended consequences. While targeted at addressing SMEs, it may influence the behaviour of businesses restructuring (companies starting new small entities) in order to exploit the regime through tax avoidance.

5.7 GENEROSITY OF THE 150% TAX DEDUCTION

There are a number of countries (about 10) that offer refundable (cash) tax credits (such as France, Singapore, the UK and Canada), and the majority of jurisdictions that provide an R&D incentive do so in the form of an additional (or super) tax deduction similar to that of the South African R&D regime.

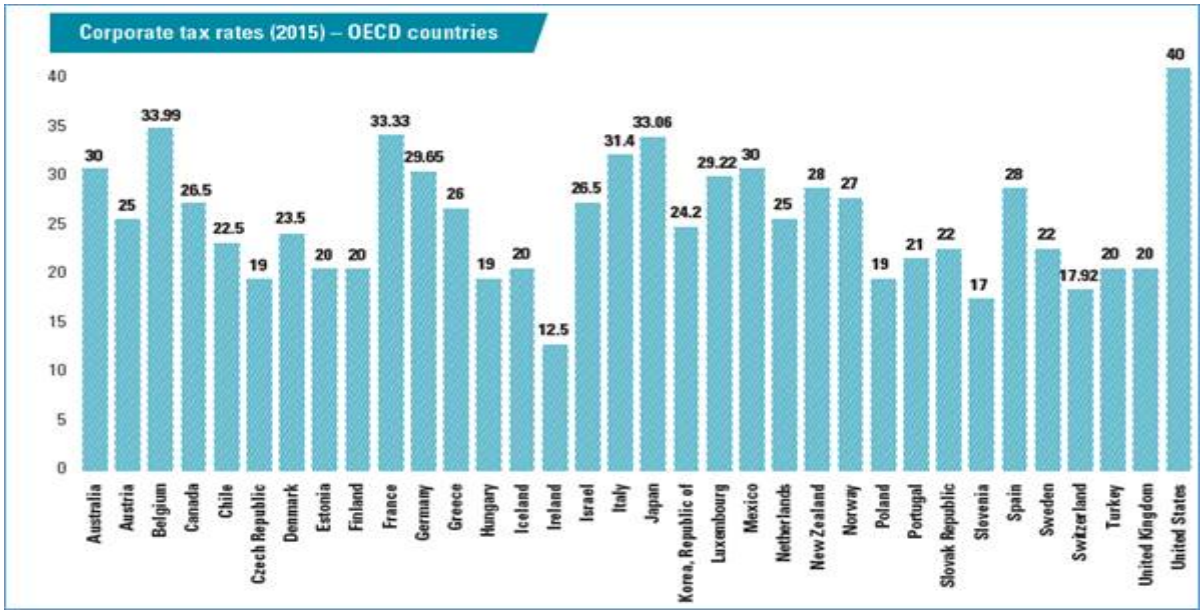
The highest combined (additional and super) deduction is Singapore, at 400%, with the average combined R&D tax deduction across about 16 countries being close to

220%. In terms of the BRICS countries, China, Russia and South Africa each have a 150% tax incentive, while Brazil has a 160% to 200% tax incentive, and India is the highest of the BRICS countries, offering a 200% additional tax deduction. Many countries also offer additional incentives in the form of tax deductions, depending on the additional number of personnel (with PhDs) employed, and a handful of countries also offer an enticing patent box regime (which encourages the centralisation of patents and trademarks (IP) in that country).

Given that the majority of countries offer a tax deduction, it is thus important to look at the corporate income tax rate to which these additional deduction percentages are applied. The global average corporate tax rate has remained virtually unchanged for the past two years (2014 and 2015), standing at 23,68%. Applying this to the average combined R&D tax deduction percentage of 220% noted above, it could be said that the average effective R&D tax deduction is about 28% (120% @ 23,7%). In South Africa, we have a 28% corporate income tax rate, and thus applying the additional 50% R&D incentive realises an effective R&D tax deduction of 14%.

The figure below sets out the corporate income tax rates of the OECD countries.

Figure 9: Corporate tax rates in OECD countries



Source: 2015 Global Tax Rate Survey, KPMG (Published: 7 Dec. 2015)

Corporate income tax rates are predicted to resume their long-term fall as tax competition re-emerges. This can reduce the generosity of the 150% tax deduction for multinational enterprises. There are arguments that this makes the South African incentive less competitive in the international context.

On the other hand, there is risk of excessive subsidisation in the sense that the cost of providing assistance could exceed the benefits. The key benefit of government providing the tax incentive arises from the additional knowledge spillovers that occur as firms increase R&D in response to the incentive. In the case of South Africa, a target for GERD/GDP was set at 1,5%, but this is proving difficult to achieve.

For SMEs, the level of generosity appears to be low if one considers some SMEs are taxed at 10% or below (turnover tax). A different incentive structure must be considered for SMEs. This idea was supported widely. Other suggestions were that SMEs and start-up enterprises may require a totally different, targeted programme, since they do more product/process innovation without necessarily engaging in formal R&D. Such an incentive (which can be cash-based) can target innovation as the desired outcome, rather than R&D (which is an activity leading to innovation).

New forms of incentive such as the patent box options should be considered – to encourage companies to register patents in particular ways. A requirement to have IP held in South Africa may help to make R&D to be undertaken locally – although this can depend on a range of other factors. Another view within the Task Team is that the current IP regime in South Africa renders this impractical.

The Task Team's deliberations indicate that it is not easy to assess how the Incentive is performing, given many changes in various countries. There is a need to update information about how South Africa's R&D Tax Incentive measures up against the level of generosity. A view was expressed that the current 150% may not be sufficient as an incentive for companies, after taking into account the (unintended) administrative burden that has arisen through the delays in the pre-approval process and the uncertainty brought about in terms of when companies could receive approvals from the DST.

The Task Team debated whether an increase of the level of the current 150% (effectively 14 cents benefit) needs to be prioritised, and the view was that more

evidence was required before a definite recommendation to increase the level above 150% can be made.

The discussion also turned to how to make the Incentive more attractive for SMEs and start-up firms, and it was felt that further work is needed to understand the generosity of the R&D tax deduction for different categories of firms, and also that the feasibility should be assessed for targeted measures to encourage SMEs and start ups.

Recommendation 13:

It is recommended that further analysis be carried out to assess the attractiveness of the level of the R&D tax deduction from the current 150%. In addition, the feasibility analysis of enhancing the incentive for SMEs and start-up enterprises needs to be undertaken. (See recommendation under par. 5.6 above.)

6. SUMMARY OF RECOMMENDATIONS AND CONCLUSION

The Task Team managed to deal with all the issues that it was mandated to address in terms of its ToRs. In this report, a summary of the analysis on each issue is provided, as well as the recommendations for consideration by the Minister.

The Task Team agreed that recommendations can be categorised as follows:

- Short-term administrative enhancements that the DST can implement on its own without elaborate involvement by National Treasury, SARS or other departments. The Task Team has noted that the DST has already started implementing some of the proposed actions.
- Changes that require consultation with or the concurrence of National Treasury and/or SARS. Such recommendations require more time to consider.
- Recommendations that have implications for legislative amendments. Such recommendations need to be put through the appropriate processes of National Treasury in considering amendments to the tax laws.

A system of monitoring implementation of the recommendations is necessary. A decision about how that will be carried out can be determined by the Minister.

The Task Team understands that all recommendations presented in this report are subject to further consultation/evaluation within government before they can be accepted as decision(s) and/or implemented. The Minister can determine, upon considering the recommendations, what actions are required.

The following table summarises a list of actions arising from the Task Team recommendations:

Table 7: Summary of actions arising from the recommendations

Actions arising from recommendations. (The actions are arranged from simple ones to more complex ones).	Can be implemented by the DST (with minimal involvement of National Treasury, SARS or others)		Require consultation with National Treasury	Require consultation with SARS	Require further analysis and supporting evidence
	Funded/Can fund from internal sources	Need additional funding from outside the DST			
1. Deploy a new, revised, online application form.	X				
2. Issue new guidelines, improve website information and work with SARS on the Interpretation Note.	X			X	
3. Run quarterly information sessions (roadshows) to assist applicants in understanding information requirements.	X				
4. Increase internal administrative staff to support with incentive administration (screening, information processing, technical screening, document preparation, etc.).	X	X			
5. Appoint additional external experts to assess applications.	X				
6. Allow an additional step whereby applicants can represent their information before a non-approval decision is finalised.	X				
7. Introduce advisory	X		X		X

Actions arising from recommendations. (The actions are arranged from simple ones to more complex ones).	Can be implemented by the DST (with minimal involvement of National Treasury, SARS or others)		Require consultation with National Treasury	Require consultation with SARS	Require further analysis and supporting evidence
	Funded/Can fund from internal sources	Need additional funding from outside the DST			
committee to review consistency of adjudication committee decisions.					
8. SARS to issue guidelines for submission of R&D tax claims.				X	
9. Introduce a once-off amendment to section 11D (2)(a)(iv) and section 11D (a)(v) of the Act to enable applicants to claim for R&D expenditure incurred since October 2012 and that the claim be allowed in the year of receiving an approval, and to consider eligible expenditure incurred by applicants since 1 Oct 2012 as deductible, subject to date of application and provided that the approval of applications has been received from the Minister.			X		X
10. Review the preapproval system with consideration of a more refined retrospective method.			X	X	
11. Investigate feasibility for enabling loss-making SMMEs and start-ups to have a refundable cash			X		X

Actions arising from recommendations. (The actions are arranged from simple ones to more complex ones).	Can be implemented by the DST (with minimal involvement of National Treasury, SARS or others)		Require consultation with National Treasury	Require consultation with SARS	Require further analysis and supporting evidence
	Funded/Can fund from internal sources	Need additional funding from outside the DST			
credit.					
12. Issue regulations or guidelines to provide needed clarification on eligibility requirements of software development and other ICT-related activities.	X		X		
13. Amend section 11D(1) to remove "uncertainty" from eligibility requirements for software development.			X		
14. Amend section 11D(6) to further encourage various forms of R&D funding and organisations, e.g. collaborations, partnerships and joint ventures.			X		
15. Review the generosity of R&D tax deductions for different categories of firms.			X		X

ANNEXURE A: TERMS OF REFERENCE

TERMS OF REFERENCE

JOINT GOVERNMENT-INDUSTRY TASK TEAM ON THE

RESEARCH AND DEVELOPMENT TAX INCENTIVE

1. Introduction

1.1 In an effort to strengthen partnerships between government and the private sector on matters related to research, development and innovation, the Department of Science and Technology (DST) has established a joint government-industry Task Team on the Research and Development (R&D) Tax Incentive ("Task Team").

1.2 The idea of a Task Team was proposed by the private sector during a meeting between the DST and industry representatives on 21 August 2015, and was welcomed by the Minister of Science and Technology.

2. Role of the Task Team

2.1 The Task Team's role is to review matters raised at the meeting of 21 August 2015, and to make recommendations to the Minister of Science and Technology about measures to advance the R&D Tax Incentive. These matters include the following:

2.1.1 The pre-approval process, including the timing and method of submitting applications. This could include a review of the application and approval procedures in other jurisdictions that administer R&D incentives.

2.1.2 The information required to access the incentive.

2.1.3 Eligibility requirements, in particular the criteria used to interpret "innovativeness".

2.1.4 The need to make the Incentive more accessible to small and medium enterprises (SMEs) and start-ups.

2.1.5 The possibility of considering and introducing an appeal process.

2.1.6 Global benchmarking to determine whether the Incentive is competitive in terms of rate, qualifying activities and administrative proceses.

3. Composition

3.1 In establishing the Task Team, the DST has taken into account that its composition should be representative of key stakeholder groups, such as R&D-performing companies of different sizes and in different sectors, consulting firms, industry associations, relevant government departments and agencie,s as well as academia and the policy research community.

3.2 The Task Team comprises the following:

3.2.1 Four persons representing companies that apply for the Incentive as per nominations received from the private sector.

3.2.2 Four persons representing consulting firms that assist companies to apply for the Incentive as per nominations received from the private sector.

3.2.3 Five persons from government departments or entities, namely the DST, National Treasury, the South African Revenue Service (SARS), the Technology Innovation Agency (TIA) and the National Intellectual Property Management Office (NIPMO).

3.2.4 Four persons from academia/the policy research community.

3.3 Representation from the private sector covers most of the sub-sectors addressed by the R&D Tax Incentive, e.g. manufacturing, mining, information and communication technology (ICT), pharmaceuticals/health, engineering, mining and agriculture, etc., as well as the supporting disciplines of accounting, tax and law. Representatives from the government sector are from government programmes whose activities are most closely relevant to the purpose of the Task Team.

4. Ways of working and deliverables

4.1 The Task Team must complete its work by the end of March 2016.

4.2 The Task Team plans to meet three times, as follows:

4.2.1 The first session will be a workshop to allow members of the Task Team to agree on the current issues and to discuss all the matters listed in par. 2 above. The discussion will be solution-driven in the sense that, by the end of the session, the Task Team must have evaluated options and possible recommendations on measures that are implementable to address each of the issues. A document summarising the proceedings and outcome will be generated.

4.2.2 At the second session the report will be discussed, and the Task Team's recommendations finalised and set out in a first draft report to be presented to the Minister of Science and Technology for comments.

4.2.3 At the third session, the Task Team will consider comments from the Minister and produce its final report.

4.3 One of the representatives from academia/the policy research community will chair the Task Team. The Chair will be assisted by a Secretariat provided by the DST to coordinate meetings, take minutes, compile reports and monitor follow-up actions.

Work Programme for the Joint Government-Industry Task Team on the Research and Development Tax Incentive

The Task Team plans to meet three times, as follows:

1. The first session will take place in November 2015. The session will be in a workshop format to allow members to agree on the key issues to be addressed, as identified from the 21 August 2015 meeting. The session will proceed to consider each of the issues and evaluate options for addressing them.

Deliverable: *Minutes of proceedings and a report summarising the outcome/draft recommendations should be generated from this meeting.*

Proposed agenda items for first session:

- Opening and welcome
- Project briefing by the DST
- Review of expectations (five minutes outline by each of the members, highlighting key issues to be addressed and options for addressing them)
- Technical input presentations:
  - Input on software development and ICT
  - Options for reviewing the pre-approval process
  - Eligibility requirement – "innovativeness"
  - Improving accessibility by SMEs and start-up enterprises
  - Feasibility of appeals process
- Discussions after each input presentation
- Outline of recommendations and options
- Closure

Preparatory work for the first session:

- Mr Godfrey Mashamba will prepare an input document that will serve as a project briefing for the Task Team. The document will provide a status update on the R&D Tax Incentive and share experiences of the DST in terms of successes and challenges. The document will also outline the work programme and how the outcome of the Task Team will be processed.
- A dedicated workshop to deal with software development and ICT-related activities will take place before the first session of the Task Team (scheduled for 20 November 2015). Members of the Task Team may attend this workshop at will, as this will not count as part of the Task Team's duties. Only one of the Task Team members, Prof. Eloff, has been requested to take part in this workshop with a view to capturing the outcomes of the workshop and feed into the work of the Task Team. He will also present an overview of

the software development and ICT industry in South Africa, highlighting the R&D and technological innovations taking place in this industry, and also giving insights into global trends and how South Africa fits into the global ICT/software development industry.

- Members of the Task Team will be invited to volunteer to prepare technical input presentations on other areas listed on the agenda to help set the scene for Task Team discussions. These input presentations should help to focus the proceedings in working towards solutions.

2. The second session will evaluate each of the draft recommendations with a view to finalising and presenting a draft report for the Minister's comments.

Deliverable: *The output will be minutes of the proceedings and a first draft report that will be presented to the Minister of Science and Technology for comments.*

Proposed agenda items for second session:

- Opening and welcome
- Presentation of outcomes from the first session
- Discussion to review recommendations
- Adoption of first Draft Report to be presented to the Minister

3. The third session will consider comments from the Minister and produce a final Task Team report.

Deliverable: *Minutes of the proceedings and a Task Team report with final recommendations to be presented to the Minister.*

Proposed agenda items for third session:

- Opening and welcome
- Presentation of Minister's comments
- Discussion to review recommendations
- Adoption of second Draft Report (as the Final Report of the Task Team to be presented to the Minister).

IMPORTANT DATES

Dates	**Activity**
30 October 2015	Finalise appointment of Task Team

17–24 November 2015	Circulation of documents for first Task Team meeting
27 November 2015	First Task Team meeting.
22 January 2016	Circulation of documents for second Task Team meeting
29 January 2016	Second Task Team meeting.
05 February 2016	Draft report submitted to the Minister of Science and Technology
04 March 2016	Comments from Minister circulated to the Task Team
11 March 2016	Third Task Team meeting
31 March 2016	Final report submitted to the Minister of Science and Technology.