



science, technology
& innovation

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA

Research & Development Tax Incentive Programme

Report to Parliament 2022/23

TABLE OF CONTENTS

PREFACE	4
EXECUTIVE SUMMARY.....	6
1. INTRODUCTION	8
1.1 Legislative mandate	8
1.2 Objectives of the R&D tax incentive	9
1.3 Benefits of the R&D tax incentive.....	9
1.4 Where the R&D tax incentive fits in.....	9
1.5 Who can apply for the R&D tax incentive.....	10
1.6 Eligibility for the R&D tax incentive	11
1.7 Criteria used to determine eligibility	11
1.8 Exclusions and limitations	13
1.9 R&D tax incentive application process (via R&D tax incentive online system)	15
1.10 R&D tax incentive refinements from 1 January 2024	16
1.11 The use of the R&D tax incentive online system.....	16
2. APPLICATIONS FOR THE R&D TAX INCENTIVE	19
2.1 Number of project applications received by the DSTI	19
2.2 Profile of participating companies	21
3. PROCESSING OF PROJECT APPLICATIONS	24
3.1 Number of adjudication meetings and recommendations on project applications	24
3.2 Subsection of section 11D(1) cited for purpose of conducting R&D.....	26
3.3 Approved project applications per company turnover size and industry sector	28
3.4 Turnaround time in processing project applications	30
4. EXPENDITURE AMOUNT PLANNED FOR R&D BUDGET	31
4.1 Planned expenditure for project applications and approved projects	31
4.2 Estimates of tax revenue foregone	32
5. PROGRESS REPORTS	35
5.1 Number of progress reports received by the DSTI.....	35
5.2 Status of projects reported in progress reports	36
5.3 R&D expenditure incurred in the 2022/23 reporting period	36
6. R&D TAX INCENTIVE AWARENESS AND PROMOTION	40

REFERENCES.....	41
-----------------	----

LIST OF FIGURES

Figure 1: Where the R&D tax incentive fits in the innovation chasm	10
Figure 2: The application process	16
Figure 3: Uptake of applications received by the DSTI in 2022/23.....	19
Figure 4: Uptake of applications received by the DSTI in 2022/23 per company turnover	20
Figure 5: Number of project applications received by the DSTI (2012/13 to 2022/23) ..	20
Figure 6: Status of project applications at the end of reporting period	22
Figure 7: Overall status in processing applications as at Feb. 2023	24
Figure 8: Overall outcomes of adjudicated project applications during the reporting period (Mar. 2022 - Feb. 2023)	25
Figure 9: Quality of information in project applications received	26
Figure 10: Approved project applications per company turnover as at 28 Feb. 2023....	29
Figure 11: Approved project applications per industry sector as at 28 Feb. 2023	29
Figure 12: Planned R&D expenditure on approved and recommended projects.....	31
Figure 13: Number of progress reports received by the DSTI.....	35
Figure 14: Status of projects for which progress reports were received	36

LIST OF TABLES

Table 1: Legislative and regulatory changes to section 11D over the years.....	8
Table 2: Number of project applications per industry sector.....	22
Table 3: Number and percentages of project applications received by the DSTI in 2022/23 per province.....	23
Table 4: Number of project applications received per stated purpose of R&D	27
Table 5: Number of projects adjudicated and signed off per stated purpose of R&D	28
Table 6: Planned R&D expenditure per industry sector.....	32
Table 7: Selected corporate tax estimates by sector.....	33
Table 8: Tax revenue foregone due to the R&D tax incentive	34
Table 9: R&D expenditure on projects for which progress reports were received in 2022/23	37

LIST OF ABBREVIATIONS

DSI	Department of Science and Innovation
DSTI	Department of Science, Technology and Innovation
Feb.	February
IT	information technology
Mar.	March

OECD	Organisation for Economic Cooperation and Development
R&D	research and development
SARS	South African Revenue Service
SMEs	small and medium enterprises
STI	science, technology and innovation

PREFACE

The government offers the research and development (R&D) tax incentive to promote private-sector R&D investment in the country. The incentive was introduced in November 2006, and can be accessed by companies of all sizes and in all sectors of the economy. One of the key thrusts of the 2019 White Paper on Science, Technology and Innovation and the STI Decadal Plan (2022 – 2032) is to increase R&D in South Africa in order to support innovation and inclusive economic growth. The private sector needs to complement the government's efforts in this regard, and therefore a conducive environment for private-sector investment is necessary.

This report focuses on the applications received and processed in 2022/23. During this period, the Department of Science and Innovation (“DSI”), now Department of Science, Technology and Innovation (“DSTI”) received 188 project applications from 77 companies. The majority (52,7%) of applications were received from very large companies, followed by 17,6% from small and medium enterprises (SMEs) and 12,2% from large companies. This shows that very large companies continue to make up the majority of applicants and that we need to encourage smaller companies to participate in this programme. Projects that have been approved to benefit from the tax incentive during the reporting period had an estimated R766,8 million in planned R&D expenditure. It is my hope that approved projects have helped the respective sectors to grow and become globally competitive.

In the period ahead, the focus will be on the implementation of the recent amendments to section 11D of the Income Tax Act, introduced when the R&D tax incentive was extended to 31 December 2023. Among the refinements made to section 11D were adjustments to the definition of R&D to make it simpler to understand and administer, resulting in an easier application process. A six-month grace period was also introduced to allow applicants to claim for expenditure during the six months preceding the date of application. The grace period is envisaged to allow applicants, particularly smaller applicants and new applicants undertaking R&D in a new field to be in a better position

to provide detailed information on planned R&D activities that may qualify for the R&D tax incentive. The government is hoping that more companies will take advantage of these features.

PROF BE NZIMANDE, MP

MINISTER OF SCIENCE, TECHNOLOGY AND INNOVATION

EXECUTIVE SUMMARY

The R&D tax incentive is offered in terms of section 11D of the Income Tax Act. The incentive reduces the after-tax cost of research and development (R&D) for beneficiary companies, thus encouraging further investment. The aim is to help local companies to build capabilities and innovations by creating new products, processes, devices and techniques, and/or to significantly improve existing ones.

This annual report on the performance of the R&D tax incentive programme for the period March 2022 to February 2023 (referred to in this document as 2022/23) is produced as required by section 11D(17) of the Income Tax Act.

In this report, the information presented focuses mainly on the applications received in 2022/23 and, where appropriate, the cumulative uptake and contribution of the incentive since October 2012. The information was obtained from two sources, namely, declarations made to the Department of Science, Technology and Innovation ("DSTI") about incurred R&D expenditure claims that companies submitted to the South African Revenue Service (SARS) retrospectively (from November 2006 to September 2012), and the R&D applications submitted to the DSTI since the introduction of the preapproval process in October 2012.

In 2022/23, the DSTI received 188 project applications from 77 companies, with total planned R&D expenditure estimated at R1,5 billion. The majority (99 or 52,7%) of applications were received from very large companies, followed by 33 (17,6%) from small and medium enterprises (SMEs) and 23 (12,2%) from large companies. Thirty-three applications (17,6%) were received from applicants that did not indicate their latest annual turnover. In the same period, the DSTI also received a total of 221 R&D tax incentive progress reports related to 1 451 approved (i.e. ongoing or finalised) projects from 157 companies.

The majority (80) of applications received claimed to be for purposes of conducting clinical trials, followed by those for purposes of making significant and innovative improvements to an invention, functional design, computer program or knowledge (53); discovering non-obvious scientific or technological knowledge (40); creation or development of a functional design (33); creation or development of an invention (22); creation or development of knowledge essential to an invention, functional design, computer program or knowledge (19); as well as creation or development of a computer program (15).

By the end of the reporting period, an estimated R766,8 million in planned R&D expenditure had been approved for project applications received in 2022/23. This amount comprises R479,1 million for projects approved by the Minister and R287,7 million for projects recommended for approval by the committee but not yet approved by the Minister. During the same period, the National Treasury conducted a sectoral trend analysis in tax expenditure for a period between 2016/17 and 2020/21 using SARS tax data, and reported that almost half of the total R&D tax expenditure foregone through the incentive supported the manufacturing sector (R514 million), followed by the financial intermediation, real estate and business services sector at R275 million, and the agriculture, hunting, forestry and fishing sector at R109 million.

Different analyses undertaken over the years by various authors/institutions on the impact of the incentive concluded that the incentive had a positive impact on R&D spending by companies, increased in-house R&D investment in terms of expenditure, R&D intensity and productivity, as well as reduced technology in-licensing. Considering this and other economic issues, in his budget speech in February 2023, the Minister of Finance announced that the R&D tax incentive will be extended for 10 years from 1 January 2024, as a government tax policy instrument that supports "early-phase research and development" to help address market failures. Apart from extending the incentive, it will be refined to make it simpler and more effective.

1. INTRODUCTION

1.1 Legislative mandate

The R&D tax incentive programme was introduced in 2006 to encourage private-sector R&D investment in South Africa. It is implemented in terms of section 11D of the Income Tax Act, as amended in October 2012, January 2014, January 2015, January 2017 and January 2024, and supported by regulations published in *Government Gazettes* Nos. 38729, 38730 and 38732 of 23 April 2015 (Table 1).

Table 1: Legislative and regulatory changes to section 11D over the years

Year	Legislative changes
2006	The incentive was introduced on 1 November 2006, allowing companies to deduct an additional 50% on R&D expenditure incurred. Companies had to submit retrospective R&D tax incentive claims directly to SARS and only report to the DSTI about their R&D expenditure incurred.
2012	The pre-approval process was introduced on 1 October 2012. Companies were required to obtain approval for R&D activities from the then Minister of Science and Technology before claiming a deduction from SARS.
2014	New amendments to section 11D of the Act became effective on 1 January 2014, in terms of the Taxation Laws Amendment Act, 2013 (Act No. 39 of 2013). Refinements to section 11D, including adjustments to the definition of R&D, were made to streamline and simplify the regime and to ensure that only genuine R&D is supported.
2015	Further refinements were made to section 11D, including amending the definition of R&D in respect of qualifying "innovative" functional designs, and including multisource pharmaceutical products and clinical trials in the definition of R&D. These amendments became effective on 1 January 2015 in terms of the Taxation Laws Amendment Act, 2014 (Act No. 43 of 2014). Regulations on the additional criteria for multisource pharmaceutical products and for clinical trials were published in <i>Government Gazettes</i> Nos. 38729, 38730 and 38732 on 23 April 2015.
2017	New amendments to section 11D, introduced in terms of the Taxation Laws Amendment Act, 2016 (Act No. 15 of 2016), became effective on 1 January 2017. Subsection 20 was added to allow companies to catch up on their deductions.
2024	New amendments to section 11D, introduced in terms of the Taxation Laws Amendment Act, 2023 (Act No. 17 of 2023), became effective on 1 January 2024. Refinements to section 11D, including adjustments to the definition of R&D, were made to make it simpler to understand and administer, resulting in an easier application process. A six-month grace period was also introduced to allow applicants to claim for expenditure incurred during the six months preceding the date of application.

1.2 Objectives of the R&D tax incentive

The objectives of the R&D tax incentive are:

- To encourage businesses to conduct scientific and technological R&D in South Africa, especially R&D that would not have been conducted in the absence of the incentive.
- To advance scientific knowledge and achieve technological advancement aimed at creating new or significantly improved materials, devices, products or processes.
- To increase the positive spillover to the rest of society through knowledge transfer and skills development.

All the above objectives are aimed at growing the economy.

1.3 Benefits of the R&D tax incentive

Once approved, the R&D tax incentive allows companies to deduct 150% of eligible R&D expenditure incurred from their income. This deduction reduces companies' tax liability to SARS, which ultimately saves them 14c for each rand spent on R&D, at a corporate tax rate of 27%. The R&D tax incentive is therefore regarded as indirect financial support for private-sector R&D. The aim is to help local companies build capabilities and innovations by creating new products, processes and technologies, and/or to significantly improve existing ones.

1.4 Where the R&D tax incentive fits in

The R&D tax incentive has been designed to support early-phase R&D (Figure 1) funded by business. The government expects that, by encouraging companies to undertake R&D in South Africa, these companies will strengthen their capabilities of developing value-added products, technologies and processes, or improving them. In this way, the incentive will promote scientific and/or technological advancement by creating an environment that is conducive to increased commercialisation and export of new

processes and product technologies. This contributes to making South African companies internationally competitive.

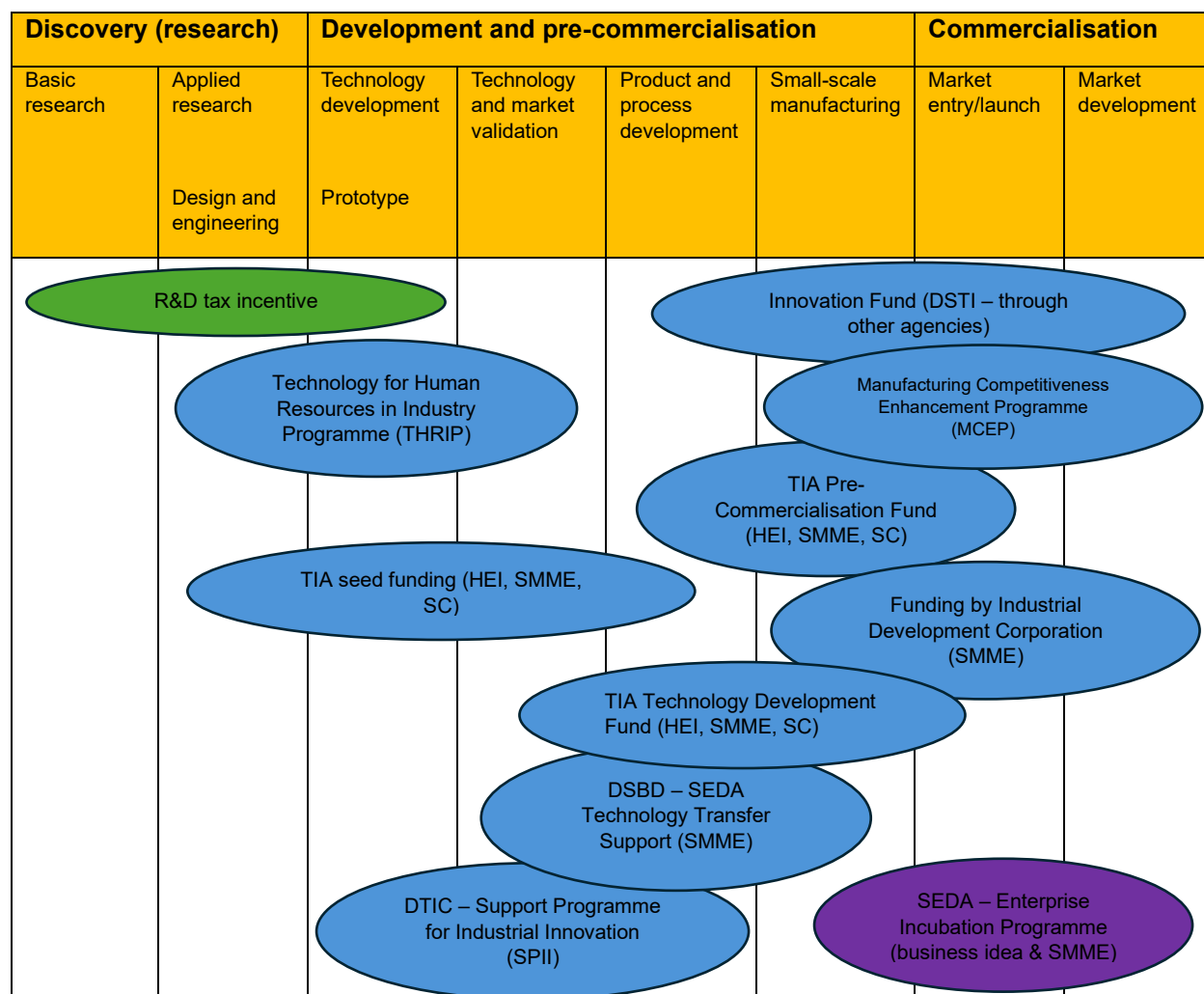


Figure 1: Where the R&D tax incentive fits in the innovation chasm

1.5 Who can apply for the R&D tax incentive

The R&D tax incentive can be accessed by companies of all sizes and in all sectors of the economy. A company (as defined in the Income Tax Act) must be registered for tax in South Africa but need not be a registered South African company. Individuals, non-profit organisations and trusts are not eligible for the R&D tax incentive.

1.6 Eligibility for the R&D tax incentive

For a company to benefit from the incentive, its R&D activities must be approved by the Minister of Science, Technology and Innovation ("the Minister") or a person appointed by the Minister.

Companies will further be eligible if they actually incur the expenditure, directly and solely for R&D activities undertaken in the Republic of South Africa. The expenditure should also be incurred in the production of income, in the carrying on of any trade, and on or after the date of receipt of the application by the DSTI. Companies will only be eligible if they can determine or alter the methodology of the research.

Approval is granted based on a recommendation by the R&D Tax Incentive Adjudication and Monitoring Committee ("the committee"), which evaluates the project(s) of each application according to the definition of R&D in terms of section 11D of the Income Tax Act. The committee comprises officials of the DSTI, SARS, and the National Treasury, who are appointed by the Minister and the Minister of Finance.

Section 11D(17) of the Income Tax Act requires the Minister to report to Parliament annually on the direct benefits of the R&D activities through the incentive programme in terms of economic growth, employment, aggregate expenditure and other broader government objectives.

1.7 Criteria used to determine eligibility

R&D is intrinsically aimed at generating new knowledge and devising new applications of available knowledge. R&D is intended to lead to new technologies or significant improvements to existing technologies, which can be used to support some form of socio-

economic activity. These are some of the basic concepts included in the Frascati Manual¹ as standards for defining R&D.

For the purposes of the R&D tax incentive, R&D means systematic investigative or systematic experimental activities of which the result is uncertain for the purpose of –

- (a) discovering non-obvious scientific or technological knowledge;
- (b) creating or developing –
 - (i) an invention²;
 - (ii) a functional design³ that is innovative in respect of the functional characteristics or intended uses of that functional design;
 - (iii) a computer program⁴ that is of an innovative nature; or
 - (iv) knowledge essential to the use of such invention, functional design or computer program⁵; or
- (c) making a significant and innovative improvement to any invention, functional design, computer program or knowledge contemplated in paragraph (a) or (b) for the purpose of –
 - (i) new or improved function;
 - (ii) improvement of performance;
 - (iii) improvement of reliability; or
 - (iv) improvement of quality;
 of that invention, functional design, computer program or knowledge;
- (d) creating or developing a multisource pharmaceutical product⁶; or

¹ The Frascati Manual is the international guideline for definition and measurement of R&D. This guideline is published by the Organisation for Economic Cooperation and Development (OECD).

² As defined in section 2 of the Patents Act, 1978..

³ As defined in section 1 of the Designs Act, 1993, capable of qualifying for registration under section 14 of the Act.

⁴ As defined in section 1 of the Copyright Act, 1978.

⁵ Other than creating or developing operating manuals or instruction manuals or documents of a similar nature intended to be utilised in respect of that invention, functional design or computer program subsequent to the research and development being completed.

⁶ As defined in the World Health Organization Technical Report Series, No. 937, 2006 Annex 7 Multisource (generic) pharmaceutical products: guidelines on registration requirements to establish interchangeability, and conforming to such requirements as must be prescribed by regulations made by the Minister after consultation with the Minister for Science and Innovation.

- (e) conducting a clinical trial⁷.

1.8 Exclusions and limitations

For the purposes of section 11D of the Income Tax Act, the definition of R&D does not include activities conducted for the following purposes:

- (a) Routine testing, analysis, collection of information or quality control in the normal course of business.
- (b) Developing internal business processes, unless those internal business processes are intended for sale, or for granting right of use or permission to use to persons who are not related to whoever is undertaking that R&D.
- (c) Market research, market testing or sales promotion.
- (d) Social science research, including the arts and humanities.
- (e) Oil and gas or mineral exploration or prospecting, except research and development carried out to develop technology used for that exploration or prospecting.
- (f) Creating or developing financial instruments or financial products.
- (g) Creating or enhancing trademarks or goodwill.
- (h) Any expenditure contemplated in section 11 (gB) or (gC).

In respect of multisource pharmaceutical products and clinical trial R&D projects, the following activities are ineligible:

- (a) Phase IV clinical trials, other than a clinical trial conducted for the purpose of developing new indications, new methods of administration or new combinations of pharmaceutical products.
- (b) Post-marketing research.
- (c) Cost-effectiveness research.
- (d) Any activities undertaken for the purpose of compliance with regulatory requirements.

⁷ As defined in Appendix F of the Guidelines for Good Practice in the Conduct Of Clinical Trials With Human Participants in South Africa issued by the Department of Health (2006), conforming to such requirements as must be prescribed by regulations made by the Minister after consultation with the Minister for Science and Innovation.

- (e) A product familiarisation programme.
- (f) Research carried out for statistical purposes (meta-analysis).
- (g) Epidemiological research.
- (h) Research activities undertaken in preparation for the registration of a clinical trial.

1.9 R&D tax incentive application process (via R&D tax incentive online system)

Company representative profile registration

- The representative captures all the required information and registers.
- The representative verifies the system-generated email address.
- The representative is assigned with all rights of an external user of the online system.

Company profile registration

- The representative logs into the system, registers the company profile and attaches a letter of authorisation from the company.
- The DSTI approves the company profile registration.

Project application submission

- The representative creates a project and links it to the company.
- The system displays an online form on which the user can capture project details and submit a project application.
- The system acknowledges receipt of the project application via an automated message.
- The application is assessed by an external expert.

Assessment and adjudication

- The secretariat screens and assigns the project application to a technical expert for assessment.
- The technical expert assessment report and the project application are made available to committee members for adjudication.
- If the committee intends to make a non-approval recommendation, the applicant is given an opportunity to submit additional information (in terms of the Promotion of Administrative Justice Act).
- The committee makes a recommendation to the Minister.

Decision

- The Minister's decision letter is sent to the company.
- This letter serves as proof to SARS that the company's R&D activities have been approved when claiming the tax deduction.

Progress reporting

- A company whose R&D activities have been approved must submit annual progress reports to the DSTI, coinciding with their financial year-end tax reporting.
- The company should keep records that support tax expenditure claims and progress with R&D.

Figure 2: The application process

1.10 R&D tax incentive refinements from 1 January 2024

In his budget speech in February 2023, the Minister of Finance announced that the R&D tax incentive will be extended for a period of 10 years from 1 January 2024, as a government tax policy instrument that supports "early-phase research and development" to help address market failures. Apart from extending the incentive, the following refinements have been made:

- A six-month grace period is introduced that will allow applicants to claim R&D expenses for activities performed during a six-month period prior to the date of application.
- The definition of R&D is made simpler to understand and administer, resulting in an easier application process for the incentive.
- The definition of R&D is changed from an "end-result" approach (for example, it must be patentable) to incorporate principles of the OECD Frascati Manual, in which activities should be novel, uncertain, systematic, and transferable and/or reproducible.
- The exclusion of internal business processes has been removed.
- The SARS Commissioner is allowed to disclose certain information to the Minister of Science, Technology and Innovation to improve monitoring and evaluation.

The abovementioned refinements followed the review of tax incentives, emanating from the advice of the Davis Tax Committee, which has led to several incentives being discontinued because there was little evidence of any additional benefit (The National Treasury Budget Review, 2023).

1.11 The use of the R&D tax incentive online system

The R&D tax incentive online system (online system) was launched on 3 October 2022. Applicants are required to register their company profiles and subsequently submit project applications, progress reports and change notifications through the online system.

Other (backend) users on the online system include committee members, technical experts, DSTI IT officials and the DSTI secretariat.

The introduction of the online system was expected to make the DSTI secretariat more efficient in administering the incentive. However, over the first few months of implementation, this milestone has not been without its challenges. The stability (especially in the first few weeks) and availability of the system has been a problem since the system went live. The intermittent availability of the system has been particularly compounded by network connectivity issues during periods of heavy loadshedding. The system was recently migrated to Microsoft Azure, however, which has addressed the availability issues.

In order for the online system also to be fully used in terms of its progress report functionality, previously approved applications have to be back-captured first. The directorate has started the process of capturing thousands of manual records into the system to enable the commencement of receipt of progress reports for previously approved applications through the online system.

Due to the amendments that were made to section 11D in January 2024, it is necessary to make amendments to the online system. The DSTI is taking the necessary steps to enable this.

Text box 1: Other government support for R&D and innovation

South Africa has a number of policy instruments or incentives to promote private-sector R&D and technological innovation. The R&D tax incentive is particularly aimed at early-phase R&D. It is not the objective of this incentive to support innovation not based on scientific or technological R&D, nor to assist commercialisation, industrialisation, or the incubation of new start-ups per se. There are other government programmes aimed at addressing these aspects and related funding gaps. The incentive, therefore, is implemented alongside such instruments, in order to complement the policy package to address a number of objectives, ranging from new enterprise formation, R&D and technology innovation, industrial development, export promotion, and attraction of foreign direct investment. All these aspects contribute to the targets as set out in the DSTI's White Paper on Science, Technology and Innovation (STI) and the STI Decadal Plan.

The following are examples of some of the existing funding support and incentives:

- The Support Programme for Industrial Innovation offers direct financial grants to private sector companies to support the development of innovative products and processes.
- The Technology and Human Resources for Industry Programme offers direct financial grants, on a cost-sharing basis, to promote collaborative R&D and human resource development between private sector companies and public institutions (e.g. universities and science councils).
- The Technology Innovation Agency offers direct financial assistance (through loans/grants/equity holdings) to stimulate various forms of technology innovation investment and commercialisation. The support is available to private-sector companies, science councils and universities, as well as other organisations.
- The Manufacturing Competitiveness Enhancement Programme offers direct financial support (which may be a loan or a cost-sharing grant) to enhance the competitiveness of existing manufacturing companies in the private sector to help them create jobs, as well as diversify manufacturing outputs and contribute to exports.
- Other complementary tax-based incentives that encourage companies to modernise and implement innovative smart approaches, for instance under section 12K of the Income Tax Act for emissions reduction; section 12L for cleaner production and energy efficiency; section 12B for production of renewable energy and fuels; and section 37B for recycling and waste disposal.

Besides the financial support and incentives, other measures include partnerships and technical support through government research institutions and universities (laboratory experimentation, testing facilities, standards, etc.), contracts for public R&D work, collaborations and partnerships with local and multinational companies and organisations, administration of intellectual property laws and regulation in the spheres of innovation, and industrial policy and sector-based skills training initiatives.

A collection of the above programmes and related programmes can be referred to as a "policy mix" for business R&D and innovation. Most of these instruments fall under the responsibility of the Department of Trade, Industry and Competition. Achieving coherence and efficiency across the various aspects of the policy mix is crucial. The government constantly reviews these individual programmes and makes adjustments where necessary to address redundancies and introduce new initiatives to pursue new opportunities.

2. APPLICATIONS FOR THE R&D TAX INCENTIVE

This section provides a summary of the uptake of the R&D tax incentive in terms of the number of project applications received and the number of companies participating during the period under review.

2.1 Number of project applications received by the DSTI

For the period under review, the DSTI received a total of 188 project applications from 77 companies (Figure 3). Twenty-eight (33,7%) companies were first-time applicants. A total of 19 projects were withdrawn by the applicants, leaving 169 valid projects.

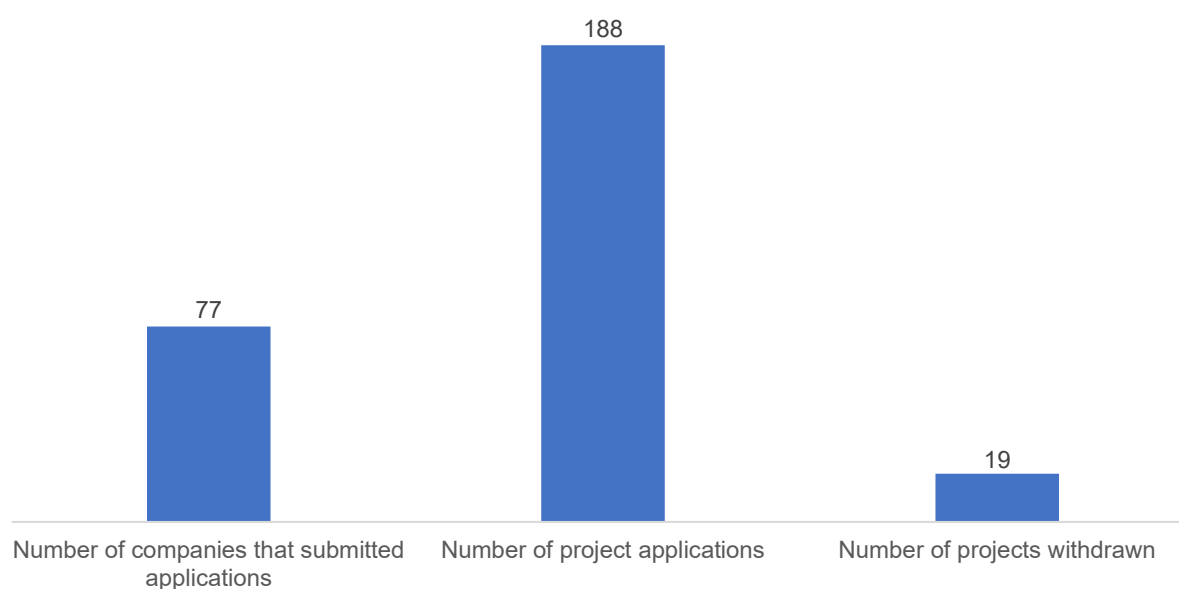


Figure 3: Uptake of applications received by the DSTI in 2022/23

Of all projects applied for, 152 were multiyear projects, while 36 had timelines of one year or less. Figure 4 shows that most project applications (99) were received from very large companies (with annual turnover of R100 million and above). An equal number of project applications (33) was received from SMEs (with a latest annual turnover of R40 million and below) and from companies that did not indicate their latest annual turnover. Large companies (with annual turnover between R41 million and R100 million) submitted

23 applications. It is expected that the issue of turnover not being indicated will become less of an issue in future reports, as turnover is a mandatory input field of the online system.

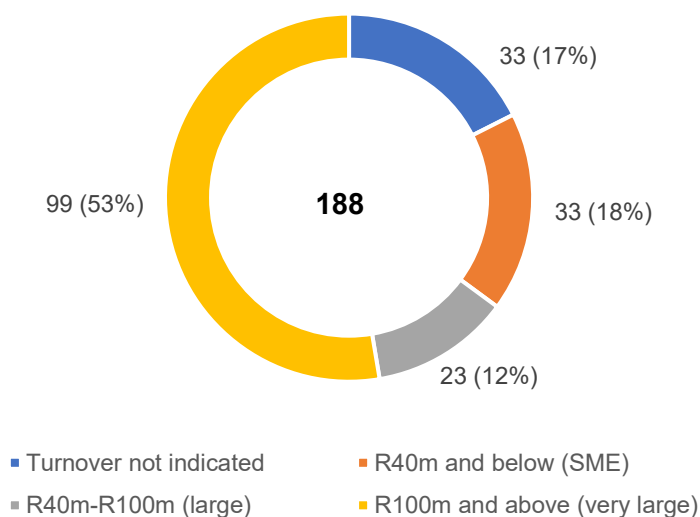


Figure 4: Uptake of applications received by the DSTI in 2022/23 per company turnover

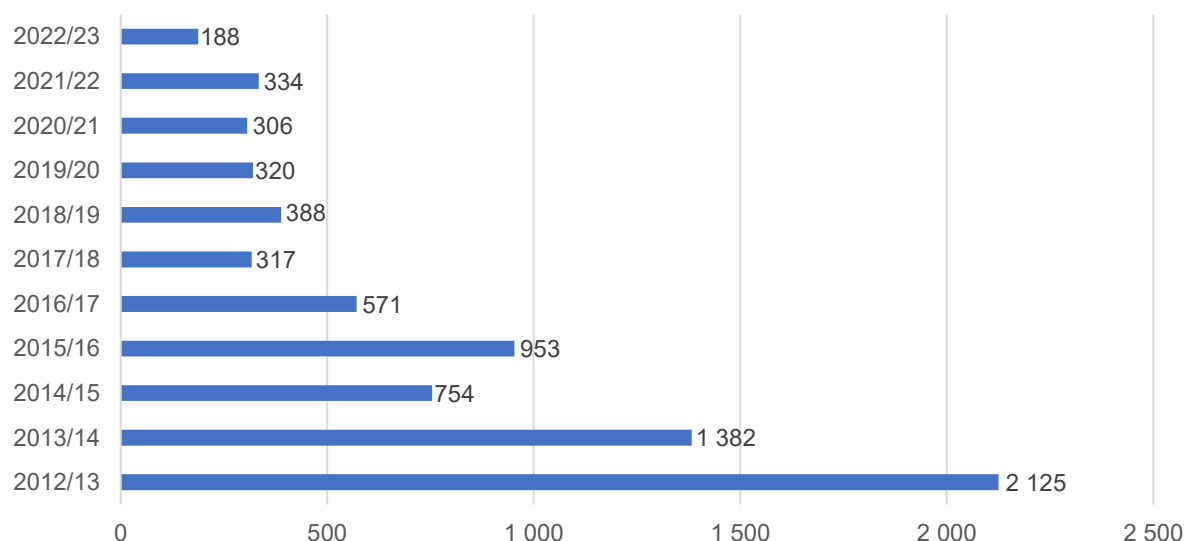


Figure 5: Number of project applications received by the DSTI (2012/13 to 2022/23)

Figure 5 indicates that there has been a drop in the number of project applications received in 2022/23 in comparison to the trends of previous years. The drop may be

attributed to various issues experienced during 2022/23. First, an information technology (IT) failure in mid-2022 resulted in email accounts associated with the R&D tax incentive not being available for several weeks. At that time, applicants were submitting applications via email. Second, after the DSTI's launch of the R&D tax incentive online system in October 2022, teething problems such as severe loadshedding episodes that caused downtime, slow internet speeds, and connectivity issues for all users of the system likely had an impact on the number of project applications received. The introduction of the new system may have also caused slower submission rates of applications as users had to familiarise themselves with the system. Finally, there may also have been lingering uncertainty about the future of the incentive prior to the extension, which was only announced in February 2023.

These reasons do not take into account macro-economic factors that may have impacted on companies' decisions to conduct R&D, including the after-effects of the Covid-19 epidemic, increased loadshedding, a stagnant economy, and increased global inflation rates. Overall, a total of about 7 568 project applications have been received since October 2012, averaging 293 projects a year in the last five years.

2.2 Profile of participating companies

Companies from all industry sectors can access the R&D tax incentive. Table 2 and Figure 6 show the distribution of the project applications received in 2022/23 per Standard Industrial Classification sectors. The programme received most of the project applications from the manufacturing sector (116 or 61,7%), followed by the financial intermediation, real estate and business services sector (31 or 16,5%), and the agriculture, hunting, forestry and fishing sector (16 or 8,5%). The manufacturing sector is dominated by the pharmaceutical industry, while other project applications relate to the manufacturing of food and beverage products, wood products, chemical products, metal products, machinery and apparatus, communication equipment and medical apparatus, transport equipment, and green economy. Of the manufacturing-sector companies, 62

(53,4%) manufactured pharmaceuticals. Other sub-sectors account for the remaining 54 (46,6%) project applications.

Table 2: Number of project applications per industry sector

Sector	Number of project applications	Percentage
Manufacturing	116	61,7%
Financial intermediation, real estate and business services	31	16,5%
Agriculture, hunting, forestry and fishing	16	8,5%
Mining and quarrying	14	7,4%
Transport, storage and communication	4	2,1%
Community and social services	3	1,6%
Electricity, gas and water supply	2	1,1%
Construction	1	0,5%
Wholesale and retail trade	1	0,5%
Total	188	100,0%

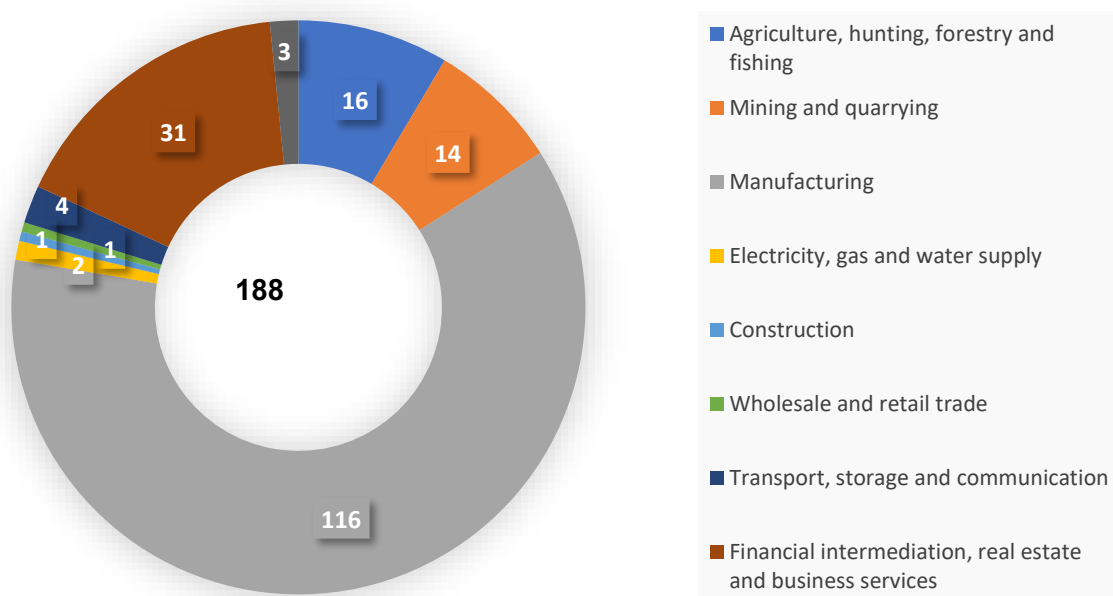


Figure 6: Status of project applications at the end of reporting period

Table 3 shows that Gauteng had the greatest number of project applications (131 or 69,7%) received, followed by the Western Cape (31 or 16,5%) and KwaZulu-Natal (16 or

8,5%). Companies from these three provinces submitted 178 (or 94,7% of the total) applications in 2022/23. Fewer project applications were received from companies from the North-West, Mpumalanga, Northern Cape and the Free State, while no companies from the Eastern Cape and Limpopo submitted applications in 2022/23.

Future annual reports will provide additional geographic information as the online system is also now recording R&D locations of projects and not only the location of participating companies (often associated with head offices in Gauteng and the Western Cape).

Table 3: Number and percentages of project applications received by the DSTI in 2022/23 per province

	Number of projects	Percentage
Gauteng	131	69,7%
Western Cape	31	16,5%
KwaZulu-Natal	16	8,5%
North-West	5	2,6%
Mpumalanga	2	1,1%
Northern Cape	2	1,1%
Free State	1	0,5%
Eastern Cape	0	0,0%
Limpopo	0	0,0%
Total	188	100,0%

3. PROCESSING OF PROJECT APPLICATIONS

The number of project applications processed and finalised during the reporting period and the time taken to inform applicants of decisions are key indicators of the efficiency of the administration of the R&D tax incentive programme.

3.1 Number of adjudication meetings and recommendations on project applications

Approval or non-approval of projects for access to the R&D tax incentive is based on a recommendation by the committee, which evaluates the project(s) covered by each application according to the definition of R&D in terms of section 11D of the Income Tax Act.

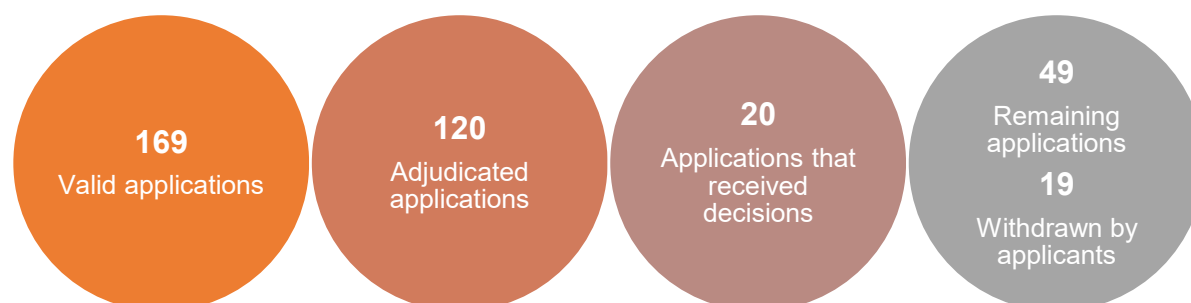


Figure 7: Overall status in processing applications as at Feb. 2023

Of the 188 project applications received in 2022/23, 19 were withdrawn by the applicants at various stages of processing, leaving 169 projects (Figure 7). Of these, 120 projects were adjudicated by the end of the reporting period and 49 remained. The committee also adjudicated applications left over from the previous year. During the reporting period, the committee had 19 meetings, at which 338 projects were adjudicated. Of the project applications, 143 were recommended for approval, 116 were not approved, 42 were referred back to the applicants for the provision of additional information or clarification, and 26 projects were for the committee's discussion or noting (Figure 8).

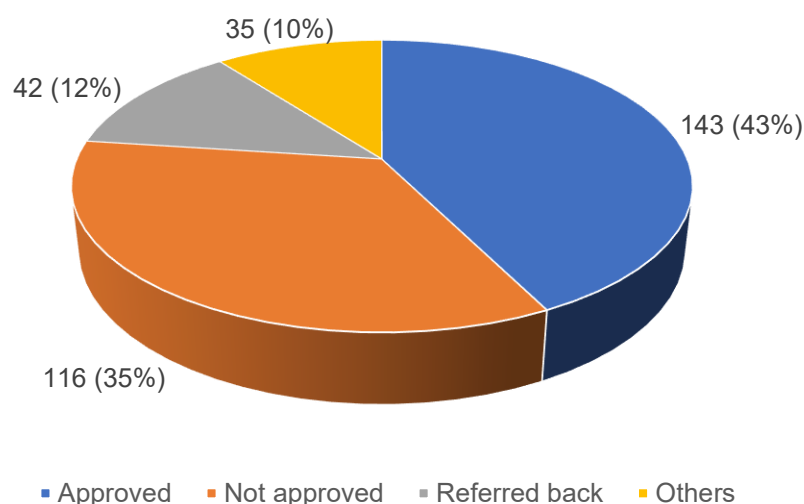


Figure 8: Overall outcomes of adjudicated project applications during the reporting period (Mar. 2022 - Feb. 2023)

For projects to be approved, their activities must meet the requirements of section 11D of the Income Tax Act. The onus is on the applicant to demonstrate that their proposed activities qualify. Most project applications (97 or 52%) received in 2022/23 needed additional information before adjudication (Figure 9). The DSTI secretariat (Directorate: Private Sector R&D Promotions) often contacted the applicants to clarify the criteria and guided them. This matter will be partly resolved with the introduction of the new amendments in January 2024 as the definition has been refined and should become easier to understand.

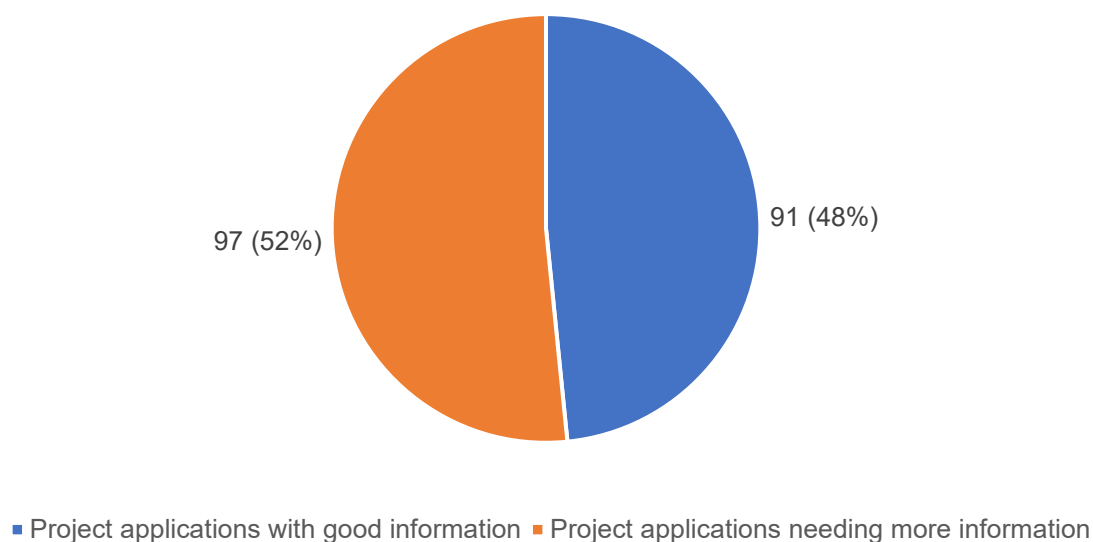


Figure 9: Quality of information in project applications received

Where non-approval is likely, applicants are given a further opportunity in terms of section 3 of the Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000) (PAJA), to submit additional information that may support the eligibility of their activities before a final decision is made. Of the applications that were adjudicated in 2022/23, 56 projects were subjected to this process. Project applications that are considered by the committee several times because they are referred back to applicants for clarification or additional information, or in terms of PAJA, are counted each time they are adjudicated.

3.2 Subsection of section 11D(1) cited for purpose of conducting R&D

For adjudication, applicants are required to select one or more predefined purposes from the section 11D(1) definition of R&D to indicate why the proposed scientific or technological activities will be conducted. An applicant can select more than one purpose per project.

Table 4: Number of project applications received per stated purpose of R&D

Subsection of section 11(D)(1) cited for purpose	Project applications
(a) Discovering non-obvious scientific or technological knowledge	40
(b)(i) Creating or developing an invention	22
(b)(ii) Creating or developing a functional design	33
(b)(iii) Creating or developing a computer program	15
(b)(vi) Creating or developing knowledge essential to the use of an invention, functional design, computer program or knowledge	19
(c) Making significant and innovative improvements to an invention, functional design, computer program or knowledge	53
(d) Creating or developing a multisource pharmaceutical product	0
(e) Conducting a clinical trial	80

Of the project applications received by the DSTI in 2022/23, the purpose given for the majority (80) was for conducting a clinical trial, followed by those for making a significant and innovative improvements to invention, functional design, computer program or knowledge (53), and discovering non-obvious scientific or technological knowledge (40) (Table 4). None of the project applications received by the end of the reporting period were for the purpose of creating or developing a multisource pharmaceutical product.

Of the project applications adjudicated by the committee, the purposes given for the majority (16) of those recommended for approval was making significant and innovative improvements to invention, functional design, computer program or knowledge (Table 5). Similarly, of those that were not recommended for approval, the majority (9) had also applied for the purpose of making significant and innovative improvements to an invention, functional design, computer program or knowledge. Of the projects that were signed off as approved by the Minister, most were for conducting a clinical trial (23) or discovering non-obvious scientific or technological knowledge (15). The Minister did not consider any project not recommended by the committee in 2022/23. As reported in the previous year, none of the projects adjudicated by the committee by the end of the reporting period were for the purpose of creating or developing a multisource pharmaceutical product.

Table 5: Number of projects adjudicated and signed off per stated purpose of R&D

Subsection of section 11(D)(1) cited for purpose	Projects recommended by committee	Projects not recommended by committee	Projects approved by Minister	Projects not approved by Minister
(a) Discovering non-obvious scientific or technological knowledge	6	4	15	0
(b)(i) Creating or developing an invention	4	1	5	0
(b)(ii) Creating or developing a functional design	5	6	11	0
(b)(iii) Creating or developing a computer program	3	2	5	0
(b)(vi) Creating or developing knowledge essential to the use of an invention, functional design, computer program or knowledge	4	2	11	0
(c) Making a significant and innovative improvements to an invention, functional design, computer program or knowledge	16	9	14	0
(d) Creating or developing a multisource pharmaceutical product	0	0	0	0
(e) Conducting a clinical trial	12	1	23	0

Note: Due to administrative processes, there is a delay between committee recommendations and approval/non-approval by the Minister, so no correlation should be drawn between the two stages. The number of recommendations may differ from the number of approvals if they do not fall in the same reporting period. For example, the figures in this table do not include projects that the committee adjudicated in 2021/22 but that were only approved/not approved in 2022/23.

3.3 Approved project applications per company turnover size and industry sector

Figure 10 shows the distribution of project applications that have been approved and/or recommended for approval per company turnover size as at 28 February 2023. The highest number (45 or 47%) of approved project applications are from very large companies, followed by large companies (18 or 19%) and SMEs (13 or 14%). Those that did not indicate the latest turnover were at 19 or 20%. These figures are in line with the trend for project applications received as the majority were received from very large companies. This shows that very large companies are more regularly submitting project

applications for the R&D tax incentive in comparison to large companies and SMEs. This could be due to very large companies having the budget to conduct R&D, having dedicated staff members to submit R&D tax incentive applications, or having the ability to appoint consultants to submit applications on their behalf.

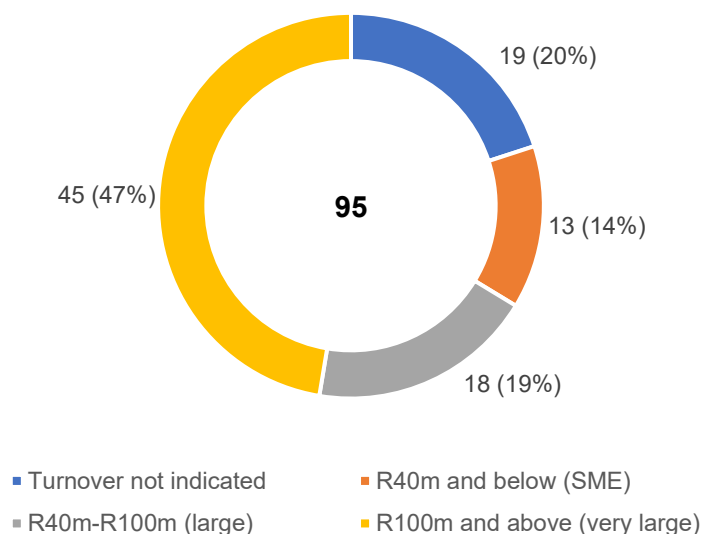


Figure 10: Approved project applications per company turnover as at 28 Feb. 2023

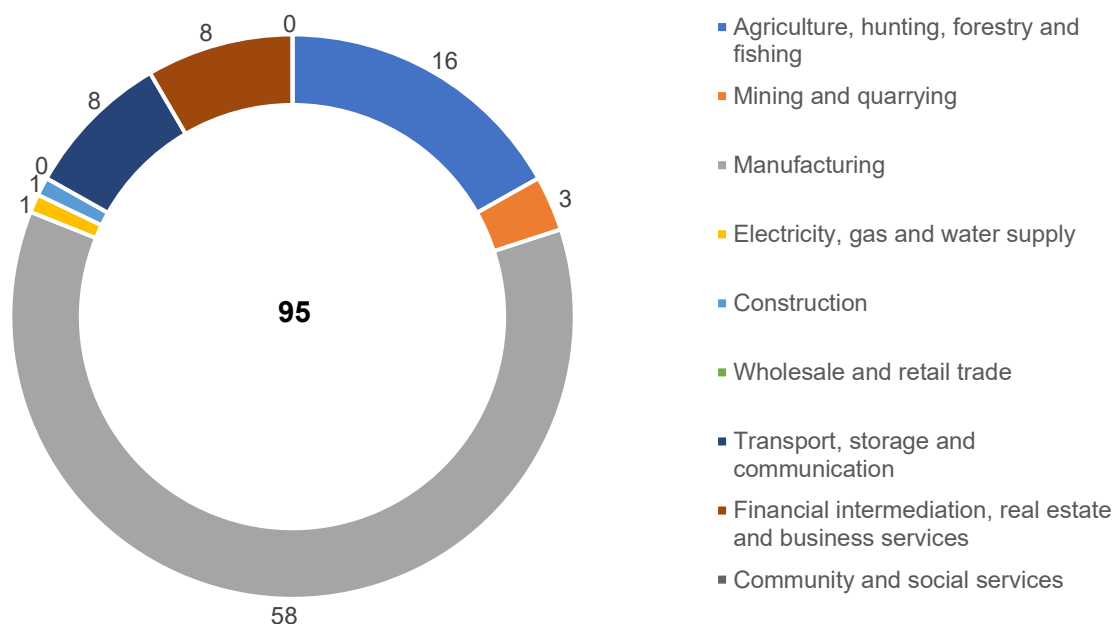


Figure 11: Approved project applications per industry sector as at 28 Feb. 2023

Similarly, the distribution of project application approvals per industry sector follows the same distribution as the received project applications (Figure 11). Most of (58 or 61,1%) the project applications that have been approved are from the manufacturing sector, followed by those from the agriculture, hunting, forestry and fisheries (16 or 16,8%), the transport, storage and communication sector (8 or 8,4%), and financial intermediation, real estate and business services sector (8 or 8,4%).

3.4 Turnaround time in processing project applications

The turnaround time in processing applications depends, among other things, on the quality of information provided in the applications and the time it takes for the applicants to respond to the DSTI's requests for additional information. Applications that include the required information are generally processed and finalised more quickly, especially as it is unlikely that additional information will be requested. The onus is therefore on the applicants to provide sufficient information. Ways to make the process more efficient and easier to use are continually being explored, including the development of improved guidelines, memoranda and an updated application form that will assist in obtaining better and more sufficient information. These were implemented during the reporting period, including the introduction of the online system to improve the efficiency of the process.

In 2022/23, the above was compounded by the teething problems of the online system and network connectivity issues during loadshedding, which affected the use of the system. During the same period, the department also experienced an IT failure that had a direct impact on the efficiency of the R&D tax incentive secretariat.

4. EXPENDITURE AMOUNT PLANNED FOR R&D BUDGET

The information reported below comes from project applications received and can be disaggregated per industry sector. In contrast, SARS data published in the annual National Treasury Budget Review speaks to actual expenditure claimed by taxpayers and allowed by SARS. The detailed breakdown of actual expenditure claimed per industry sector provided in the budget review allows the DSTI to compare the SARS data to the R&D tax incentive data disclosed on application forms.

4.1 Planned expenditure for project applications and approved projects

The planned R&D expenditure for the project applications received in 2022/23 was for an estimated total of R1,5 billion over the life of the various R&D projects. However, as shown in Figure 12, only an estimated R766,8 million of this planned expenditure was approved for the tax incentive. This amount comprises projects to the value of R479,1 million approved by the Minister and projects to the value of R287,7 million in planned R&D expenditure recommended for approval by the committee but not yet approved by the Minister.

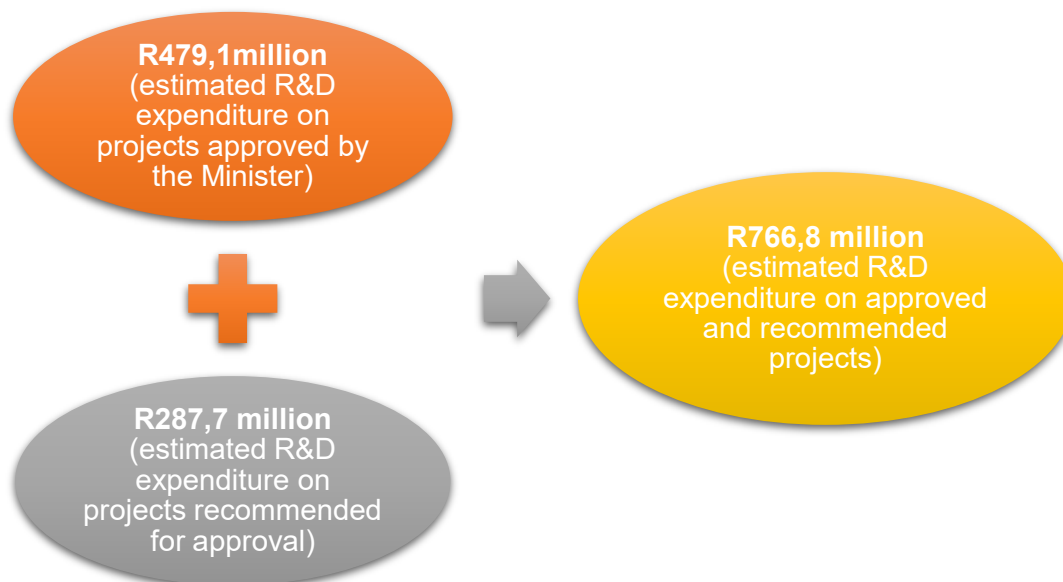


Figure 12: Planned R&D expenditure on approved and recommended projects

Table 6 shows the breakdown of planned R&D expenditure for projects received in 2022/23, those approved by the Minister, and those recommended for approval by the committee per industry sector. Following the trends reported above and in previous years, the manufacturing sector had the highest planned R&D expenditure for approved projects (R225,3 million or 47%), followed by the financial intermediation, real estate and business services sector (R164,5 million or 34,3%).

Table 6: Planned R&D expenditure per industry sector

Sector	Planned R&D expenditure for all projects	Planned R&D expenditure for approved projects	Planned R&D expenditure for projects recommended for approval
Manufacturing	R570 005 811	R225 262 093	R153 951 911
Financial intermediation, real estate and business services	R760 192 370	R164 500 000	R94 700 000
Community and social services	R25 690 513	R25 690 513	0
Transport, storage and communication	R7 150 000	R2 000 000	R3 350 000
Mining and quarrying	R64 632 064	0	R30 725 000
Electricity, gas and water supply	R5 000 000	0	R5 000 000
Construction	R2 000 000	0	0
Wholesale and retail trade	R3 000 000	0	0
Total	R1 502 570 303	R479 137 990	R287 726 911

*Source: National Treasury Budget Review (22 February 2023)

4.2 Estimates of tax revenue foregone

Tax revenue foregone represents part of the government's financial support for business-sector scientific or technological R&D activities. The National Treasury conducted a sectoral trend analysis in tax expenditure for a period between 2016/17 and 2020/21 using SARS tax data.⁸ Table 7 shows that, like the trend reported in the 2022 Budget Review, almost half of the total R&D tax expenditure foregone supported the manufacturing sector over this period. The manufacturing sector is followed by the

⁸ The National Treasury Budget Review (22 February 2023).

financial and business services sector and to a lesser extent the agricultural sector, which also corresponds with the trend of project applications received and approved from these sectors. It appears that the incentive encourages R&D in sectors that are important for creating jobs. It should be noted that the data for the most recent years have not yet been finalised and will be updated in future budget reviews as companies submit their claims.

Table 7: Selected corporate tax estimates by sector

Sectors	2016/17 (R'000)	2017/18 (R'000)	2018/19 (R'000)	2019/20 (R'000)	2020/21 (R'000)	Total (R'000)
Manufacturing	123	118	132	86	55	514
Financial intermediation, insurance, real estate and business services	42	65	39	52	77	275
Agriculture, hunting, forestry and fishing	22	32	25	19	11	109
Community, social and personal services	17	26	20	18	9	90
Mining and quarrying	14	21	27	18	1	81
Others	16	9	14	19	14	72
Total	234	271	257	212	167	1 141

*Source: National Treasury Budget Review (22 February 2023)

The National Treasury Budget Review (2023) estimated that the tax revenue foregone due to the R&D tax incentive for the period 2005/06 to 2020/21 was just above R6,1 billion. The figures in Table 8 represent deductions allowed by SARS on claims by companies for each particular tax year and are revised annually, as companies submit their claims (as mentioned above). The figures also include claims that were made under section 11B of the Income Tax Act, which was used before November 2006.

Table 8: Tax revenue foregone due to the R&D tax incentive

Reporting period	Tax revenue foregone (R'000)
2005/06	183 000
2006/07	449 000
2007/08	358 000
2008/09	594 000
2009/10	966 000
2010/11	1 216 000
2011/12	361 000
2012/13	197 000
2013/14	219 000
2014/15	207 000
2015/16	277 000
2016/17	234 000
2017/18	270 000
2018/19	257 000
2019/20	213 000
2020/21	165 000
Total	6 166 000

*Source: National Treasury Budget Review and SARS tax data (2023)

Note: Information for 2021/22 and 2022/23 is not yet available.

5. PROGRESS REPORTS

Section 11D(13) of the Act requires companies that have received ministerial approval for R&D projects to submit progress reports to the DSTI annually, within 12 months of the close of the company's tax assessment year. Many companies fail to comply with this requirement and thus the DSTI does not have a full picture of the expenditure incurred and progress of all R&D projects approved under the programme.

To improve compliance, the DSTI started conducting compliance audits in 2019, using the database of approved R&D projects and sending letters to companies that had not submitted reports. In parallel, the online system has been developed to make it easier to submit and receive progress reports. The system also facilitates the monitoring of compliance with section 11D(13) in that progress report statuses can be monitored through automated reports, and automatically sends reminders to companies about progress reports that are due.

5.1 Number of progress reports received by the DSTI

Figure 13 shows the number of companies that have submitted progress reports during the reporting period. The DSTI received a total of 221 R&D tax incentive progress reports related to 1 451 projects from 157 beneficiary companies. The total eligible R&D expenditure incurred as reported in these progress reports is R5,9 billion.

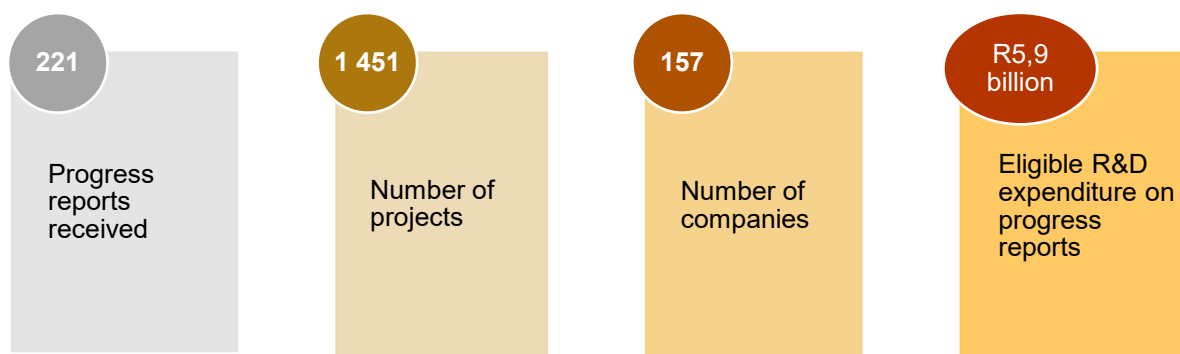


Figure 13: Number of progress reports received by the DSTI

5.2 Status of projects reported in progress reports

Companies reporting on the progress of their approved R&D projects are also required to indicate the status of the projects for the relevant financial year. Figure 14 shows the status of each project for which progress reports were received in 2022/23. The majority (910 or 62,7%) of projects are in progress, 160 (11%) have been completed, 374 (25,8%) are on hold, and 7 (0,5%) have been discontinued for various reasons.

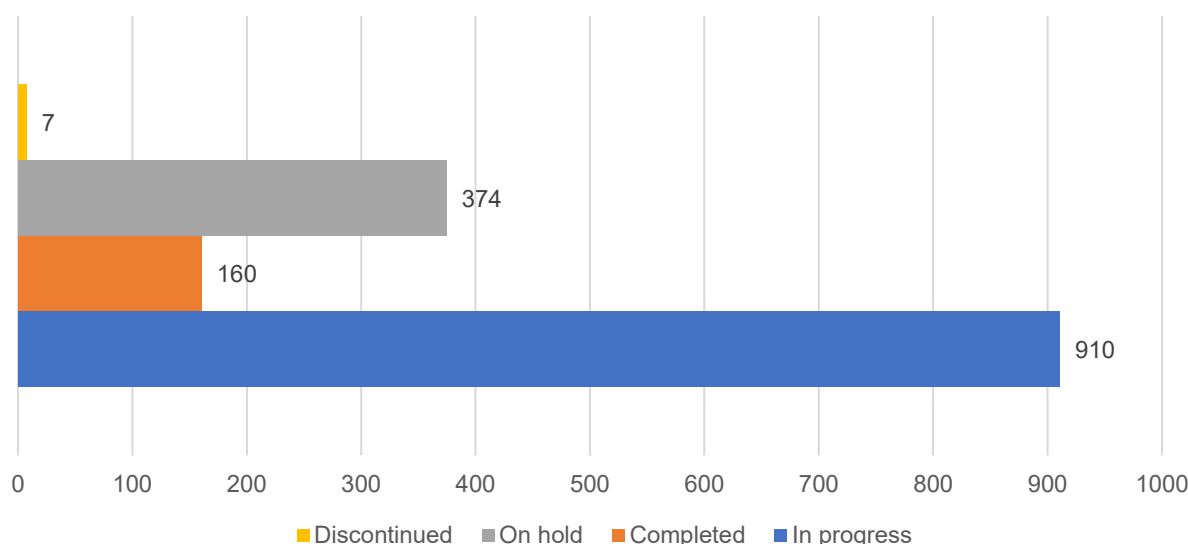


Figure 14: Status of projects for which progress reports were received

5.3 R&D expenditure incurred in the 2022/23 reporting period

Table 9 gives a breakdown of the R5,9 billion of R&D expenditure incurred between the 2013/14 and 2022/23 company financial years, in contrast to the number of projects reported on, by the end of the reporting period. More than half (854 or 58,9%) of the projects for which progress reports were submitted during the reporting period relate to R&D activities performed during the 2020/21 financial year. Similarly, their eligible R&D expenditure was higher (R4,6 billion) than the amounts reported for other financial years.

Table 9: R&D expenditure on projects for which progress reports were received in 2022/23

Financial year	Number of projects	Eligible R&D expenditure (R'000)
2013/14	2	1 300
2014/15	3	2 622
2015/16	63	1 500
2016/17	57	21 171
2017/18	77	22 272
2018/19	72	93 303
2019/20	175	226 028
2020/21	854	4 680 371
2021/22	145	538 488
2022/23	3	408 339
Total	1 451	5 995 394

A surge in the number of progress reports received in the period under review for the financial year 2020/21 is attributed to the automated compliance monitoring measures implemented on the online system. The impact of compliance measures put in place is also evidenced by the number of progress reports (445 or 31%) received during the reporting period that relate to past financial years as far back as 2013/14 to 2019/20.

Text box 2: Examples of companies benefitting from the R&D tax incentive

Information about applying companies is kept confidential, but some companies have agreed to share their experiences. Information of three companies is presented anonymously and is meant to indicate the influence of the current R&D tax incentive programme on a company's decision to invest in R&D.

Company A

Company size: very large

Sector: Manufacturing

Number of approved projects: one

Company A, which specialises in producing ultra-pure electrolytic manganese metals, stated that the R&D tax incentive has enabled it to acquire additional team members as well as an advanced laboratory and process equipment that are essential for the project's success. Company A was also able to establish a commercial facility with an increased capacity for production and a diversified product offering.

Company B

Company size: Turnover not indicated

Sector: Agriculture, hunting, forestry and fishing

Number of approved projects: Multiple

Company B (i) develops new sugar cane varieties; (ii) provides technologies, resources and specialist services that advance nutritional, agronomic and agricultural engineering practices and enhance the efficacy of pest and disease control; (iii) generates new ideas to enlarge the scope of sugar cane production into the future; and (iv) transforms tacit knowledge and research outcomes into explicit knowledge and technology products. Accessing the R&D tax incentive enabled Company B to increase employment of R&D staff and provide downstream growth and employment opportunities for its suppliers.

Company C

Company size: SME

Sector: Mining and quarrying

Number of approved projects: Multiple

Company C provides high-quality analytical services that are accessible to organisations and countries around the world. This company focuses on commodities that are of interest in society at the time, for example, rare earth elements that are in demand, in terms of their need, use and disposal. The tax break has allowed Company C to have a higher capital amount, which allows it to budget correctly and enables it to buy correct equipment and employ people of high skills and passion.

A large number of companies that were supported by the incentive highlighted the fact that it helped South Africa stay competitive internationally from a cost perspective. However, these stories may not show the complete picture of the effect or impact of the incentive. This is because R&D can be a lengthy process, with results and outcomes only materialising after several years of investment.

Some of the studies that have been undertaken to evaluate the impact of the R&D tax incentive and similar incentives have found the following:

- Companies benefiting from the incentive spent an additional R4 million on R&D compared to those who conducted R&D but did not benefit from the incentive. This study also found that for every R1 of tax revenue foregone, companies spent an additional R1,83 on R&D. The impact was found to vary by sectors, with a higher positive impact found in sectors such as aircraft and ships, pharmaceuticals, computers and services.
- Positive and significant effects associated with the R&D tax incentive, in that companies that received the R&D tax allowance increased in-house R&D investment in terms of expenditure and intensity. R&D tax allowances for companies also reduced technology in-licensing.
- There was a positive and significant correlation between R&D expenditure and productivity, and between R&D tax allowances and total factor productivity, even after controlling for actual R&D expenditure. It was also suggested that a strong policy "eco-system" is required that provides support (monetary and otherwise) from the R&D phase through to commercialisation.

6. R&D TAX INCENTIVE AWARENESS AND PROMOTION

The overall aim of the R&D tax incentive programme is to encourage increased private-sector R&D investment, which is central to improving South Africa's innovation performance and competitiveness. To achieve this, companies must be aware of the incentive, must find the project application process easy, and understand the processes to access it.

During the reporting period, the DSTI's Directorate: Private Sector R&D Promotions, which administers the incentive programme, engaged with many stakeholders, including taxpayers and/or various types of consulting companies and legal firms. Many meetings were held with new and existing applicants. During the engagements, the DSTI gave presentations and shared information to improve the accessibility and awareness of the programme.

The directorate also revised the templates and documentations, especially to refine the questions and processes necessary to determine the eligibility of projects. Memoranda were also developed during this period to provide a clearer understanding of the criteria for approval. These were also aligned to the new online application system. The Department also provided briefings on the R&D tax incentive matters to the Economic Sectors, Employment and Infrastructure Development Cluster and to Cabinet.

REFERENCES

DSI (2019). White Paper on Science, Technology and Innovation.

https://www.gov.za/sites/default/files/gcis_document/201912/white-paper-science-technology-and-innovation.pdf

DSI (2022). Science, Technology and Innovation Decadal Plan 2022–2032.

<https://www.nrf.ac.za/wp-content/uploads/2023/06/STI-Decadal-Plan-2022-2314Dec22.pdf>

The National Treasury Budget Review (2023).

<https://www.treasury.gov.za/documents/national%20budget/2023/review/FullBR.pdf>