ANNUAL REPORT
2015/16

NCRST
National Commission
On Research Science & Technology

Fostering Excellence

Through Knowledge and Innovation

ANNUAL REPORT 2015/16

NCRST

National Commission On Research Science & Technology

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FORWARD BY THE CHAIRPERSON

It is my honour and privilege to present the third National Commission on Research, Science and Technology (NCRST) Annual Report, which is also the second since the NCRST adopted its strategic plan for the period 2014/15 to 2018/19, and also coincides with the second year of the implementation of National Programme on Research, Science, Technology and Innovation (NPRSTI) for the period 2014/15 and 2016/17. The NCRST continues to implement planned programmes and activities for the year under review, while engaging all stakeholders to ensure implementation of the NPRSTI.

During the period under review, the NCRST facilitated the development of the implementation plan for the NPRSTI as well as the monitoring and evaluation framework for the NPRSTI. This exercise will lead to the enhancement of the process of monitoring, evaluating, and reporting on progress made in the implementation of the programme.

The NCRST Annual Report 2015/16 presents the performance of an organisation that has made a meaningful impact on strengthening the national system of innovation and addressing challenges in the system. Most noticeable challenges relate to outdated policy and legal framework, low investment in Research and Development (R&D), the fragmentation of Science, Technology and Innovation (STI) activities, unavailability of a centralised information system on STI-related activities, such as R&D, and innovation indicators, inventory of facilities, laboratories, and instruments for research. The NCRST has made strides in providing the requisite support mechanism to enable Namibian scientists and innovators across various research and innovation institutions - whether public or private - to apply their intellectual capacity, design and implement cutting edge innovation and technology projects, which could have the ability to improve scientific knowledge and technical capacity, the ability to address national social and economic challenges, and provide benefits to Namibians. A number of projects are being funded that can add value, with the potential to be translated into tangible outputs.

The NCRST acknowledges that more needs to be done and the organisation will therefore develop targeted interventions, including the formulation of the national strategy for STI infrastructure, which would seek to address the challenge of inadequate research infrastructure in Namibia. This would be done through establishing relevant infrastructure and dedicated STI that will cater for the enhancement and strengthening of the STI value chain, in order for STI to successfully play its meaningful role of driving Namibia to becoming a knowledge-based economy.

The performance of the organisation and the impact on its stakeholders would not have been possible without the commitment and diligence of management and staff. I therefore comment the Chief Executive Officer (CEO), Dr Eino Mvula, and the entire NCRST team for their hard work and dedication during 2015/16. The strategic leadership provided by the Commission, particularly during these formative years of the NCRST is also commended. The NCRST continues to commit to the principles of corporate governance as informed by the Namibian Code of Corporate Governance (NamCode), the Research, Science and Technology Act, 2004 (Act No. 23 of 2004) and the Public Enterprises Amendment Act, 2015 (Act No. 8 of 2015), and the Commission remains ever cognisant of the impact of effective governance structures on the organisation effectiveness.

The Commission looks forward to the review of the National Research, Science and Technology (NRST) Policy of 1999 and to the formulation of the new National Science and Technology Policy under the able leadership of the Hon. Dr Itah Kandjii-Murangi, Minister of Higher Education, Training and Innovation.

Prof. Andre du Pisani

Prof. Andre du Pisani

REVIEW BY THE CHIEF EXECUTIVE OFFICER

Dr Eino Mvula

The year 2015/16 is the second year of the implementation of our five-year strategy, which has been formulated to ensure a holistic approach to all key areas of the NCRST's mandate. The NCRST strategy for 2014/15 to 2018/19 together with the NPRSTI for the period 2014/15 and 2016/17 are the cornerstones of STI development in Namibia. In line with its strategic objectives, the NCRST took a conscious decision to focus on its five strategic themes, which are also aligned to the strategic priorities on the NPRSTI namely:

- **Creating awareness of STI:** We need to attract the best and brightest into a career of science as a result of our sustained outreach efforts, as the young people would become the drivers of new discoveries and innovations that create growth and enhance the quality of the lives of our people;
- **Establishing smart partnerships and cooperation:** The solutions of tomorrow evolve in the junction where different perspectives and competences meet, hence NCRST works to connect innovative actors in different sectors and fields of knowledge with one another;
- **Creating an enabling policy environment**: An enabling policy and legislative environment is a prerequisite for Namibian scientists and innovators across various research and innovation institutions to be able to apply their intellectual capacity and ability to address national social and economic challenges, and provide benefits to Namibians;
- **Building R&D capability:** New knowledge and competence are necessary to create the innovations of the future, hence the NCRST supports R&D programmes that benefit our community; and
- **Promoting innovation for Namibia's prosperity**: In an innovative Namibia, people need to be able to create, utilise, and implement new, useful knowledge and new ideas.

Overall, the NCRST has achieved it performance targets, with some targets having been exceeded, resulting in a rating of superior performance and higher achiever based on a performance rating adopted under the Performance Management Policy and Procedures. This was a significant improvement on last year's performance, especially taking into consideration limited resource allocation towards programmes' implementation.
Looking ahead, the NCRST's strategy will remain anchored on the principle that five strategic areas will go a long way towards addressing the country's socio-economic challenges, through a well-coordinated system of innovation. The organisation will continue to improve its processes and capabilities to meet the huge expectations placed on it, and the dynamic nature of R&D, and innovation.

The opportunities are endless for Namibia in that we know our challenges and we are blessed with abundant natural resources. What needs to happen is to invest in building research capacity in terms of human resources, develop research and innovation facilities to ensure that our scientist and innovators have access to state-of-the-art research facilities, develop a programme for technology adaptation, and develop a programme for innovation and entrepreneurship development. There is no reason why our water woes and food shortages cannot be a thing of the past through exploring the possibility of tapping into our underground acquirers and adapting technologies to modernise our agriculture to support food security at household and national level. There is no reason why the Namibian energy demand cannot be met to support our quest for industrialisation through renewable technologies and other appropriate means. With a rich biodiversity and indigenous knowledge system, the source of active biological compounds that can treat various ailments remains unexplored. Our mineral resources present the potential to earn us the required foreign currency if we fully understand the value chain and develop the manufacturing and value addition sector. For all these to be realised, we need to embrace certain principles:

- **Collaboration:** We need to work in unison, and both the private sector, public research institutions, and individual researchers should be part of the research and innovation network;
- **Patience:** We must be prepared to be in this game for the long haul. As the saying goes, "Rome was not built in a day." The fruit of research and innovation takes a while to ripen; and
- **Sacrifice:** We need to strike the balance in terms of allocation of resources between immediate pressing social issues and investment in our future.

The NCRST is increasingly recognised as the lead agency for the promotion, coordination, development, and funding of STI, as can be seen in the number of organisations with which it has partnerships. With the approval of the new structure aligned to strategy during the year under review, the NCRST is now poised to harness skills and talents towards making the required impact.

I would like to thank the NCRST Board of Commissioners for their unwavering commitment and support towards the attainment of the NCRST's vision. I also wish to sincerely thank all stakeholders who, in one way or another, continue to give their time and expertise to support the work of the Commission. I look forward to the collective efforts of all stakeholders as we join hands in STI to build the future we want for our country.

Dr Eino Mvula

LIST OF ACRONYMS

BITRI: Botswana Institution for Technology Research and Innovation
CEO: Chief Executive Officer
CeSTII: Centre for Science, Technology and Innovation Indicators
CRAN: Communications Regulatory Authority of Namibia
DFG: German Research Foundation
EXCO: Executive Committee
FRST: Foundation for Research, Science and Technology
GRC: Global Research Council
HSRC: Human Science Research Council
ICT: Information and Communication Technology
IK: Indigenous Knowledge
IKS: Indigenous Knowledge Systems
IPR: Intellectual Property Right
IT: Information Technology
ITD: Innovation and Technology Development
M&E: Monitoring and Evaluation
MoU: Memorandum of Understanding
NCRST: National Commission on Research, Science and Technology

NDP4: Fourth National Development Plan
NIKSC: National Indigenous Knowledge Systems Council
NPRSTI: National Programme on Research, Science, Technology and Innovation
NRF: National Research Foundation of South Africa
NRS: National Research Symposium
NRST: National Research, Science and Technology
NRSTF: National Research Science and Technology Fund
NSA: Namibian Statistics Agency
NSC: National Space Science Council
NSFAF: Namibia Students Financial Assistance Fund
NSI: National System of Innovation
NUST: Namibia University of Science and Technology
R&D: Research and Development
RSTI: Research, Science, Technology and Innovation
SET: Science, Engineering and Technology
STI: Science, Technology and Innovation
TIA: Technology Innovation Agency of South Africa
UNAM: University of Namibia

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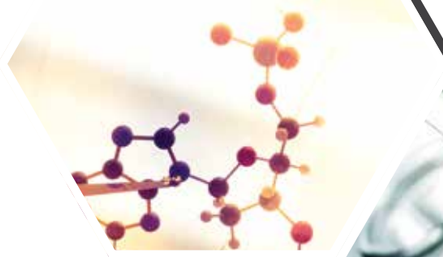



PART I: ORGANISATIONAL OVERVIEW

1 CORPORATE OVERVIEW

1.1 NCRST Mandate

The importance of research, science and technology as an engine of economic growth and development cannot be over emphasised. It is on this premise that Namibia has enacted the Research, Science and Technology Act, 2004 (Act No. 23 of 2004). The objectives as outlined in section 1 of the Act are:

a. to ensure the coordination, monitoring, and supervision of research, science and technology in Namibia;
b. to promote and develop research, science, and technology in Namibia;
c. to promote common ground in research, scientific, and technological thinking across all disciplines, including the physical, mathematical and life sciences, as well as human, social and economic sciences;
d. to encourage and promote innovative and independent thinking and the optimum development of intellectual capacity of people in research, science and technology;
e. to ensure dedicated, prioritised and systematic funding for research, science and technology application and development in Namibia; and,
f. to promote linkages between Namibia and international institutions and bodies on the development of research, science and technology.

1.2 Mission

Establish a national system that promotes, develops, coordinates and informs research, sciences, technology and innovation towards a knowledge-based society.

1.3 Vision

To be a leading agency that facilitates the development of research, science, technology and innovation towards socio-economic advancement for Namibia.

1.4 Values

The NCRST strives to further value-based behaviour, engaging and relating, decision-making and action. Stakeholders interacting with the NCRST and its representatives should consistently experience these values in all interactions and decisions, and all staff members must consciously practise the values so as to develop a consistent values-based approach.

- ***Integrity -*** We are consistently trustworthy and honest in all our interactions.
- ***Pro-activeness -*** We act responsibly guided by a clear purpose.
- ***Passion for excellence -*** We persistently pursue standards of excellence.

1.5 Strategic Themes

The following themes are of vital strategic importance over the next five years and create distinct focal clusters against which objectives can be defined:

- ***Further public understanding:*** In order to create interest and a certain pull for Research, Science, Technology and Innovation (RSTI) in Namibia, public awareness and understanding will be vital. Here leverage should be sought by targeting segments of the population that will further RSTI progress most favourably (optimal effort-return ratio);
- ***Further stakeholder cooperation and alignment:*** To identify active and potentially active RSTI "players" and create linkages, networks, and ventures that will further and optimise RSTI progress within the delivery funnel;
- ***Alignment and integration of regulatory environment:*** To establish a relevant and desirable operating environment underlying legislative and statutory frameworks aligned and integrated towards optimal mobilisation of RSTI in Namibia;
- ***Building research capacities and technical skills:*** Building research capacities together with researchers' mobility and attractiveness will not be enough, therefore technical and research managerial skills are to be created for efficient running of projects and facilities. Correspondingly, provision of infrastructure should be planned, under a rationale of centralisation and optimisation of means; and,
- ***Promoting innovation in the economic and social sectors:*** Through the NPRSTI, the NCRST will address innovation as the right approach to advance the industrialisation of the country, boosting mid and long term development towards a knowledge-based economy, through both supporting knowledge transfer to the private and entrepreneurial sector as well as supplying human and financial resources for integrating the culture and practice of innovation in the socio-economic environment.

STRATEGY MAP

NATIONAL COMMISSION ON RESEARCH, SCIENCE & TECHNOLOGY

Integrity: We are consistently trustworthy and honest in all our interaction

Pro- Activeness: We act responsibly guided by a clear purpose

Passion for Excellence: We persistently pursue standards of excellence

STRATEGIC THEMES

1. Further Public Understanding

2. Further Stakeholder Co-operation & Alignment

3. Alignment & Integration of Regulatory Environment

4. Building Research Capacities and Technical Skills

5. Promoting Innovation in the Economic and Social Sectors

GLPO1: Optimize human capital alignment that is sustainable

GLPO2: Entrench a high performance work culture

GLPO3: Optimize talent attraction & retention

GLPO4: Optimize Human Capital cost/benefit

OUR MISSION: Establish a national system that promotes, develops, coordinates and informs RSTI towards a knowledge-based society.

IPPO1: Establish key delivery processes & supporting systems to meet service & efficiency standards

IPPO2: Institute policy & risk management requirements to ensure consistency of Internal Governance

FPO1: Ensure adequacy and sustainability of funding

FPO2: Optimize value create on funds expended

FPO3: Ensure effective financial management in funds delivery channel

SHPO1: Significantly improve public awareness of RSTI & its socio-economic value

SHPO2: Establish and strengthen linkages with and associated stakeholders within RSTI funnel

SHPO3: Meet Stakeholders Needs that further RSTI Effectiveness

SHPO4: Facilitate an enabling regulatory environment for stakeholders in RSTI

SHPO5: Build human resources capacity in RSTI

SHPO6: Develop and implement a national strategy for RSTI infrastructure

SHPO7: Promote knowledge transfer towards final users.

Growth & Learning

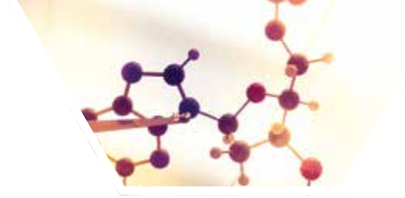
Internal Processes

Financial

Stakeholder

PERSPECTIVE

OUR VISION: To be the leading agency that facilitates the development of Research, Science, Technology and Innovation towards socio-economic advancement for Namibia.



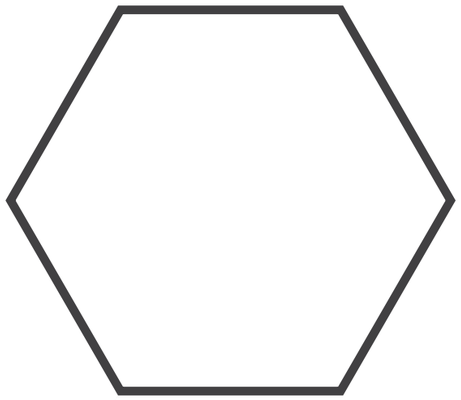
2 Board of Commissioners Structure

2.1 Functions

The NCRST is established in terms of section 4 of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004). The NCRST is governed by the Commission, consisting of 16 members appointed by the Minister and a five-member Executive Committee that executes the decisions of the Commission.

The functions and powers of the Commission in terms of section 5 of the Act are:

a. to monitor and supervise the promotion, coordination, development, and continuation of research, science, and technology in all sectors in Namibia, and to minimise overlapping in the fields of research, science, and technology;
b. to prepare and review a national programme in the manner referred to in section 18;
c. to coordinate and facilitate the development of research, science, and technology at national, regional, and local levels, and to provide direction and policy guidance to the research, science, and technology innovation systems in Namibia;
d. to promote broad participation in research, science and technology activities with the aim of promoting designated groups or persons belonging to designated groups;
e. to promote the participation of Namibians and research institutes in regional and international research, science and technology projects and events, and, in cooperation with the Minister and Ministers responsible for foreign affairs and finance, to enter into agreements on cooperation and maintenance of relationships with similar foreign institutions in the fields of research, science and technology;
f. to promote awareness and national appreciation of the value of research, science and technology to social, cultural and economic development;
g. to promote, facilitate and organise seminars, conferences, lectures, workshops and similar events relating to research, science and technology;
h. to promote the application of research, science and technology to the development and improvement of industrial and commercial outputs, designs and productivity;
i. in coordination with the Minister responsible for foreign affairs, to participate in international research, science and technology events of national interest, and to represent Namibia at research, science and technology conferences, meetings, workshops or other similar events;
j. to participate, in cooperation with relevant bodies and institutes, in studies on human resources relating to research, science and technology activities, and where appropriate, to promote the growth and development of human resources for such activities;
k. to collect and distribute, in accordance with this Act, financial, human and other resources for the efficient management and promotion of councils and research institutes and to solicit and make priorities for funding in respect of:
    i. research, science and technology purposes;
    ii. a framework for expense on research, science and technology;
    iii. the building and maintenance of research, science and technology capacity by way of selective funding of training and development; and
    iv. national facilities for research, science and technology;
l. to coordinate the use of funds of the Fund and investments, and to facilitate, separately or in cooperation with the private sector, the use of public good research outputs, and to stimulate proposals of broad national interest for research;
m. to provide research grants, loans, bursaries and similar financial aid in research, science and technology;
n. to collect, disseminate and promote any research, science and technology results, statistics, reports, literature, data, services or any other information, including the establishment and maintenance of information systems to support:
    i. the monitoring and evaluation of the overall management and functioning of the science and technology system and the national system of innovation; and
    ii. the continuous revision of science and technology policies to address changing and new circumstances;
o. to undertake, in cooperation with the appropriate institutions and other bodies, the development and exploitation of any research, science and technology invention, and to provide advice and assistance to innovators and inventors in the registration and protection of their innovations and inventions;
p. to identify and validate national R&D priorities in or relating to research, science and technology;
q. to identify and raise awareness with any authority, institution, body or person, of any need relating to the establishment, transformation or dissolution of any relevant research, science or technology body or policy or other relevant matter, including the coordination of any request for advice in this regard;
r. to build capacity, skills and know-how of the staff of the Commission and councils and Namibian people in general;
s. to advise the Minister on procedures of how to secure a sustained basis for the funding of research, science and technology;
t. to advise the Minister, the President, Parliament and any other authority or body on the functions and initiatives of the Commission and on any matter relating to research, science and technology;
u. to make recommendations to the Minister regarding the amendment of this Act or any other Acts which may contribute to the promotion of research, science and technology; and,
v. at the request of the Minister, or on its own accord, to enquire into, report on and make recommendations on any matter, or the performance of such other tasks, falling within the objects of this Act.



2.2 NCRST Commissioners

Board of Commissioners

	Name	Representation	Role on the Commission
1.	Prof. Andre du Pisani	National Council of Higher Education (NCHE)	Chairperson
2.	Dr Johannes D. Shoopala	Ministry of Agriculture, Water and Forestry	Deputy chairperson
3.	Ms Josephine Joste /Haubas	Office of the President	Member
4.	Mr Markus von Jeney	Engineering Council of Namibia (ECN)	Member
5.	Ms Martha Namudjebo-Tilahun	Namibia Chamber of Commerce and Industry (NCCI)	Member
6.	Mr Johannes Aipanda	National Planning Commission (NPC)	Member
8.	Ms Antonia Kapia	Ministry of Finance	Member
9.	Mr Alfred Ilukena	Ministry of Education	Member
10.	Ms Sharonice Busch	Namibia National Students Organisation (NANSO)	Member
11.	Mr Uda Nakamhela	The Law Society of Namibia	Member
12.	Ms Hilma Nangombe	Ministry of Health	Member
13.	Ms Elly Hamunyela	Ministry of Environment and Tourism	Member
14.	Ms Graca D'Almeida	Ministry of Fisheries and Marine Resources	Member
15.	Mr Franz Uirab	Ministry of Works and Transport	Member
16.	Ms Vicky Do Cabo	Ministry of Mines and Energy	Member
18.	Ms Petrina N. Nakale	Ministry of Trade and Industry	Member
19.	Dr Martha Kandawa-Schulz	Chairperson: Biosafety Council	Member
18.	Mr Moses Molatendi	Chairperson: Indigenous Knowledge Council	Member
19	Dr Eino Mvula	NCRST: CEO	Ex officio member
20	Ms Enid Keramen	Head: Company Secretariat and& Legal Advice	Company Secretary and Legal Adviser

During the period under review, the Commission held two (2) ordinary meetings and three (3) special meeting as indicated below.

Meeting type	Date
Special	25 April 2015
Special	5 May 2015
Ordinary	5 September 2015
Special	3 October 2015
Ordinary	28 November 2015

The Commission approved the following matters during the year under review:

a. Revised Strategic Plan for the period 2015/16 to 2018/19 and Business Plan for 2015/16;
b. Finance-related policies and procedures;
c. Human resources-related policies and procedures;
d. Information and Communication Technologies (ICT)-related policies and procedures;
e. Revised grant rules and procedures;
f. Proposals received under the various National Call for Research Proposals in line with sections 5 (m) and 24 (3c) of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004);
g. Revised organisational structure as well as the salary structure; and
h. Regulations to the Biosafety Act, 2006 (Act No. 7 of 2006).

2.3 NCRST Committees and Councils

The Commission shall, in terms of sections 12, 13 and 14 read together with section 31 of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004, delegate certain functions to the Chairperson of the NCRST ("the Chairperson"), the CEO or any other statutory Committees established under the Act, without abdicating its own responsibilities. The functions may be delegated to the following committees:

- Executive Committee (EXCO);
- Foundation for Research, Science and Technology (FRST);
- Finance, Investments, Audit and Risk Management Committee (FIARM);
- Human Resources and Remuneration Committee; and
- Tender Committee.

2.3.1 EXCO

Section 12 (1) of Research, Science and Technology Act, 2004 (Act No. 23 of 2004) establishes the EXCO, whose functions is to execute decisions and manage the affairs and activities of the Commission. The EXCO consists of five members appointed by the Commission, comprising the following persons as listed in section 12 (3) of the Act:

- Chairperson of the Commission (the " Chairperson");
- Vice-Chairperson of the Commission (the "Vice-Chairperson");
- Three other Commissioners elected by the Commission; and
- The Chairperson and Vice-Chairperson of the Commission are the Chairperson and Vice-Chairperson of the EXCO, respectively.

During the period under review, the EXCO held three ordinary meetings and one special meeting as indicated below.

Meeting type	Date
Special	18 April 2015
Ordinary	22 August 2015
Ordinary	23 November 2015
Ordinary	29 March 2016

The EXCO duly considered matters from all the other committees for onwards submissions to the Commission. These included:

a. Revised Strategic Plan for the period 2015/16 to 2018/19 and Business Plan for 2015/16; and
b. Project Management Policy and Procedures.

2.3.2 FRST

The FRST (the "Foundation"), whose functions are as specified in the rules of the Commission, is established in terms of section 13 (4) of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004). The Foundation consists of seven members elected by the Commission from their number to serve on an annual basis, or such longer period as the Minister may determine on recommendation of the Commission.

The Foundation shall have the following powers and functions:

- To advise the Commission in formulating national policies and strategies on RSTI;
- To oversee the development of the NPRSTI and monitor its implementation as provided for in section 18 of the Act;
- To oversee and approve the allocation of resources necessary to advance and implement the NPRSTI;
- To guide the allocation of the resources necessary to advance strategic regional and international collaborations in the field of RSTI;
- To evaluate and approve grants for research and innovation;
- To actively pursue international collaboration and funding opportunities for collaborative research; and
- To ensure that Intellectual Property Rights (IPR) issues emanating from publicly funded research are handled in a fair and equitable manner in line with section 33 of the Act.

During the period under review, the Foundation on RST held two ordinary meetings as indicated below.

Meeting type	Date
Special	22 May 2015
Ordinary	13 November 2015

The FRST duly considered the revised the grand rules and procedures, and proposals received under various National Call for Research Proposals in line with sections 5 (m) and 24 (3c) of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004) were recommended to the Commission for approval through a round robin process.

2.3.3 Finance and Audit Committee

The primary purpose of this committee is to assist the Commission in discharging its duties relating to the safeguarding of assets, the operation of adequate systems, control processes and the preparation of accurate financial reporting, state of compliance with all applicable legal requirements, and accounting standards and risk management.

During the period under review, the Finance and Audit Committee held three ordinary meetings and two special meetings as indicated below.

Meeting type	Date
Special	10 April 2015
Special	20 May 2015
Ordinary	13 August 2015
Ordinary	15 November 2015
Ordinary	16 March 2016

The following items were considered by the Finance and Audit Committee and recommended to the full Commission for approval:

a. Budget for 2015/16;
b. Financial Management Policy and Procedures;
c. Supply Chain Management Policy and Procedures;
d. Risk register for 2015/16; and
e. Audit plan for 2015/16.

2.3.4 Human Resources and Remuneration Committee

This committee's major duties are:

a. To oversee compliance with human resources-related policies and provide advice on such policies to the Commission; and
b. To initiate and oversee the formulation and review of all human resources-related policies and recommend these to the Commission for approval with due consideration of guidelines contained in the Labour Act, 2007 and State Owned Enterprises Governance Act, 2006 (SOE Act) where appropriate.

During the period under review, the Human Resources Committee held three ordinary meetings and one special meeting as indicated below.

Meeting type	Date
Ordinary	4 June 2015
Ordinary	12 August 2015
Ordinary	10 November 2015
Special	11 February 2016

The Human Resources Committee has considered and recommended the following to the Commission for approval:

a. Revised organisational structure aligned to the Strategic Plan and grading;
b. New remuneration structure aligned to market;
c. Performance Management Policy and Procures;
d. Remuneration Policy and Procedures,

2.3.5 Tender Committee

The primary purpose of the Committee is to assist the Commission in discharging its duties in ensuring that an appropriate procurement system is established and maintained.

During the period under review, the Tender Committee held four meetings, where two were ordinary and two were special, as indicated below.

Meeting type	Date
Special	14 April 2015
Ordinary	14 August 2015
Ordinary	11 November 2015
Ordinary	7 March 2016

The Tender Committee successfully finalised the evaluation and awards of various tenders, including the following:

a. Development of the New STI Policy;
b. Conducting of the R&D and Innovation Census; and
c. Development of the Business Plan for the Computer-based Science and Mathematics Learning Centres.

2.3.6 Biosafety Council

During the period under review, the Commission established the Biosafety Council in terms of by section 5 of the Biosafety Act, 2006 (Act No. 7 of 2006) and section 19 (1) of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004). The objectives of the Biosafety Act, 2006 (Act No. 7 of 2006) are:

a. to introduce a systems-and-procedures approach for the regulation of Genetically Modified Organisms (GMOs) in Namibia, in order to provide an adequate level of protection to the conservation and sustainable use of biological diversity, taking into account:
   i. potential risks to the health and safety of humans and potential harmful consequences to the environment that could be posed by genetically modified organisms or genetically modified products; and
   ii. social, cultural, ethical and economic considerations:

Provided that lack of scientific knowledge due to insufficient relevant scientific information or scientific consensus should not be interpreted as indicating a particular level of risk, or absence of risk, or an acceptable risk; and

b. to provide a framework for responsible research, development, and the use of genetic engineering and to manage the potential risks posed by or as a result of gene technology by regulating activities involving the development, production, use, import, export, transport, release into the environment, marketing and other uses of genetically modified organisms and genetically modified products.

The composition of the Biosafety council is prescribed in terms of section 6 of the Biosafety Act, 2006 (Act No. 7 of 2006):

a. Environmental issues, including environmental assessment;
b. Public health issues, including food hygiene and food safety;
c. Animal health and welfare or other related agricultural issues;
d. Molecular biology;
e. Law;
f. Research, science and technology; and
g. Trade and economy.

During the period under review, the NIKSC held four meetings as indicated below.

Meeting type	Date
Ordinary	8 February 2015
Ordinary	10 October 2015
Ordinary	15 November 2015
Ordinary	8 March 2016

During the period under review, the Biosafety Council concluded its Annual Work Plan for 2014/15 and recommended it to the Commission for approval. The Council has finalised the drafting of regulations to the Biosafety Act, 2006 (Act No. 7 of 2006), and submitted them to the full Commission for approval.

Members of the Biosafety Council are:

	Name	Representation	Role on the Biosafety Council
1.	Dr Martha Kandawa-Schulz	Molecular biology	Chairperson
2.	Mr Etuna Josua	Law	Deputy chairperson
3.	Dr Herbert Schneider	Animal health and welfare or other related agricultural issues	Member
4.	Mr Teofilus M Nghitila	Environmental issues, including environmental assessment	Member
5.	Dr Ronnie A Bock	Public health issues, including food hygiene and food safety	Member
6.	Mr Simana Chimana	Trade and economy	Member
7	Ms Caroline !Garus-Oas	Research, science and technology	Member

2.3.7 National Indigenous Knowledge Systems Council (NIKSC)

The establishment of the NIKSC draws its mandate from section 19 of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004), which states that "the Commission, from time to time in the prescribed manner and after consultation with the Minister, may establish one or more councils in the Research, Science and Technology sector to perform such functions as prescribed and as may be assigned to it by the Commission. A council performs its functions under the supervision of the Commission."

The objective of the NIKSC is to facilitate the development of a national agenda related to Indigenous Knowledge (IK) in all related sectors. This may include the development of the National Indigenous Knowledge Systems (IKS) Policy in order to: provide a strategic direction on matters related to IK, for instance, ethics in IK research; identify IK activities relevant to Namibia; promote IK R&D; and gather Namibian IK-related material. The NIKSC consists of five members appointed by the Commissioners with prior approval by the Minister. The appointed members represent the following fields or sectors: (a) Culture; (b) Health; (c) Natural sciences; (d) Social sciences; and (b) Law.

During the period under review, the NIKSC held four meetings as indicated below.

Meeting type	Date
Ordinary	8 May 2015
Ordinary	10 July 2015
Ordinary	9 October 2015
Ordinary	9 March 2016

During the period under review, the NIKSC concluded its Annual Work Plan for 2014/15 and recommended it to the Commission for approval. The Council has been preoccupied with the formulation of the National IKS Policy, and has undertaken benchmarking visits to Mali and South Africa as part of this process.

Members of the NIKSC are:

	Name	Representation	Role on the Commission
1.	Mr Moses Molatendi Moses	Law	Chairperson
2.	Prof. Jekura Uaurika Kavari	Culture	Deputy chairperson
3.	Ms Ivonne Mujoro	Natural sciences	Member
4.	Mr Nyanyukweni Pandeni Tshifugula	Health	Member
5.	Dr Michael U. Akuupa	Social sciences	Member

2.3.8 National Space Science Council (NSC)

The establishment of the NSC draws its mandate from section 19 of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004), which states that "the Commission, from time to time in the prescribed manner and after consultation with the Minister, may establish one or more councils in the Research, Science and Technology sector to perform such functions as prescribed and as may be assigned to it by the Commission. A council performs its functions under the supervision of the Commission." The major aim is to facilitate the development of a national agenda related to space science in all sectors. This may include national space policy development, provision of a strategic direction on matters related to space science, for instance, ethics in space science research, identification of space activities relevant to Namibia, and the promotion of space R&D.

Members expected to serve on NSC should be persons bringing skills or experience in the following fields:

a. Astronomy and astronautics;
b. Engineering;
c. Environmental sciences;
d. Information technology;
e. Law; and,
f. Defence Force.

During the period under review, the NSC held four meetings as indicated below.

Meeting type	Date
Ordinary	10 April 2015
Ordinary	4 June 2015
Ordinary	29 July 2015
Ordinary	11 March 2016

During the period under review, the NSC concluded its Annual Work Plan for 2014/15 and recommended it to the Commission for approval. The Council has been preoccupied with the formulation of the National Space Science Policy and Strategy, which is expected to be finalised during the following financial year.

Members of the NSC are:

	Name	Representation	Role on the Commission
1.	Dr Riaan Steenkamp	Astronomy and astronautics	Acting Chairperson
2.	Mr Laban Hiwilepo	Engineering	Member
3.	Dr Lisho Mundia	Environmental science	Member
4.	Mr Emmanuel Tsihungileni Kikuyu	Defence	Member

3 MANAGEMENT AND SUPPORT STRUCTURE

3.1 Executive Management

The CEO and the executive management members guide the strategic and policy direction of the NCRST.

	Position	Incumbent
1.	CEO	Dr Eino Mvula
2.	GM: Research, Science, Technology and Innovation Coordination and Support	Dr Diina Shuuluka
3.	GM: Innovation and Technology Development (Management of National Facilities)	Mr John Sifani
4.	GM: Business Support	Ms Albertina Ngurare
5.	Head: Company Secretariat and Legal Advice	Ms Enid Keramen
6.	Head: Internal Audit	Mr Metlem Kahona
7.	Head: Corporate Communication and Marketing	Ms Elzita E. Beukes
8.	Head: Quality Assurance and Operational Excellence	Mr Matheus Shikongo

3.2 Office of the CEO

The CEO is responsible for implementing the strategy set by the Commission, while also exercising specific supervisory roles of the divisions within the CEO's office, namely: Internal Audit and Risk; Legal Advice and Company Secretary; Quality Assurance and Operational Excellence; Corporate Communication and Marketing function. These aforementioned divisions are managed by the heads.

	Position	Incumbent
1.	CEO	Dr Eino Mvula
2.	Head: Company Secretariat and Legal Advice	Ms Enid Keramen
3.	Head: Internal Audit	Mr Metlem Kahona
4.	Head: Corporate Communication and Marketing	Ms Elzita E. Beukes
5.	Head: Quality Assurance and Operational Excellence	Mr Matheus M. Shikongo

3.2.1 Internal Audit and Risk

The division provides professional assurance and consultancy services that enable the effective, consistent, and thorough review of all NCRST processes and systems within the context of a risk and mitigations framework. It is also tasked to develop a common understanding of risk across functions and business units so we can manage risk cost-effectively on an enterprise wide basis.

3.2.2 Company Secretariat and Legal Advice

The Legal Advice and Company Secretariat division is a support function within the NCRST. It provides complete legal services as well as secretariat services to NCRST Commissions Board and its Councils and Management. The main focus of the divisions is to ensure that the organisation runs smoothly in line with the applicable laws. In addition, the division also manages legal risk and litigation:

- To provide a complete legal and company secretarial service;
- To tie in closely with all legal requirements in all other functional areas;
- To assist in mitigating legal risk; and
- To provide an effective company secretarial service to the Commission, Councils, Committees, and Management.

3.2.3 Quality Assurance and Operation Excellence

The Quality Assurance and Operational Excellence (QAOE) unit is an essential element necessary to achieve NCRST's organisational objectives. The QAOE unit endeavours to ensure that the NCRST can best achieve its business objectives by establishing and managing robust quality systems. During this cycle, the QAOE unit concentrated on laying the foundation onto which quality systems development can thrive by benchmarking against comparable high standard institution, identifying and developing key policies, processes, procedures and forms, as well as availing various competence building interventions.

The QAOE unit's specific objectives are:

- To establish the quality and standards requirements throughout the NCRST;
- To provide support and services to other functions in order to ensure superior organisational and quality standards and consistency throughout the NCRST; and
- Among other duties, the Head of QAOE is the management representative for the NCRST Management Systems, Programmes and Projects.

3.2.4 Corporate Communications and Marketing

The Corporate Communications and Marketing department is tasked with positioning the NCRST both internally and externally as an effective and valuable driver of RSTI in Namibia, a key factor in the RSTI delivery channel that has substance and ability to meaningfully further RSTI in Namibia. The focus in this cycle will be on establishing key communications and marketing avenues that will optimally serve NCRST's image and standing in the eyes of staff, stakeholders in the RSTI funnel, and the eyes of the public, and to leverage possibilities to maximum positive impact.

3.3 Research, Science Technology and Innovation Coordination and Support (RSTICS)

While interdependent and integrated within the NCRST value chain, the RSTICS department is concerned with the creation and deepening of RSTI awareness, the development and alignment of the regulatory environment leveraging its possibilities to optimally serve RSTI, and the allocation of grants and support means to directly further the development climate of RSTI. In this cycle the focus will be on establishing tools/approaches/means of furthering RSTI within the delivery funnel, using both local and comparative insight gained from other relevant socio-economic systems. Furthermore, to prioritise the approaches that are likely to have an optimal impact on RSTI development. Furthermore, to develop the awareness means/programmes that will create and further awareness of RSTI amongst high leverage target groups in the delivery funnel.

Taking note of the above, the specific objectives of the department are:

1. To create and deepen the RSTI awareness in Namibia;
2. To develop and align the regulatory environment leveraging its possibilities to optimally serve RSTI;
3. To allocate grants and support to directly further the development climate of RSTI; and
4. To coordinate the management of knowledge and other outputs from funded RSTI initiatives.

The RSTICS department has three divisions, namely, Policies and Programme Development, Resource Mobilisation and Grant Management, and Human, Institutional Development and Science Promotion.

	Position	Incumbent
1.	GM: Research, Science, Technology and Innovation Coordination and Support	Dr Diina Shuuluka
2.	Manager: Policies, Programmes and Council Services	Mr Gernot Piepmeyer
3.	Manager: Resource Mobilisation and Grant Management	Ms Alushe Nditya
4.	Manager: Resource Human, Institutional Development and Science Promotion	Ms Angelique Philander

3.4 Innovation and Technology Development (Management of National Facilities) Department (ITD)

While interdependent and integrated within the NCRST value chain, the ITD department is concerned with the furthering of innovation and technology within the RSTI funnel. Acting mostly as a catalyst in terms of bringing various partners together and furthering cooperation within ITD and application, there are instances where the department will take a more direct role of involvement, but within a clearly defined time frame and criteria, until the venture can sustain itself. In this cycle, the focus will be on the assessment of the Namibian RSTI landscape, a comparative analysis of other comparable socio-economic systems, the development of effective approaches to ITD, and prioritisation through focus on high leverage areas.

Taking note of the above, the specific objectives of the department are:

1. To develop and manage RSTI infrastructure (RSTI Valley);
2. To coordinate biosafety and biotechnology programmes and projects;
3. Facilitate the coordination of bilateral and multilateral agreements/Memorandums of Understanding (MoUs) on the RSTI delivery funnel;
4. To create and manage linkages that promote innovation and industrial research, innovations spin-offs, value addition and tech transfer;
5. Coordinate natural sciences research (space science , IKS, fundamental research, blue economy and global projects); and
6. To coordinate social science and humanities research.

The ITD department has three divisions, namely, Innovation and Industrial Research, Natural Science Research, and Biotechnology.

	Position	Incumbent
1.	GM: Innovation and Technology Development (Management of National Facilities)	Mr John Sifani
2.	Manager: Innovation and Industrial Research	Ms Lovisa Kambonde
3.	Manager: Natural Science Research	Ms Hilya Shikongo
4.	Manager: Biotechnology	Mr Vincent Nowaseb

3.5 Business Support Department

The department is tasked with the provision of superior services and support within mainly the internal value chain, but also with an acute awareness of the external aspects of the NCRST value chain.

This cycle the focus will be on the development of service processes to stakeholders (mainly internal users) and institutionalise these against efficiency standards, so that the various functional areas that make up the NCRST value chain are optimally supported in the areas of financial, human resources, and Information Technology (IT) services and support. Furthermore, to develop the services in high leverage areas, for instance, budgeting, performance management, systems and applications availability, talent management, work culture, and so forth, that will ensure a high favourable impact on the NCRST business plan deliverables.

Business Support Services objectives:

1. To assist in resource mobilisation efforts for the National Research Science and Technology Fund (NRSTF);
2. To provide timely and efficient procurement of goods and services;
3. To ensure effective and efficient human capital management and organisational culture development; and
4. To develop appropriate IT infrastructures and systems for efficient service delivery.

The services are provided through the four divisions, namely, Finance, Fund and Investments, Human Resources and Organisational Development, and ICT.

	Position	Incumbent
1.	GM: Business Support	Ms Albertina Ngurare
2.	Manager: Finance	Mr Simon Nghipangwa
3.	Manager: Fund and Investments	Mr Jeremiah Ntinda
4.	Manager: Human Resources	Ms Johana Hatutale
5.	Manager: ICT	Mr Kevin Fisch

PART II: PERFORMANCE OVERVIEW

41 4. **STRATEGIC THEME 1: FURTHER PUBLIC UNDERSTANDING**
- **4.1 Significantly Improve Public Awareness of RSTI and its Socio-economic Value**
  - 4.1.1 Public Awareness Programmes
  - 4.1.2 Specific Awareness Programmes Through Workshops

45 5. **STRATEGIC THEME 2: FURTHER STAKEHOLDER COOPERATION AND ALIGNMENT**
- **5.1 Establish and Strengthen Linkages With and Amongst Stakeholders within the RSTI Funnel**
  - 5.1.1 Regional and International Cooperation
  - 5.1.2 Cooperation within Namibia

47 6. **STRATEGIC THEME 3: ALIGNMENT AND INTEGRATION OF REGULATORY ENVIRONMENT**
- **6.1 Facilitate an Enabling Regulatory Environment for Stakeholders in RSTI**
  - 6.1.1 Development and Implementation of Policy
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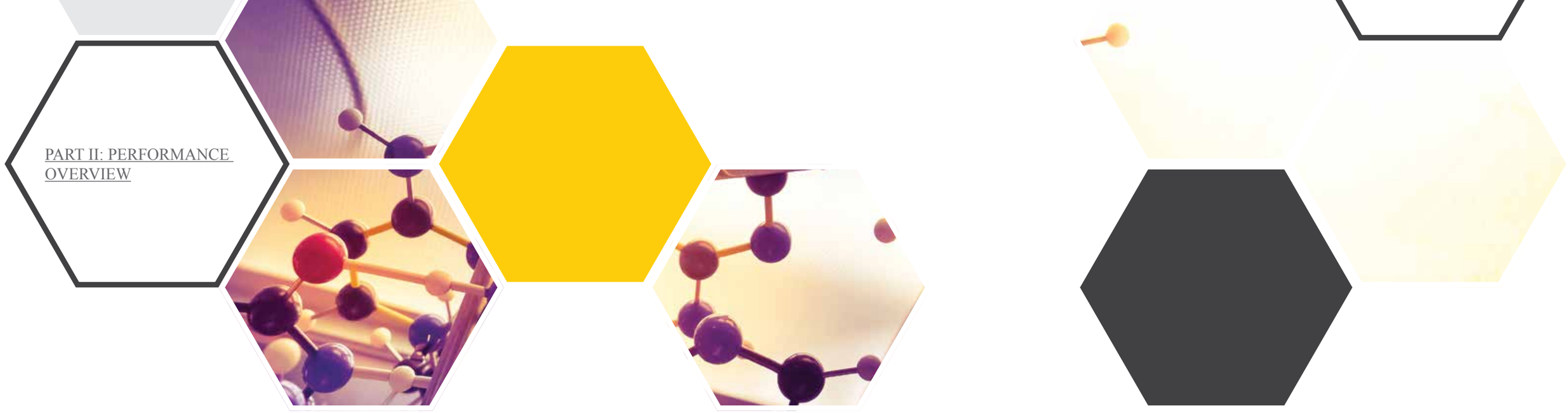
50 7. **STRATEGIC THEME 4: BUILDING RESEARCH CAPACITIES AND TECHNICAL SKILLS**
- **7.1 Build Human Resources Capacity in RSTI**
- **7.2 Building Research and Innovation Infrastructure**

53 8. **STRATEGIC THEME 5: PROMOTING INNOVATION IN THE ECONOMIC AND SOCIAL SECTORS**
- **8.1 Promote Knowledge Transfer Towards Final Users**



PART II: PERFORMANCE OVERVIEW

The NCRST measures its success in developing a responsive national system of innovation based on how well the challenges related to outdated policies and legal framework, low investment in R&D, the fragmentation of STI activities, unavailability of centralised information system on STI related activities, such as R&D, and innovation indicators, inventory of facilities, laboratories, and instruments for research, are being addressed. In this regards, we report on progress made in achieving the objectives and set targets, under each of the five strategic themes namely:

- Further public understanding;
- Further stakeholder cooperation and alignment;
- Alignment and integration of regulatory environment;
- Building research capacities and technical skills; and
- Promoting innovation in the economic and social sectors.

4. STRATEGIC THEME 1: FURTHER PUBLIC UNDERSTANDING

This strategic theme calls for interventions that are targeted not only to the Namibian science and technology community but also to the economic actors and the whole of the population in order to fully improve their understand of the role of knowledge in supporting the attainment of the country's development objectives as well as supporting the defined goals and the corresponding allocation of public resources. Under this theme, the specific objective is focused on significantly improving public awareness of RSTI and its socio-economic value.

4.1 Significantly Improve Public Awareness of RSTI and its Socio-economic Value

With this objective we believe that we must attract the best and brightest into a career of science as a result of our sustained outreach efforts. By embracing a career in science, the young people would become the drivers of new discoveries and innovations that create growth and enhance the quality of the lives of our people. As indicated in Table 1, our sustained efforts in improving public awareness of RSTI and its socio-economic value has reached 51% of the targeted population by direct contact, 87 publications emanating from NCRST direct efforts, and a 75% satisfaction rating by those the NCRST engaged. The media-based awareness could only reach 12% of the targeted population as opposed to the target of 50%. This will require more effort on the part of the NCRST to support science journalism in Namibia.

Table 1: Performance indicators of improving public awareness of RSTI and its socio-economic value

Performance indicator	Target	Achieved
% of targeted RSTI population covered by RSTI awareness	10%	51%
% of targeted RSTI population covered by media-based RSTI awareness	50%	12%
% rating of programme(s) by participants/attendees	75%	75%
% rating on branding and associated branding awareness, and corporate identity	75%	ND[1]
[2]# of scientific publications emanating from NCRST's direct efforts	2	87

The above targets where achieved through a number of awareness programmes, targeted at specific stakeholders as reported below.

[1]This target was not determined during the period under review
[2]This indicator was not set as part of the strategic plan but as part of the three-year National Programme on Research, Science and Technology

4.1.1 Public Awareness Programmes

(a) STI Festival

The NCRST successfully hosted the STI Festival from 29 April to May 2015 under the theme of the "Light + Science = Future" at the Windhoek Country Club. The theme was designed with the aim of celebrating the International Year of Light. This festival is an annual event with the aim to cultivate a general public informed by science, inspired by its wonder, convinced of its value, and prepared to engage with its implications for the future. The festival discussed and showcased the importance of STI to national development, with an emphasis on giving audiences amazing experiences through a programme of STI inspiring events. The STI Festival also brought together the scientific and innovation community to educate and excite the next generation about STI. A total number of 1,571 people attended the festival. The festival received sponsorship to the value of N$330,000.00 from our sponsors, who include: Shell Namibia; DebMarine; Namibia Ports Authority (NAMPORT); the Pupkewitz Group; Trip Travel; O&L Group; Development Bank of Namibia (DBN); and the Communications Regulatory Authority of Namibia (CRAN). Various institutions, including government ministries, public enterprises, and the private sector participated in the festival in different capacities.

Authority (NAMPORT); the Pupkewitz Group; Trip Travel; O&L Group; Development Bank of Namibia (DBN); and the Communications Regulatory Authority of Namibia (CRAN). Various institutions, including government ministries, public enterprises, and the private sector participated in the festival in different capacities.

(b) NamPower Annual National Science Fair

The NCRST successfully hosted the NamPower Annual National Science Fair from 7 to 11 September 2015. This is an annual event that is organised in collaboration with the NamPower Foundation. The aim of the event is to popularise science and technology among students, the community, and educators. It is a vehicle to encourage students, parents, and teachers to take a more active interest in the study of science by providing an opportunity for students to conduct and publicly present an independent scientific inquiry. Over 282 leaners from all 14 regions participated in the national fair where 221 projects were presented.

(c) Regional Level and National Level Science Quiz Competition 2015

Regional Level and National Level Science Quiz Competition 2015 took place in two regions, namely the Kharas Region and the Erongo Region. This was done as a pilot project before the quiz is rolled out to all the regions in the next financial year. The competition is aimed at providing innumerable benefits to learners, which encourage their educational and social development. It also stimulates learners' interest in science and technology while simultaneously promoting the development of life skills, such as communication, strategic thinking and team work, and lights the fire for knowledge. The Erongo Region was awarded the winner of the competition, while the Kharas Region was awarded the runner up.

(d) National Research Symposium (NRS)

The NRS was held from 23 to 25 September 2015. The event was attended by a total number of 287 people of which 87 presented their research outputs. The symposium is a national event aimed at bringing together researchers and research institutions on one platform to share their research findings, discuss funding opportunities, and possibilities for collaborations and networking. This event provides an opportunity to learn from one another, to find out current research activities in Namibia, and encourage information sharing and openness.

(e) Mathematics and Science Computer-based Learning Centres

This project has been building capacity and upgrading the abilities of senior secondary school learners in order that they enter tertiary studies with a more advanced level of understanding of the mathematics and science fields. PLATO Centres are aimed at building capacity and upgrading the abilities of learners in the mathematics and science fields. The following centres are currently operating: Rundu (Kavango East Region); Katima Mulilo (Zambezi Region); and Keetmanshoop (Kharas Region), while centres in Ongwediva (Oshana Region); Gobabis (Omaheke Region); Windhoek (Khomas Region) and Khorixas (Kunene Region) were being equipped to start functioning and a business plan is being developed to ensure operational efficiency and to derive maximum benefit for the learners.

(f) Namibian Women in Science, Engineering and Technology

The charter for the establishment of the Namibian Women in Science, Engineering and Technology (NAMWISET) Chapter has been approved by the Commission. The main objectives of the charter are: to mobilise for increased participation of women in Science, Engineering and Technology (SET) at all levels; and to promote women in SET in Namibia with the aim of enhancing their full participation in the socio-economic development of Namibia through the application of scientific knowledge and technological innovation. The charter for the establishment of the NAMWISET Chapter is planned for the next financial year.

4.1.2 Specific Awareness Programmes Through Workshops

(a) Reviewers' Training Workshop

The NCRST conducted a training workshop for academic reviewers in March 2016. The overall goal of the reviewers training workshop was to upgrade effective knowledge and skills to better streamline the NCRST evaluation process. One of the key activities of the training focused on the guidelines for reviewing the quality of research project proposals, reviewing NCRST current guidelines for reviewers, as well as reviewers' incentives. Academic reviewers play a significant role in the evaluation process of the NCRST grant management process, and the organisation depends on a team of reviewers to help assess the quality, scientific validity, authenticity, innovativeness, and usefulness of the research proposals received during each research call. A total of 21 reviewers and potential reviewers attended the workshop and this is expected to strengthen the NCRST's reviewer pool through broad-based participation.

(b) Researchers' Workshop Under the Namibia-South Africa Bilateral Agreement

The NCRST and the National Research Foundation of South Africa (NRF) hosted a bilateral researchers' workshop in September 2015 in Namibia. The main objective of the workshop was for researchers to present progress reports for the research projects being undertaken under the joint collaboration. A total of 91 researchers attended and presented their research findings. Approximately 30 of the researchers were from South Africa.

(c) Consultations on Innovation

The NCRST has engaged in a series of innovation diffusion and sensitisation sessions with the City of Windhoek's Bokamoso Incubation Centre, to encourage youth to participate in entrepreneurial and innovation programmes.

5. STRATEGIC THEME 2: FURTHER STAKEHOLDER COOPERATION AND ALIGNMENT

This strategic theme calls for development of a research and innovation eco-system in Namibia fostered through enhanced cooperation both at local as well as at regional and international levels. The specific objectives are focused on strengthening linkages with and amongst stakeholders within the RSTI funnel.

Our efforts to form partnership have yielded some results with the achievement of 47% of the targeted institutions. The country-to-country agreements could only be effectively concluded and implemented with 19% of the targeted countries, as indicated in Table 2.

Table 2: Performance indicators focused on strengthening linkages with and amongst stakeholders within the RSTI funnel value

Performance indicator	Target	Achieved
% of agreed list of country cooperation agreements active	65%	19%
% of specified organisations linked through cooperation agreements within an identified/listed spectrum of fields	45%	47%

The targets through specific interventions aimed at fostering smart partnership and cooperation involving educational institutions and various industries, cooperation of research units in interdisciplinary projects, relevant institutions in the region and beyond as reported below.

5.1 Establish and Strengthen Linkages With and Amongst Stakeholders within the RSTI Funnel

This specific objective underscores that the solutions of tomorrow evolve in the junction where different perspectives and competences meet. They are developed in the meeting between different people, industries, and sectors. Understanding this, the NCRST works to connect innovative actors in different sectors and fields of knowledge with one another.

5.1.1 Regional and International Cooperation

(a) Cooperation with South Africa

The Namibia/South Africa Bilateral Agreement signed in March 2005 has taken science and technology to higher frontiers in Namibia. Namibia values this agreement as a critical instrument for advancing STI for its national economic competitiveness. In accordance with Article 6 of the Agreement, parties of the Agreement are expected to hold an annual joint committee meeting to review progress on the agreed research priority areas.

At the meeting held in Pretoria in March 2015, Namibia and South Africa signed a joint plan of action for 2015/16, which includes the following: the signing of an agency-to-agency agreement between the NCRST and NRF; and also between the NCRST and Technology Innovation Agency of South Africa (TIA).

The NCRST and the NRF entered into an MoU in September 2015. The objective of this MoU is to promote cooperation in the fields of science, including social sciences and humanities, and technology and innovation between the parties on the basis of equality and mutual benefit. The two parties agreed to cooperate in the following priority areas of STI taking into consideration each country's needs and capabilities: biosciences (with focus on food, agriculture, and health technologies); space science (with emphasis on astronomy and earth observation); IKS; mathematical sciences; mineral resources (with focus value addition); laser sciences; energy (with emphasis on renewable energy and efficiency); ICT; logistics; and environment and tourism.

The NCRST and the TIA entered into an MoU in September 2015. The parties agreed to cooperate with each other in regard to the areas and matters related, to undertake joint reviews of research projects for potential technology development support, facilitate joint workshops/seminars on commercialisation and Intellectual Property (IP) management, experience sharing on the establishment of technology stations, start-ups, and incubation services, and training on technology management for government institutions/programmes /audiences.

(b) Cooperation with Botswana

The NCRST and Botswana Institution for Technology Research and Innovation (BITRI) entered into an MoU in September 2015. The purpose of this MoU is to facilitate support of collaborative research and exchange activities between BITRI and the NCRST.

(c) Cooperation with Finland

NCRST signed the DEMOLA Agreement with the New Factory International Company on 3 February 2015 to allow Namibian participation in the entire DEMOLA network. The partnership will see Namibia improving its national competitiveness in innovation and knowledge diffusion. The details of the implementation of this agreement are reported under the DEMOLA initiative under the strategic theme on innovation for the social sector.

(d) Global Research Council

The Governing Board of the Global Research Council (GRC) selected Namibia to host the Africa Regional Consultation of the GRC in 2015. The NCRST and the NRF have been competitively selected as co-host of the Africa Regional Consultation of the GRC. The regional consultation, in parallel with five others, are taking place around the globe and has as its primary aim to facilitate and coordinate deliberations and input on the main themes identified by the GRC Governing Board for the 2016, which will be held in New Delhi, India in May 2016. Formed in 2012, GRC brings together Heads of Research Councils (HORCs) to compare notes on common challenges and discuss cooperation. Topics for discussion by HORCs from around the world in May 2016 will include issues affecting women in the scientific workforce and how to promote interdisciplinary research.

For the Africa Regional Consultation, the NCRST in partnership with NRF, with the generous support from the German Research Foundation (DFG), hosted the African Regional Consultation under the overarching open forum entitled "GRC African Summit." The summit, which was held in Swakopmund in November 2015, attracted a number of HORCs from major research funding agencies from Japan, the United States of America, and Europe. These include, among others, the head of the Japanese Society of the Promotion of Science (JSPS), the National Science Foundation (NSF) of the United States of America and the DFG.

5.1.2 Cooperation within Namibia

(a) NCRST Cooperation with CRAN

The NCRST and CRAN signed an MoU in January 2016. The NCRST and CRAN have agreed to collaborate in applied research and awareness related to ICT. The purpose of this MoU is to clearly identify the roles and responsibilities of each party as they relate to the planning of collaborative R&D, educational and training activities of mutual interests and where appropriate, the joint funding of these planned collaborative efforts. In particular, this MoU is intended to promote applied research and capacity development on the socio-economic impact (and assess capacity) of IT usage in Namibia, promote applied research on and awareness of cyber security threats and develop globally-relevant strategies to secure ICT's resources and users of the country, promote applied research and develop application on sectoral information systems, and promote green ICT practices, with specific focus on e-waste.

(b) NCRST Cooperation with the Namibia Students Financial Assistance Fund (NSFAF)

A co-funding MoU was signed with the NSFAF in January 2016. The two institutions agreed to co-finance postgraduate students in the areas as identified in the NPRSTI. The NSFAF and NCRST agree to co-fund students' postgraduate education in areas as identified in the NPRSTI read with the NSFAF funding and award criteria, by way of the contributions as in accordance with the timeframes as required by the applicable institutions of higher learning, through jointly issuance of calls for application for postgraduate scholarship and research grants.

(c) NCRST Cooperation with the Namibian Statistics Agency (NSA)

The NCRST and the NSA continue to implement the MoU that was signed in 2014. The purpose of this MoU is to set out the respective areas of responsibilities between the two institutions. The MoU provides a framework for the NCRST and NSA to agree on mutual areas of cooperation, including commissioning the conducting of surveys, such as the R&D and innovation survey. As part of the implementation plan under the MoU, the two institutions launched an R&D and innovation survey. This was preceded by training of staff from NCRST, the University of Namibia (UNAM), NSA, and enumerators by resource persons from the Centre for Science, Technology and Innovation Indicators (CeSTII) at the Human Science Research Council (HSRC) in South Africa, the New Partnership for Africa's Development (NEPAD) Agency ASTII Hub experts in July 2015, who imparted technical skills on R&D and innovation data collection procedures.

6. STRATEGIC THEME 3: ALIGNMENT AND INTEGRATION OF REGULATORY ENVIRONMENT

The NCRST is mandated under section 5 (1) (c) of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004) to coordinate and facilitate the development of research, science and technology on national, regional, and local level, and to provide direction and policy guidance to the research, science, and technology innovation systems in Namibian. With the implementation of this NPRSTI, we are presented with opportunities to formulate and design evidence-based and robust RSTI-related policies and legislation that would guide investments in science, research, and innovation during this NPRSTI and the Fourth National Development Plan (NDP4) and beyond, paying the necessary attention to align the strategies of the different stakeholders. The specific objectives in this regards are to facilitate an enabling regulatory environment for stakeholder in RSTI.

Our efforts to facilitate an enabling regulatory environment resulted in 94% stakeholder groups engaged during the drafting of legislative documents. In terms of tracking progress in developing and implementing the regulatory framework, we achieved 55% and 34%, respectively, as indicated in Table 3.

Table 3: Performance indicators focused on facilitating an enabling regulatory environment

Performance indictor	Target	Achieved
% stakeholder groups engaged during the drafting of legislative documents	50%	94%
% regulatory framework developed and/or reviewed to plan	60%	55%
Degree of regulatory framework implemented to plan	40%	34%

6.1 Facilitate an Enabling Regulatory Environment for Stakeholders in RSTI

An enabling policy and legislative environment is a prerequisite for Namibian scientists and innovators across various research and innovation institutions to be able to apply their intellectual capacity, design and implement cutting edge innovation and technology projects, which could have the ability to improve scientific knowledge and technical capacity and provide benefits to Namibians.

6.1.1 Development and Implementation of Policy

(a) R&D and Innovation Census

The NCRST in collaboration with the NSA and the UNAM conducted the R&D Census and the Innovation Census in 2015. The analysis is being performed with the assistance from the CeSTII at the HSRC in South Africa, the New Partnership for Africa's Development (NEPAD) Agency ASTII Hub. The report is expected to be produced in the next financial year, which will provide the basis for the formulation of the new National Science, Technology and Innovation Policy.

(b) The New Science, Technology and Innovation Policy

Namibia is in the process of formulating a new modern policy framework for STI. The formulation of the new policy framework is being informed by a thorough review of Namibia's National System of Innovation (NSI) and the evaluation of the implementation of the NRST Policy of 1999. An initial stakeholder consultative workshop on the review process of the RST Policy of 1999 was held in February 2016 to sensitise the stakeholders on the review process; and to get their inputs into the draft document on the review of the National RST Policy and NSI. The new National STI Policy and its implementation plan are expected to be completed in the next financial year.

(c) Implementation and Monitoring and Evaluation Framework for the NPRSTI

In terms of section 18 of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004), subject to subsection (2), the NCRST, once in every three years, or at such other intervals as the Minister may determine, must prepare a national programme for research, science, and technology for the following three years, or such other period as the Minister may determine. The NCRST facilitated the development of the implementation and Monitoring and Evaluation (M&E) plan of the NPRSTI through a wider consultation with stakeholders during the period under review. The implementation plan will guide the stakeholders on specific initiatives for implementation during a given financial year, while the M&E plan for the NPRSTI serves as a tool to plan and manage the process of monitoring, evaluating, and reporting on progress made on the implementation of the programme.

(d) National Strategy for R& D Infrastructure

The NCRST has through stakeholder consultation facilitated the development of Namibia's first National Strategy on Research, Science, Technology and Innovation (RSTI) Infrastructure. The strategy seeks to address the challenge of inadequate research infrastructure in Namibia through establishing relevant infrastructure and dedicated STI that will cater for the enhancement and strengthening of the STI value chain, in order for RSTI to successfully play its meaningful role of driving Namibia to becoming a knowledge-based economy. The national strategy is set to harness and guide the operations pertaining to research and innovation and how it is envisioned to create benefits through various technologies.

The implementation plan outlines the detailed investments required for the period 2017/18 to 2020/21 to achieve the following objectives:

- Advance R&D through facilitating the establishment of a national STI facility;
- Enhance and upgrade existing STI facilities through an appropriate funding mechanism;
- Ensure optimum utilisation of STI facilities through promoting collaborations and fostering open access; and
- Strengthen human capacity to ensure effective utilisation of STI facilities.

The strategy will be submitted to the Cabinet through the Ministry of Higher Education, Training and Development for approval during the following financial year.

(e) National Space Science Policy and Strategy

During the period under review the NCRST facilitated the drafting of the National Policy on Space Science and Technology to address the current situation of fragmented initiatives within the space arena being conducted in Namibia and to create an opportunity for synergies and complementarities. This policy will among other things facilitate the urgent need to build national awareness on the critical need to introduce space science into the education curriculum that will in turn assist in developing space programmes and related industries. This draft policy is currently undergoing wide stakeholder consultations. This will be followed by the formulation of the National Space Science Strategy that will guide the implementation of a national space science programme to enable the country to exploit its space resources in a more coordinated manner with the overarching objectives of contributing to the country's socio-economic development. The policy and strategy will be submitted to the Cabinet through the Ministry of Higher Education, Training and Development for approval during the following financial year.

(f) National Indigenous Knowledge System Policy

The NCRST is facilitating the formulation of the National IKS Policy in response to a commitment made by stakeholders involved in IKS matter during the development of the NPRSTI, who identified the need for a national policy framework to guide the protection and preservation of IKS knowledge holders in Namibia.

As part of this process, members of the IKS council carried out as benchmarking visit to Mali to draw lessons that will help them develop a policy addressing the challenges related to protection and preservation of our indigenous knowledge.

6.1.2 Development and Implementation of Legislative Instruments

(a) Biosafety Act, 2006 (Act No. 7 of 2006) and Regulations

During the period under review the NCRST coordinated the drafting of regulations to the Biosafety Act, 2006 (Act No. 7 of 2006). These regulations were drafted through extensive stakeholder consultation and benchmarked internationally. The regulations were endorsed by the Minister responsible for science and technology and have been submitted to the Chief Legal Drafter for further finalisation and gazetting. Once gazetted, the Minister will by notice in the government gazette determine the commencement date for the Biosafety Regulations, which will pave the way for a comprehensive implementation of the biosafety framework in Namibia.

(b) Research, Science and Technology Act and Regulations

The NCRST facilitated the amendment to the regulations under the Research, Science and Technology Act, 2004 (Act No. 23 of 2004), made by the Minister responsible for science and technology by Government Gazette no. 208 of 11 November 2011. An amendment, which deleted the words "Namibian Researchers" in the regulations, was published in the Government Gazette No. 5990 of 15 April 2016. The NCRST has also been working with the Office of the Attorney General to draft the Research, Science and Technology, Act amendment bill.

7. STRATEGIC THEME 4: BUILDING RESEARCH CAPACITIES AND TECHNICAL SKILLS

New knowledge and competence are necessary to create the innovations of the future. Therefore, we support R&D programmes that benefit our community. In line with the NPRSTI the NCRST focuses on the following priority research areas: health; agriculture; energy; water; geoscience and mining; environment and tourism; social sciences; logistics; ICT; manufacturing technologies; biotechnology; and space sciences. The focus is to build human resources capacity in RSTI and build research and innovation infrastructure, which address the research needs under the various NPRSTI. Our efforts to build human resources capacity in RSTI have resulted in around 163 postgraduate students (Masters and Doctoral students) participating in NCRST funded projects as indicated in Table 4.

Table 4: Performance indicators focused on build human resources capacity in RSTI

Build human resources capacity in RSTI	Target	Achieved
[3]# of postgraduate students trained as a direct effort of NCRST	N/A	163

With regards to building research and innovation infrastructure, the target is set for the completion of some key facilities toward the end of 2018/19, hence only progress in terms of implementation will be reported. We will now report on specific initiatives performed, aimed at building human resources capacity in RSTI and building research and innovation infrastructure.

7.1 Build Human Resources Capacity in RSTI

The NCRST has developed a funding framework and its associated und rules and procedure in which we have specific funding instruments. These instruments include:

- R&D funding programme;
- ITD programme;
- National infrastructure and flagship programmes; and
- Capacity building.

(a) Funded R&D and Capacity Building

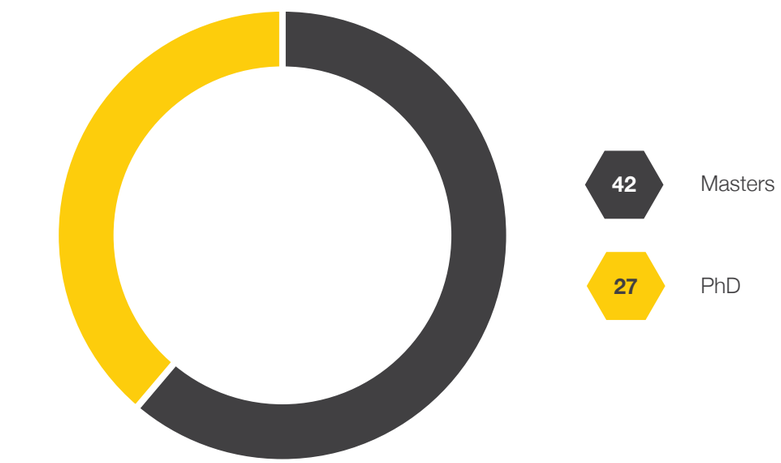
During the period under review the NCRST issued two calls that have been funded as follows:

- The call for full time Doctoral research students was launched in January 2015. The call attracted over 97 applications of which 27 projects were funded to the value of N$1.8 million for a period of two years starting on 1 October 2016; and
- Taking into consideration the low approval rate, the NCRST issued another call for both full time and part time Masters research students in September 2015. The call attracted over 45 applications of which 42 projects were funded to the value of N$2.76 million for a period of two years starting in May 2016.

[3]This indicator was not set as part of the strategic plan but as part of the three-year National Programme on Research, Science and Technology

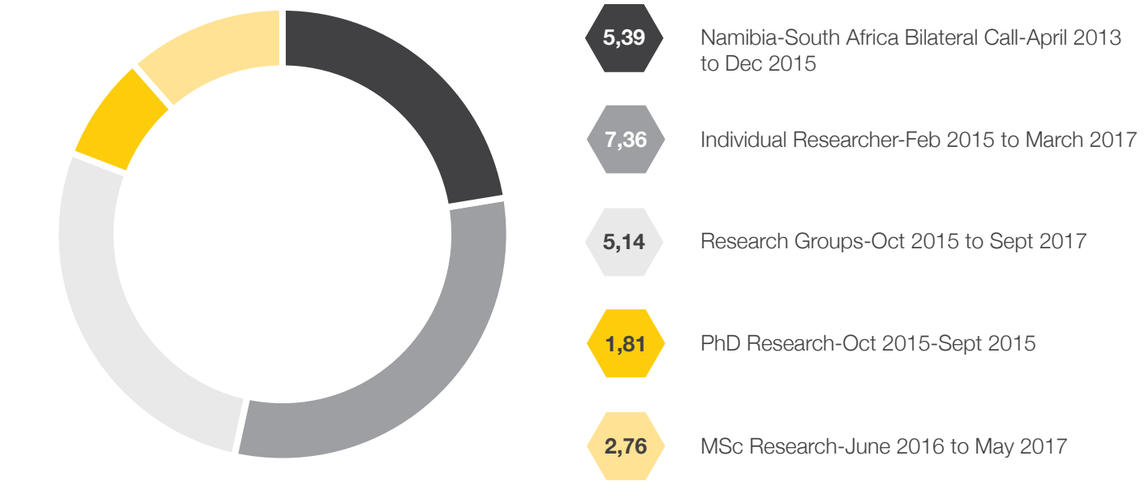
The NCRST funding of 69 students who are undertaking research towards higher education qualifications is in line with the commitment to build a critical mass of researchers. Progress in terms of the current distribution is shown in Figure 1.

Figure 1: Number of scholarships awarded by NCRST towards building a critical mass of researchers



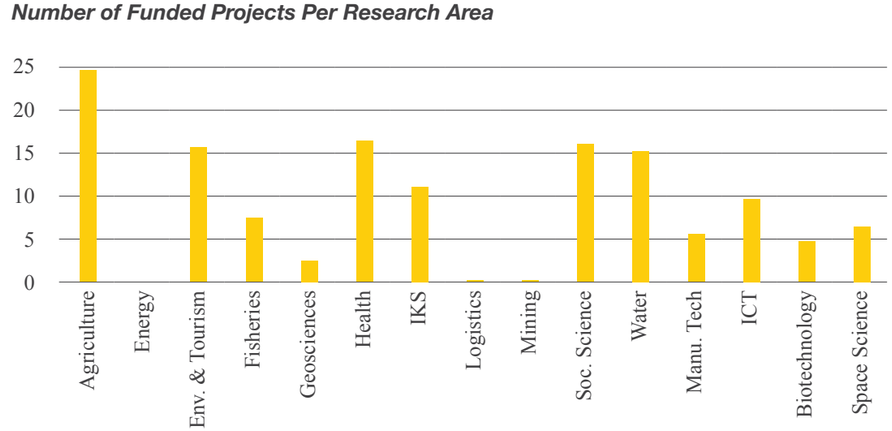
In addition to the capacity building support that the NCRST is providing towards developing the required critical mass of researchers, the NCRST is already funding research projects performed by researchers at various institutions in Namibia. In total, 134 R&D projects are being funded by the NCRST to the value of N$22.46 million under different funding instruments as shown in Figure 2.

Figure 2: Funding amount for different funding instruments since 2013



The funded projects are in line with the national priority areas as set out in the NPRSTI as indicated in Figure 3.

Figure 3: Projects funded per research priority area



It is important to note that the NCRST funding is done on a competitive basis through a peer review of project proposal to ensure excellence in R&D. In view of the above, we focus our funding to Namibians with a proven track record in R&D. Researchers at higher education institutions represent the highest percentage of beneficiaries of the NCRST funding towards R&D.

(b) R&D Projects Under Review for Funding

The NCRST issued a National Call for Research Proposals in February 2016 closing on 15 April 2016, inviting interested universities/research institutions to submit proposals that will improve their capacity for enhancing the quality of research. Funding is open to disciplines that support the priority research areas as indicated in the NPRSTI. The purpose of the NCRST National Call for Strengthening Research Capacity at Universities is to provide an opportunity for Namibian universities and research institutions to strengthen their research capacity, particularly towards increased postgraduate students output through a long term (two to three year) programme. Each project is allocated a maximum at N$1.5 million per year. The research proposals will be subjected to an external review process consisting against the following criteria: scientific merit; modern and robust study methodology and design; feasibility and clarity of the research; output orientated approach; significance to national priorities; capacity development and skills transfer component; and a realistic budget estimate. The approval for this call will be made during the next financial year.

(c) Establishment of Research Chair

During the period under review, the NCRST has finalised the MoU with the NRF on the management of a research chair in astronomy and astrophysics. The MoU will be signed during the next financial year, after which a joint call will be issued.

7.2 Building Research and Innovation Infrastructure

Namibia is faced with a challenge of inadequate scientific and technological infrastructure to support the advancement of research, innovation, and development. Therefore, the NCRST has solicited the services of a team of consultants led by Agostihno Ferreira Architects to design and construct the NRSTI valley, which will address this shortage. The national RSTI valley would house the following facilities, namely: NCRST headquarters; innovation hub; national testing, training, and research laboratories; and a national science demonstration centre, with specific functions as outlined below:

- **National science and technology demonstration centre:** Aimed at presenting science and technology in a stimulating and engaging environment that combines entertainment with education through demonstrations, workshop shows, and exhibitions, tailor made to the Namibian setup;
- **The national innovation hub:** Provides state-of-the-art facilities to attract R&D activities within the hub and increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated business and knowledge–based institution. It will also create a synergistic environment where innovators and academia can share learning, create working partnerships, and do business together; and
- **The national testing, training and research facility:** This will contain components of laboratories in different fields where other natural science tests and research will be conducted. The facility will be accessible to academia, industry, and private sector institutions who want to conduct R&D.

These facilities will allow academia and industry to have access to state-of-the-art equipment for their research as well as product and technology development initiatives. This project is being realised as result of a cordial relationship between UNAM and NCRST, as UNAM agreed to avail seven hectares of land for construction of the valley.

8. STRATEGIC THEME 5: PROMOTING INNOVATION IN THE ECONOMIC AND SOCIAL SECTORS

In an innovative Namibia, people need to be able to create, utilise, and implement new, useful knowledge and new ideas. That is why the NCRST invests in strengthening the country's innovative capacity, especially within particularly important target groups. Under this theme the specific objective is focused on promoting knowledge transfer towards final users. The success of our efforts will be measured in terms of number of new products and services initiated and also in terms of number of new IPRs registered.

8.1 Promote Knowledge Transfer Towards Final Users

(a) Funding of Innovation

A Call for Youth Innovators was launched in January 2015. The call attracted over 73 applications of which 11 were funded to the value of N$4.2 million for a period of two years from January 2016 to December 2017. In addition to the grant funding, the 11 young innovators have received a six-month business development, training and mentorship course aimed at strengthening their business and financial management skills. There has been significant progress shown by youth in terms of project implementation. The success stories are reported under Part III.

The NCRST has launched the Innovation Challenge for the year 2016. The call is open throughout the year with three periodic closures to allow evaluations as follows:

- First open period: 15 February to 15 March 2016;
- Second open period: 15 June 2016 to 15 July 2016; and
- Third open period: 15 October 2016 to 15 November 2016.

The Innovation Challenge (first open period) attracted over 61 applications. The applications are screened internally and thereafter the shortlisted candidates will be invited make a presentation to an external evaluation panel of judges.

(b) Technology Adaptation Programme

NCRST through the technology adaptation/transfer programme aims to assist the local community in terms of technology identification, adaptation, development, and transfer. This is achieved through networking technology seekers and suppliers. The following activities are therefore carried out:

- Identification of technological inclined projects with potential value addition to the Namibian community;
- Advice on intellectual property arrangements; and
- Assist the identified projects with the prospect of commercialisation of the identified technologies and innovations.

So far two projects have been approved for funding on the basis of their viability and how they improve the quality of goods and services produced in the country.

(c) Operationalisation of DEMOLA

The NCRST signed the DEMOLA Agreement with the New Factory International Company on 3 February 2016 to allow Namibian participation in the entire DEMOLA network. DEMOLA is a collaborative open innovation platform concept where university students develop product and service demos together with companies and create new solutions to real-life problems. The partnership will see Namibia improving its national competitiveness in innovation and knowledge diffusion.

The NCRST has been engaging all relevant stakeholders to sensitise them about the benefit of the network. It is worth to report that there was a positive cooperation from industry and institutions of higher learning in Namibia, where many lecturers agreed to serve as mentors to the students who intend to apply for these innovation challenges. The DEMOLA initiative will be formally launched during the next financial year.

PART III: NCRST FUNDED RESEARCH AND INNOVATION PROJECTS

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PART III: NCRST FUNDED RESEARCH AND INNOVATION PROJECTS

9 RESEARCH AND INNOVATION PROJECTS

9.1 List of All Funded R&D & I Projects and Deliverables

(a) Projects Funded under the South Africa-Namibia Cooperation Agreement

Under the South Africa-Namibia Cooperation Agreement, the NCRST and the NRF subsequently have funded 30 research proposals under the Joint Third Call (2013) to the value of N$5,390,442 for a period 1 April 2013 up to 31 December 2016. These projects represented a range of disciplines, such as animal sciences, computer science, education, environmental sciences, food sciences, microbiology, molecular genetics, astronomy, IKS, and oceanography. The grant recipients have provided the reports which are summarised in the Table 5 below. The grants awarded under the bilateral call are expected to make a meaningful contribution to the attainment of targets set out in the NPRSTI, in that about 42 scientific publications have been authored, 36 students enrolled for Bachelor of Science degrees and 22 students enrolled for the MSc programme. The PhD programme has seven students who are currently carrying out research work in the projects funded under this bilateral agreement.

Table 5: Funded projects and their output

Number	Project title	Priority research area	Institutions	Outputs
1.	Testing Climate Change Responses of Fauna of a Fog-dependent Desert, Using Lizards as Indicator Species	Environment	University of the Witwatersrand/Gobabeb Research and Training Foundation	PhD (0) Masters (2) Honours (2) Publications (8) Patents (0)
2.	Tracking Impacts of Climate Change on the West Coast of South Africa	Environment	UNISA/Gobabeb Research and Training Foundation	PhD (0) Masters (1) Honours (0) Publications (5) Patents (0)
3.	Environmental and Anthropogenic-determined Spatial and Temporal Patterns of Plant Health of Welwitchia Mirabilis in the Central Namib Desert	Environment	Gobabeb Research and Training Centre/North-West University South Africa	PhD (0) Masters (1) Honours (0) Publications (1) Patents (0)
4.	Remote Sensing of the Upper Ionised and Lower Neutral Atmosphere Using Signals from Global Navigation Satellite Systems and Satellite-borne Radio Beacons	Space Science	Namibia University of Science and Technology (NUST)/South African National Space Agency	PhD (0) Masters (0) Honours (2) Publications (1) Patents (0)
5.	Geomagnetic Disturbance Monitoring in Namibia	Space Science	NUST/SANSA Space Science	PhD (0) Masters (0) Honours (5) Publications (10) Patents (0)
6.	Evaluation of Antibacterial Properties of Moringa Species Found in South Africa and Namibia and the Development of Seeds Biosand Filters	Water	NUST/University of Johannesburg	PhD (0) Masters (0) Honours (3) Publications (0) Patents (0)

Number	Project title	Priority research area	Institutions	Outputs
7.	An Evidence-based and Standardised Digital Forensic Framework for Cloud Computing and Solid State Drives (SSDs)	ICT	NUST/University of Pretoria	PhD (2) Masters (0) Honours (0) Publications (0) Patents (0)
8.	What Works in HIV and AIDS and the World of Work in the South African and Namibian Tourism Industry?	Tourism	NUST/Social Aspect of HIV/ AIDS Research Alliance (SAHARA)	PhD (0) Masters (4) Honours (0) Publications (0) Patents (0)
9.	Live Design, Transform Life: Mobile Education and Service design to Promote Gifted Youth Development for Innovation	ICT	NUST/Cape Peninsula University of Technology	PhD (0) Masters (1) Honours (6) Publications (3) Patents (0)
10.	Assessing Ecological Knowledge and Adaptations to Climate and Environmental Change Amongst Rural Communities Along an Aridity Gradient from Namibia to South Africa	Agriculture	UNAM/Agricultural Research Council	PhD (1) Masters (1) Honours (0) Publications (0) Patents (0)
11.	Ethno Botanical Knowledge on Medicinal Plants Uses by Traditional Healers in Kavango, Namibia and the Western Cape, South Africa (Plants Validation)	Indigenous Knowledge	UNAM/University of Western Cape	PhD (0) Masters (0) Honours (5) Publications (5) Patents (0)
12.	Capacity Development in NMR Spectroscopy for Molecular Structure Determination of Indigenous Plant Extracts	Indigenous Knowledge	UNAM/University of Pretoria	PhD (0) Masters (3) Honours (6) Publications (0) Patents (0)
13.	Study on Namibia Dust Emission Hot Spots and the Processes	Environment	UNAM and University of Cape Town	PhD (0) Masters (0) Honours (1) Publications (0) Patents (0)
14.	Indigenous Knowledge in Reproductive Practices and Health Care: An Intergenerational Comparative Study of Namibian and South African Rural Women	Indigenous Knowledge	UNAM/University of Johannesburg	PhD (1) Masters (1) Honours (0) Publications (1) Patents (0)
15.	Genetic Variability of the MHC Class II in Indigenous Cattle Breeds of Namibia and South Africa	Agriculture	NUST/University of Pretoria	PhD (0) Masters (0) Honours (2) Publications (1) Patents (0)
16.	Identification of Toxic Compounds in Helichrysum Argyrosphaerum, a Plant Responsible for Livestock Poisoning in Southern Africa	Agriculture	Stellenbosch University/ UNAM	PhD (0) Masters (3) Honours (1) Publications (0) Patents (0)
17.	Understanding the Interdependence of Water Resources, Climate Change and Biodiversity in Arid to Semi-arid Regions of Namibia	Water	UNAM/University of Stellenbosch	PhD (1) Masters (1) Honours (2) Publications (1) Patents (0)

Number	Project title	Priority research area	Institutions	Outputs
18.	Mycorrhizal Fugal Interaction of Aloe Species and Commercial Propagation and Conservation	Health	UNAM and Rhodes University	PhD (0) Masters (1) Honours (0) Publications (1) Patents (0)
19.	Isolation and Characterisation of Starch from Marama (Tylosema Esculentum) Tuber (Root)	Agriculture	UNAM/University of Pretoria	PhD (0) Masters (1) Honours (0) Publications (1) Patents (0)
20.	Enhancing Capacity to Access, Use and Efficiently Manage Scarce Water Resources in Rural Communities: Experiences from Namibia and South Africa	Water	HSRC/UNAM	PhD (1) Masters (1) Honours (0) Publications (4) Patents (0)
21.	Phytoplankton Community Structure in the Northern Benguela Eco-system	Fisheries	Bayworld/Ministry of Fisheries and Marine Resources	PhD (1) Masters (2) Honours (1) Publications (1) Patents (0)
22.	Throughput Optimisation of Broadband FSO Networks Under the Southern African Cloud Climatology	Environment	UNAM/Council for Scientific and Industrial Research (CSIR)	Data pending
23.	On-chip and Hybrid Passive Components for 94 GHz Near-earth Observation Transceivers	Space Science	NUST and University of Pretoria	Data pending
24.	Environmental Education for Sustainable Development (EE for SD) in Namibia and South African Schools	Environment	UNAM and North-West University	Data pending
25.	An Investigation Into the Ethnoveterinary Practices of Communal Farmers	Agriculture	UNAM and University of Fort Hare	Data pending
26.	Screening of Indigenous Namibia Mushrooms for Their Antimalarial Activities Against Sensitive and Resistant Strains of the Malaria Parasites	Agriculture	UNAM and MRC	Data pending
27.	The Use of Sheep Ewes as Incubators for Fertilisation of Bovine Gametes and Embryo Culture, Followed by Transfers Recipient Cows - a Sustainable Alternative for Natural farming	Agriculture	UNAM and University of Venda	Data pending
28.	Investigation of the Genetic Component of Oxalate Nephrosis in the Cheetah	Biotechnology, Tourism and Environment	Cheetah Conservation Fund	Data pending
29.	Meat Quality in Relation to Quality Assurance Schemes at Namibia and South African Abattoirs	Agriculture	UNAM and University of Fort Hare	Data pending
30.	Assessing the Distribution, Abundance and Migrations of Antarctic Blue Whales off the Coasts of West South Africa and Namibia	Fisheries	Ministry of Fisheries and Iziko SA Museum	Data pending
			Totals	PhD (7) Masters (22) Honours (36) Publications (42) Patents (0) Data is pending for nine projects

(b) Projects Funded Under the First National Call National Call for Individual Researchers

Under the First National Call for Research, the NCRST is funding 23 projects being performed by individual researchers to the value of N$7,369,060 for the period 1 February 2015 up to 31 March 2017. The projects are in nine research disciplines, namely, biosciences, energy, ICT, IKS, laser sciences, mineral resources, mathematical sciences, space sciences and social sciences. The grant recipients have provided the reports that are summarised in Table 6 below. About 17 scientific publications have been authored, 41 students enrolled for Bachelor of Science degrees and 11 students enrolled for the MSc programme. The PhD programme has five students who are currently carrying out research work in the projects funded under this call.

Table 6: Funded projects and their output

Number	Project title	Priority research area	Institutions	Outputs
1.	Rehabilitation of Sand Mining Pits in North Central Namibia	Space science	UNAM	PhD (0) Masters (0) Honours (5) Publications (0) Patents (0)
2.	Profiling Studies of Namibian Indigenous Seed Oils	Agriculture	UNAM	PhD (1) Masters (0) Honours (1) Publications (1) Patents (0)
3.	Urban Livelihoods, Quality of Life and Health in Informal Settlements of Windhoek, Namibia	Social sciences	UNAM	PhD (0) Masters (1) Honours (1) Publications (1) Patents (0)
4.	A Botanical Filed guide of Omusati Region, Central Northern Namibia	IKS	UNAM	PhD (0) Masters (0) Honours (3) Publications (0) Patents (0)
5.	Potential of Urea Treated De-bushed Biomass Pellets as Supplementary Feed for Cattle	Agriculture	UNAM	Report pending
6.	The Development and Validation of High Throughput Screens for Drug Discovery from Medicinal Plants	IKS	UNAM	PhD (0) Masters (0) Honours (1) Publications (1) Patents (0)

Number	Project title	Priority research area	Institutions	Outputs
7.	In Search of Innovative Models of Developing Sustainable Health Policies and Practices Through Linking Indigenous Knowledge to Literacy	IKS	UNAM	PhD (1) Masters (3) Honours (0) Publications (1) Patents (0)
8.	Monitoring of Ocean Acidification Along the Namibian Continental Shelf and Its Impact on Namibian Oyster Culture Industry	Fisheries	UNAM	PhD (1) Masters (0) Honours (3) Publications (2) Patents (0)
9.	Application of Artificial Devices to Monitor Levels of Organic and Metal Pollutants along the Namibian Coastline	Environment	UNAM	Report pending
10.	The Microbiology of Eendjeke Additive and Their Effect on Fermented Pearl Millet Flour	Agriculture	UNAM	PhD (0) Masters (2) Honours (0) Publications (0) Patents (0)
11.	Aroma Profiling, Shelf Life Extension, Starch, Structure Elucidation, Sensory Evaluation and Meta-genomic Analysis of Oshikundu: Cereal Fermented Beverage from Namibia	Agriculture	UNAM	PhD (1) Masters (0) Honours (3) Publications (2) Patents (0)
12.	Development of High Seed Producing Marama Bean: An Arid Adapted Nutrition Bean (DoHMB)	Agriculture	UNAM	PhD (0) Masters (0) Honours (4) Publications (0) Patents (0)
13.	Evaluation of Ethnoveterinary Medicinal Plants of Namibia	Agriculture	UNAM	Report pending
14.	The Development of a Plant-based Toothbrush Sanitiser	Agriculture	UNAM	PhD (0) Masters (0) Honours (1) Publications (1) Patents (0)
15.	Identification of Genetic Markers Associated with Pelt Quality Traits in Swakara Seep Breed	Agriculture	UNAM	PhD (0) Masters (0) Honours (2) Publications (2) Patents (0)
16.	Capturing and Preservation of Indigenous Knowledge in Namibia	IKS	Ministry of Education	PhD (0) Masters (0) Honours (0) Publications (0) Patents (1)
17.	Farmer Assisted Mobile Application	Agriculture	NUST	PhD (0) Masters (1) Honours (0) Publications (1) Patents (0)
18.	Computer Science and Cultural Institutions	IKS	NUST	Report pending
19.	Integrated Agriculture Technologies for Small Holding Farming	Agriculture	NUST	PhD (0) Masters (0) Honours (5) Publications (1) Patents (0)
20.	Fabrication and Optimisation on an Electrolytic Cell for the Production of Chemical Products and Fertilisers Using Bring Solution	Agriculture	NUST	PhD (0) Masters (1) Honours (2) Publications (1) Patents (0)
21.	Setting Up of a Point of Care Diagnostic Testing and Research Centre of Excellence for HIV and HIV-related Diseases in Namibia	Social sciences	NUST	PhD (0) Masters (1) Honours (3) Publications (0) Patents (0)
22.	Namibian Communities' Indigenous Knowledge Management System	IKS	NUST	PhD (0) Masters (1) Honours (7) Publications (3) Patents (0)
23.	An Automated Road Quality Assessment Framework for Namibia	Mathematical sciences	NUST	PhD (1) Masters (1) Honours (0) Publications (0) Patents (0)
			Totals	PhD (5) Masters (11) Honours (41) Publications (17) Patents (1)

(c) Project Funded Under the Second National Call for Research Groups

Under the Second National Call for Research Groups, the NCRST is funding 14 projects to the value of N$5,143,524 for the period 1 October 2015 up to 31 September 2017. The projects are in 15 priority research areas as outlined in the NPRSTI, namely:

- Research areas addressing social and economic challenges: Health; agriculture; fisheries; water; energy; geosciences; mining; IKS; social sciences and humanities; logistics; and environment and tourism; and
- Research areas addressing social and economic challenges: Manufacturing technologies; ICT; biotechnology; and space science.

Although the projects only commenced in the second half of the financial year, the preliminary report provided by the recipients indicates that 45 students are participating in the projects and that six publications are being authored as summarised in Table 7.

Table 7: Funded projects and their output

Number	Project title	Priority research area	Institutions	Capacity development support to undergraduate and postgraduate students
1.	Water-air-climate Interaction in Namibia	Water	NUST	Students (4)
2.	A Survey of Incidences, Distribution and Chemico-dynamics of Physiologically Disruptive Arsenic (As) and Other Toxic Metals (Cd, Mn, Zn and Cu)	Environment	NUST	Publications (4)
3.	International Corpus of English Namibia	Social sciences	NUST	Students (5)
4.	Prevalence of Toxoplasma Gondii, Rubella and Cytomegalovirus Among Pregnant Women Attending the Antenatal at Windhoek Central Hospital, Namibia	Health	NUST	Students (2)
5.	Recycling by Bicycle: A Green Alternative to Expand Recycling and Create Jobs in the Ongwediva Town, Namibia	Environment	NUST	Students (4)
6.	Energy Generation from Urban Waste	Energy	African Expert Federation	Students(3) Publications (2)
7.	Case Management (CM) by Social Workers as an Effective Service Delivery Framework in Namibia	Social sciences	UNAM	Students (4)
8.	Reducing the Risk of Algal Toxicity Through Improvement of Algal Toxin Assessment Methods and Removal of Algal Toxicity Within the Swakoppoort Dam, Namibia	Water	UNAM	Students(3)

Number	Project title	Priority research area	Institutions	Capacity development support to undergraduate and postgraduate students
9.	Geochemistry and Geophysics of Basement Rocks in Namibia	Geosciences	UNAM	Students (3)
10.	Biodiversity Conservation and Tourism Development in Impalila Island, Namibia	Fisheries	UNAM	Students (4)
11.	Investigative of Active Galactic Nuclei with the H.E.S.S Telescopes	Space science	UNAM	Students (4)
12.	Application of Geosciences to Promote Conservation and Tourism in the Greater Waterberg Landscape (Project awaits clearance from the MET)	Environment	Cheetah Conservation Fund	Students (3)
13.	Neurofeedback and Mindfulness Cognitive Behavioural Therapy for Elderly People with Psychotic and Insomnia Symptoms and Related Mental Disorders	Health	Namibia Neurorehabilitation Research and Training Unit (NNRTU)	Students (4)
14.	Human Health Risk Assessment of Emerging Phycotoxins Affecting the Namibian Mariculture Industry	Fisheries	UNAM (SANUMARC)	Students (4)
			Total	Students (45) Publications (6)

10. INNOVATION PROJECTS

10.1 List of Funded Innovation Projects and Deliverables

Under the Fourth National Call for Youth Innovators, the NCRST is funding 11 projects to the value of N$4,222,913 for the period 1 January 2016 up to 31 December 2017.

This Call for Youth Innovators was aimed at Namibian youth between the ages of 19 and 35 years who are able to develop new ideas and creative thinking, while strengthening concepts of innovation and who are able to address enabling technologies, which will provide wide application solutions that address economic and social challenges within the Namibian society. The call focused on two research areas, namely manufacturing technologies and ICT, which have been identified as priority technology enablers in the NPRSTI for 2014/15 to 2016/17.

Although the projects only commenced in the last quarter of this financial year, the youth have demonstrate their commitment to execute their projects and tangible results have been achieved as summarised in section 10.2 under Success Stories. Table 8 lists the funded innovation projects and the expected outputs.

Table 8: Funded innovation projects and their output

Number	Project title	Priority research area	Company	Outputs
1.	Development of the Open Data Portal	ICT	Provespace Labs	Improved data service
2.	Owela Game	ICT	National Software Engineering Academy	Owela gaming product
3.	Ticket Booth Namibia	ICT	Silicon Business Solution Namibia	Ticketing service
4.	Mobile Application Pula 24	ICT	PULA24 Investments CC	Marketing service
5.	Save My City	ICT	Byteable Investments CC	Community service
6.	Stationery Manufacturing	Manufacturing technologies	Eco-Climate Smart Education Advancers	Stationery products
7.	Manufacturing of Scientific Reagents for Testing Laboratories	Manufacturing technologies	NSVP Scientific	Laboratory chemicals
8.	Cosmetic Manufacturing	Manufacturing technologies	Kiyomisandz Beauty Products CC	Cosmetic products
9.	Sustainable Mushroom Cultivation	Manufacturing technologies	Cuvelai Media	Mushroom products
10.	M&O Décor	Manufacturing technologies	M&O Décor Enterprise CC	Décor products
11.	100% Cotton Linen Manufacturing Plant	Manufacturing technologies	Lipitua Trading CC	Linen products
			Totals	Seven manufactured products and four new services

10.2 Success Stories of Innovation Projects

Although the innovation projects only started in the last quarter of the financial year, some of the projects have advances and are delivering tangible products. We have selected four projects to demonstrate the success stories of the effort by the NCRST and the youth innovators.

(a) Pula 24 Mobile Application

Project title: Pula 24 Mobile Application **Grant Recipient: Homateni Kapewangolo**	
Background	Pula 24 is a mobile application aimed at connecting entrepreneurs/SMEs/service providers /municipalities/ artists/organisations/ministries/agencies and so forth with consumers. Pula 24 can be installed on any mobile smart phone device and users can instantly start to use the application after installation. There are business/service providers that are not known and sometimes consumers tend to travel far distances just because they do not know where to find the service providers/suppliers. Pula 24 is a platform to directly link customers to suppliers.
Challenges	Namibia has a variety of businesses. Some are really good at what they do, some sell excellent quality products, and some provide top service quality. In addition, government has excellent initiatives in place. However, people do not know about them. Pula 24 would provide a platform where citizens can reach government, government can reach citizens, government can reach businesses, and businesses can reach government. Furthermore, Pula 24 is not only targeted at local entrepreneurs/service providers. It will be a platform to connect local businesses to the rest of the world. Anyone around the world can download the app and make use of it (global brand recognition).
NCRST intervention	NCRST is helping the innovators to lay the foundation of Pula 24 through funding to acquire hardware (machinery and devices) and software that will make the application better and faster.
Outcome	The application will be available on Google Play Store. This will be a free download and can be installed on all Android devices. The team intends to start working on a version for iOS after completing the version for Android devices. The application is easy to install and user friendly. Businesses will have a platform where they can showcase their products and clients are automatically able to call directly to enquire about how/where the product can be purchased.

"ePula24.com is keeping up with advancement in the digital age by providing a service that is aimed to connect service providers with consumers through a mobile application platform. The ePula24.com application is intended to connect businesses and consumers across the globe"

My innovative design is the ePula24.com mobile application, which aimed at connecting entrepreneurs/SMEs/ServiceProviders/Municipalities/ Artists/Organisations/Ministries/Agencies with consumers. ePula 24.com can be installed on any mobile smart phone device and users can instantly start to use the application after installation. There are business/service providers that are not known of and sometimes consumers tend to travel far distances just because they do not know where to find the service providers/suppliers. ePula24.com is a platform that directly links customers to suppliers.

Homateni Kapewangolo is an NCRST Grant Award Winner under the Youth Innovation Call for 2015.

(b) Save My City

Project Title: Save My City **Grant Recipient: Naboth Nathanael**	
Background	Save My City is a web and mobile-based social innovation. The application allows for direct citizen-government or citizen decision makers collaboration to solve societal issues in Namibia. Thus, providing a digital platform for the extension and transformation of participation in the societal democratic, service delivery, information provision, and decision-making process.
Challenges	The application will foster a civic echo across Namibia to engage the government on pressing issue or social problems. In addition, it will provide and aid the Namibian citizen with a digital platform for inclusivity in developing the country. Thus, improve the quality of life of Namibian citizens, boost economic growth, and ensure more effective delivery of public services.
NCRST intervention	The NCRST assisted in acquiring the best hosting server and development equipment or tools. In addition, the NCRST also assisted in the branding and marketing of the application and provided business mentorship.
Outcome	The mobile application works in correspondence with the web-based application to achieve citizen-government collaboration to solve social issues or problems within organisations, government or communities. Thus, allowing citizens to request, complain, and give suggestions to the respective organisations via the mobile application. The reporting, requesting, and suggestions are all feasible, both through a web and smartphone front-end that adopts a map-based visualisation. The application is currently available in English and Afrikaans, however, it will be localised to indigenous languages in Namibia. This will ensure inclusive design for every citizen. With the right value proposition to the potential customers, the Save My City application will be fully commercialised. Therefore, engaging all the relevant stakeholders during the development and testing phases of the application is key. The application is mainly for the local government or decision makers in both public and corporate companies that seek to collaborate with their citizens

IGNITE THE POSSIBILITIES

Ogilvy & Mather Namibia | www.ogilvy.com.na

Nabot Natanael

Save My City

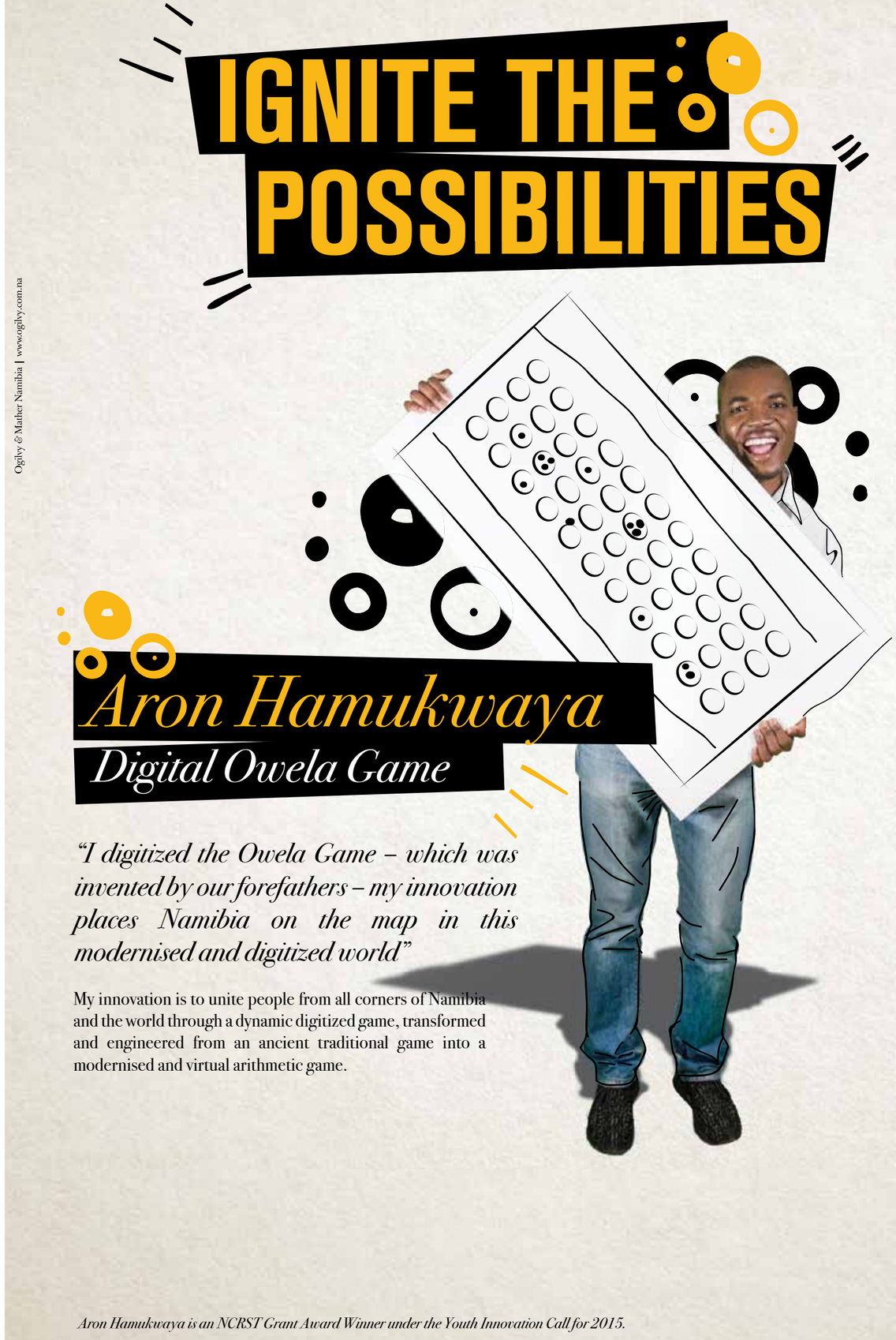
"I have created a social platform that enables the Namibian community to provide real time queries to challenges as they arise on a daily basis. My innovation changes the way in which solutions to basic problems like a burst pipe can be handled"

My innovation is a web and mobile based social platform that enables Namibians to collaborate and engage in solving social-economic issues pertaining to our daily lives. Through SaveMyCity – any Namibian who has access to data on their mobile phone can lodge a query about any issue in real time. The innovation will not only provide and aid Namibian citizens with the digital platform for inclusive communications, but will also create an opportunity to unite and nurture Namibians.

Nabot Natanael is an NCRST Grant Award Winner under the Youth Innovation Call for 2015.

(c) Owela Gaming

Project Title: Owela Gaming **Grant Recipient: Aron Hamukwaya**	
Background	Owela is a much loved traditional game played in Namibia and in many parts of Africa. Currently the game is played in holes that are created in the ground. This game dates back to the ancient times, as it was played by ancestors of many of the tribes in Namibia. Over the years, several problems/challenges have arisen that have restricted parties in playing this game. To manage these challenges, the National Software Engineering Academy (NSEA) came up with the dynamic electronic Owela game, engineered to have features that automate the game to create a virtual Owela gaming community as well as a person-computer challenge.
Challenges	The Owela game brings community members together to play against each other, thus creating unity amongst communities. The Owela game solidifies arithmetic skills. The Owela game touch table is created in such a way that in order to play, a player will have to put in coins, which will give the player a specified period of gameplay. As players play, adverts will be running. These are the two ways in which the owner of the touch table will be making money. There will be Owela game tournaments whereby various players will compete for prizes.
NCRST intervention	NCRST provided funding towards the development of the touch tables, computers as well as the graphics and sound of the game. NCRST also initiated business training and mentorship for the recipients.
Outcome	The Owela game touch table is a digital game based on the traditional Owela game. Two players get to play against each other, the aim being to take tokens from your opponent's holes. In order to play, a player will have to insert coins in the money box to allow for a specified period of gameplay. Before the game starts players will be given a menu where they can set the game to their preference. Speaking of preference, the game allows players to choose a Namibian indigenous language of their choice. The touch table will be given a wooden frame as well as an explosion-proof screen. The Owela game brings back the fun that many have lost. The game is a good tool for learning mathematics and for developing and strengthening critical thinking skills.



"I digitized the Owela Game – which was invented by our forefathers – my innovation places Namibia on the map in this modernised and digitized world"

My innovation is to unite people from all corners of Namibia and the world through a dynamic digitized game, transformed and engineered from an ancient traditional game into a modernised and virtual arithmetic game.

Aron Hamukwaya is an NCRST Grant Award Winner under the Youth Innovation Call for 2015.

(d) Cosmetic and Toiletry Contract Manufacturing

Project Title: Cosmetic and Toiletry Contract Manufacturing Grant Recipient: Sandra Mwiihangele	
Background	Kiyomisandz Beauty Products is a registered cosmetic and toiletry manufacturing company in Namibia. The innovation is developing products with the aid of high performance equipment that will allow medium to large scale manufacturing and enabling full R&D, quality control, and stability testings on products to ensure safety and quality assurance at national and international standards. In order for this industry to grow, Kiyomisandz Beauty Products currently offers the first of its kind in Namibia, full contract cosmetic and toiletry manufacturing services to those who wish to start developing their own cosmetic and personal care products line on a small or mass scale.
Challenges	The increase and appreciation of Namibian manufactured products will help grow the cosmetics industry to the same level as other industries because it has been proven that this industry is sustainable due to the fact that people need and use these products on a daily basis.
NCRST intervention	The NCRST provided funding that was used to purchase technology, equipment, and raw material used to start up and manufacture cosmetic products on a large scale.
Outcome	Kiyomisandz Beauty Products offers the following: research and product development to create a high performance product that performs well and meets customer expectations; quality control to determine whether the product meets the set requirements and standards to be used by the end consumer; stability testing to determine the shelf life and stability of the product's formulation; manufacturing to produce products on a large scale to meet the market's demands; and packaging to offer product packaging design solutions as well as labelling, preservation, filling, and protecting the cosmetic product's content.

IGNITE THE POSSIBILITIES

Sandra Mwiihangele

Kiyomisandz

"I successfully manufactured cosmetic products that are of national and international standards. My vision is to instil Namibia on the global cosmetic map; to provide skills and on the job training. Place an order at ***www.kiyomisandz.com****"*

My innovative design is cosmetic and toiletry manufacturing services that meet international standards. The innovation is developing products with the aid of high performance equipment that will allow medium to large scale manufacturing and enabling full R&D, quality control and stability testing on products to ensure safety and quality assurance at national and international standards. As a proud Namibian cosmetic chemist, I understand the lack of the cosmetic manufacturing industry in Namibia. In order for this industry to grow, my company currently offers the first of its kind in Namibia, full contract cosmetic & toiletry manufacturing services to those who wish to start developing their own cosmetic and personal care products line on a small or mass scale.

Sandra Mwiihangele is an NCRST Grant Award Winner under the Youth Innovation Call for 2015.

11. MASTERS AND DOCTORAL GRANTS

Under the Third National Call for Research PhD Proposals, the NCRST is funding 27 students currently registered for PhD at accredited institutions to the value of N$1,817,807 for the period 1 October 2015 up to 31 September 2017 (see Table 9). The purpose of this call was to provide funding to students who are pursuing PhD studies in areas as outlined in the NPRSTI, namely:

- *Research areas addressing social and economic challenges:* Health; agriculture; fisheries; water; energy; geosciences; mining; IKS; social sciences and humanities; logistics; environment and tourism; and
- *Research areas addressing social and economic challenges:* Manufacturing technologies; ICT; biotechnology; and space science.

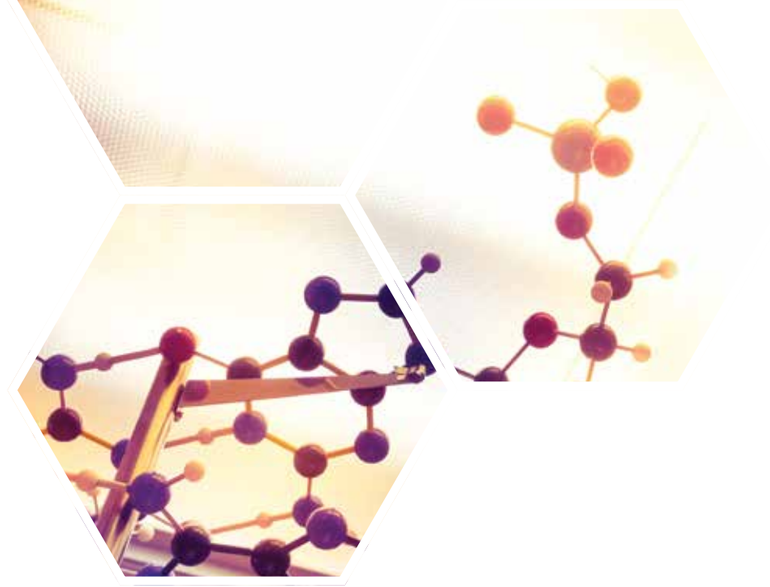


Table 9: Funded research projects towards Doctoral degrees

Number	Project title	Priority research area	Institutions
1.	Financing Agricultural Small and Medium Scale Enterprises in Namibia	Agriculture	University of Pretoria
2.	Breast Density: Improving the Detection of Breast cancer and Assessment of Breast Cancer Risk	Health	University of Sydney
3.	Robust Numerical Methods for Solving Fractional Differential Equations	Social sciences	University of Western Cape
4.	Product Development, Biochemical Characterisation and Value Addition of Oshikundu	IKS	UNAM
5.	Hydrate Slurry Flows in Subsea Pipelines: Advanced Modelling and Experiments	Fisheries	University of Edinburgh
6.	English Spoken as a Second Language by Khoekhoegowab Mother-tongue Speakers in the Topnaar Community, Namibia	Social sciences	University of Cape Town
7.	Developing a Framework for Improving Coordination in the Provision of Agricultural Support Services to Farmers in Oshikoto Region, Namibia	Agriculture	University of Cape Town
8.	Estimation of Groundwater Recharge of Perched Aquifers in the Cuvelai-Etosha Basin, Namibia	Water	UNAM
9.	Assessment of Library and Information Services' Impact on Namibia's Knowledge Economy, a Comparative Study	Social sciences	University of Western Cape
10.	Factors Contributing to Malnutrition in Children 6-24 Months Admitted to Two District Hospitals in the Northern Regions: Namibian Case Study	Health	University of Pretoria
11.	Isolation, Structural Characterisation, Bioactivity and Computational Studies from Natural Products of Selected Namibian Red Marine Algae	Fisheries	UNAM
12.	Evaluating the Biological Requirements of Fishes in Kwa-Zulu Natal from Wild and Captive "Aquaculture" populations	Fisheries	University of Kwa-Zulu Natal
13.	A Methodological Framework for Quality Assurance of Higher Education Institutions in Namibia	Social sciences	Vilnius University
14.	Investigating the Effectiveness of Telemedicine Adoption and Sustainability in a Tertiary Health Centre : The Case of Namibia	Health	University of Cape Town
15.	Investigation Into Energy Storage Devices	Energy	University of Cape Town
16.	Flood Preparedness and Economic Impacts of Floods on Rural Households: A Comparative Study of Mwandi District of Zambia and Eastern Zambezi of Namibia	Social sciences	University of Kwa-Zulu Natal
17.	Investigating the Relationship Between Different Hormonal Contraceptives and Movement of HIV Particles in Cervical Mucous From the Genital Tract of Young South African Women	Health	University of Cape Town
18.	Study on Oil and Gas Discovery in Namibia; the Oil Sector Management; Lessons from Nigeria and South Africa	Energy	UNAM
19.	Design Techniques for Reconfigurable Microwave Multiband Filters on Multilayer Substrates	Space sciences	University of Cape Town
20.	Robust Numerical Methods for Fractional Differential Equations Arising in Finance and Epidemiological Modelling	Social sciences	University of Western Cape
21.	Developing a Flood Risk Assessment Framework Using Flood Models, Remote Sensing and GIS in the Cuvelai Bain, Namibia	Water	University of Canterbury
22.	Dilemmas of Effective Implementation of a Strategic Plan in State Institutions of Health Care Delivery in Namibia	Health	UNAM
23.	Dynamics of Governance Arrangements for Small Scale Vegetable Farmers in Namibia: A New Institutional Economics Analysis	Agriculture	University of Stellenbosch
24.	An Empirical Investigation Into the Factors Affecting the Performance of Small and Medium Enterprises in Namibia	Social sciences	UNAM
25.	Children of the Sun: Children's Understandings of Health and Illness in Northern Namibia	Health	University of Canterbury
26.	Top Management Team Diversity, Innovativeness and Performance	Social sciences	UNAM
27.	The Role of Management of Water Technology Innovations in Enhancing Development: A Case Study for Kavango East in Namibia	Water	UNAM

PART IV:
GOVERNANCE AND INTERNAL CAPACITY OF THE COMMISSION

81 12. INTERNAL AUDIT AND RISK MANAGEMENT

82 13. LEGAL COMPLIANCE

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84 16. HUMAN RESOURCES

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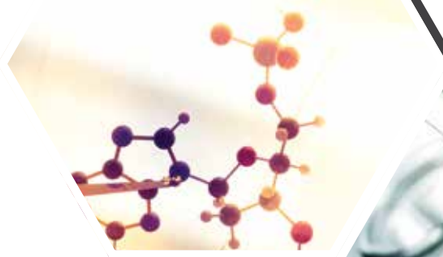

PART IV: GOVERNANCE AND INTERNAL CAPACITY OF THE COMMISSION

12 INTERNAL AUDIT AND RISK MANAGEMENT

As part of its strategy execution, the NCRST strives to institute policy and risk management requirements to ensure consistency of internal governance. To this end specific interventions were instituted during the period under review. Our efforts to institute policy and risk management requirements to ensure consistency of internal governance resulted in achieving 51% of policy and processes to cover critical areas updated and developed, 80% rating on the risk register, and a 46% audit rating on policy compliance as indicated in Table 10.

Table 10: Performance indicators focused on institute policy and risk management requirements to ensure consistency of internal governance

Performance indicator	Target	Actual achieved
% up-dated P&P in existence to cover critical areas	50%	51%
Rating on risk register (status) (% of risks in top two categories) rating on effectiveness of controls	60%	80%
Policy compliance (audit rating)	90%	46%

The abovementioned where achieve as a result of various initiatives as outlined in the following text. The Commission has an Internal Audit Charter in place, which governs the conducting of the internal audits based on a risk-based approach. During the period under review, the risk-based audit plan was developed and approved by the Commission. In terms of the implementation of the audit plan, more than 90% of the audit plan was executed and the audit reports presented. The Commission has a Risk Management Framework and Policy in place aimed at creating the required governance framework for the management of risk organisation wide and to ensure that risk management was entrenched across the organisation. In line with the Risk Management Framework and Policy, the NCRST risk register was updated and approved during the year under review.

13 LEGAL COMPLIANCE

The NCRST is committed to ensure compliance to applicable statutory requirements. In this connection, the NCRST has conducted a legislative review workshop of the Research, Science and Technology Act, 2004 (Act No. 23 of 2004) to facilitate amending of the Act. In terms of compliance with the Act, the NCTST has initiated the process of drafting the Compliance Risk Management Plan for the NCRST based on the audit conducted during the year under review. With the adoption of the Code of Conduct and Ethics Policy during the 2014/15 financial year, it is imperative that its implementation becomes a reality. For this reason, the NCRST conducted a workshop for its staff in order to initiate the process to implement the Code of Conduct and Ethics Policy.

14 OPERATIONAL EXCELLENCE

The NCRST is committed to ensure that it develops internal capacity in terms of establishing key delivery processes and supporting systems to meet service and efficiency standards. As a result of this effort, it has implemented 64% of identified systems and processes against the target of 60%, met 74% of milestones of systems development projects annually to plan against the target of 74%, addressed 72% of identified needs of stakeholders against a target of 45%, and achieved 69% stakeholder satisfaction against a target of 60%, as indicated in Table 11.

Table 11: Performance indicators focused on establishing key delivery processes and supporting systems to meet service and efficiency standards

Performance indicator	Target	Actual achieved
% of identified systems and processes developed	60%	38%
% of identified systems and processes implemented	60%	64%
% of milestones of systems development projects annually met to plan	60%	74%
Provide services to agreed turnaround times (%)	90%	69%
% of needs of identified stakeholders addressed	45%	72%
% stakeholder satisfaction with services	60%	69%

The abovementioned where achieve as a result of the following initiatives:

- Development of the Project Management Policy and Procedure: In order to ensure successful execution of its projects, the Project Management Policy and Procedure was developed and approved during the year under review;
- Internal and external stakeholder survey and finalisation of reports: In order to assess whether the NCRST is meeting its stakeholder expectations, it conducts both an internal and external stakeholder satisfaction survey. The survey was conducted during the year under review, which indicated the satisfaction levels of 69% against the target 60%; and
- Development of measures for performance management 2015/2016 finalised: In order to ensure effective strategy implementation, the NCRST conducts periodic strategy review and performance measurements. With regards to strategy review and performance measurement, the measures for the organisation performance for 2015/2016 were completed.

15 STAKEHOLDER RELATIONS

The NCRST is committed to ensure that it fulfils its mandate related to public understanding of STI through an effective stakeholder engagement strategy. In this connection, the Stakeholder Engagement Plan to coordinate our deliberate efforts with our stakeholders has been formulated. The stakeholder engagement that was conducted during the year under review includes various media campaigns and events to boost NCRST media-based awareness.

16 HUMAN RESOURCES

In order for the NCRST to realise its overall strategic goals it ensures that its human capital is poised to deliver superior results through the following key strategic objectives related to the growth and learning perceptive:

- Optimise human capital alignment that is sustainable;
- Entrench a high performance work culture;
- Optimise talent attraction and retention; and
- Optimise human capital cost/benefit.

Table 12 shows some key performance indicators related to the abovementioned strategic objectives.

Table 12: Performance indicators focused the growth and learning perspective

Performance indicators	Target	Actual achieved
% competence levels to threshold	70%	ND[4]
% of personal development plans implemented	90%	17%
% rating of employee satisfaction (average percentage)	70%	60.4
% of staff performance above threshold	55%	ND[5]
% compliance to communication policy	80%	66%
% staff turnover rate in key jobs per annum	8%	5%
% staff moving internally per annum	5%	5%
Remuneration adequacy against market	CR 0.90	0,78
Competence levels against midpoint of remuneration market	CR 0.90	ND[6]
Full staffing complement %	85% GP	75%

A number of initiatives related to human resources and organisational development include the realignment of organisational structure to the strategic plan and implementation of performance management and recruitment. These activities are elaborated on in detailed in the sections below:

- **Realignment of organisational structure to the strategic plan:** The NCRST embarked on a strategic process which includes realignment of the structure to the strategic plan, and reformulation of job functions to ensure sustainability thereof. The structure alignment to the organisational strategic plan has been carried out, was approved by the commissioners and is now awaiting approval by the line Minister;
- **Development of human resources-related policies and procedures:** During the period under review, the Performance Management Policy and Procedures was developed and approved. The Commission prides itself on the application of the Performance Management Framework through a robust strategic planning process, translated into work requirements and measured through performance management, and closely aligning business planning and budgeting within the strategic framework. A Reward and Remuneration Policy and Procedures was also developed and approved during the year under review; and
- **Human resources administration matters:** While recognising the need for high performance, it is equally important to understand the nature of the specialised operations and complementary skills required to execute the functions. As a research Commission, the operations require highly skilled employees with diverse qualifications and expertise. The Commission strives to implement some measures to support staff through implementing a wellness programme and also team building initiatives. For the effective administration of human resources, the NCRST has implemented an employee self-service pack of the VIP-Payroll System and also automated the transfer of salary from VIP directly to the bank

[4]This target was not determined during the period under review
[5]This target was not determined during the period under review
[6]This target was not determined during the period under review

17 FINANCIAL MANAGEMENT

The NCRST is committed to the development of instruments to mobilising funds and to the effective management of financial resources to support R&D and innovation activities in Namibia. In this connection, the following strategic objectives provide guidance on the financial management of the Commission:

- Ensure adequacy and sustainability of funding;
- Optimise value created on funds expended; and
- Ensure effective financial management in funds delivery channel(s).

As a result of this commitment, the NCRST is proud to report that it has achieved 76% of its funded deliverables against the target of 70%, a clean audit, and 66% of cost associated with value creation against the target of 60%, as indicated in Table 13.

Table 13: Performance indicators related to financial management of the NCRST

Performance indicators	Target	Actual achieved
% of funding achieved of required RSTI national programme funding	80%	ND[7]
% of submission for direct government funding obtained for the NCRST budget	100%	51%
% significant increase in spending by third parties towards RSTI - directly achieved by NCRST efforts	15%	7%
% of funded deliverables achieved	70%	76%
Clean audit and superior audit rating	90%	100%
% of cost associated with value creation	60%	66%
Max variance of spending against budget	(+)20%	31%

A number of initiatives related to human resources and organisational development include the realignment of organisational structure to the strategic plan, the implementation of performance management, and recruitment. These activities are elaborated in detailed in the sections below:

- **Budgeting:** The Commission continues to implement a zero-based budgeting approach during the year under review, which contributed to cost efficiency by justifying every dollar the Commission has planned to spend;
- **Development of finance-related policies:** The following policies and procedures were developed and approved: Financial Management Policy and Procedures; and the Supply Chain Management Policy and Procedures; and
- **Financial management:** During the period under review the NCRST instituted measures that contributed to the efficient administration and management of its finances. These measures have contributed to an improved turnaround time for payments, exporting of journals directly from VIP into Pastel Accounting, and timely availability of monthly management financial reports.

18 IT

ICT policies and procedures. In order to address the findings from the ICT audit which was undertaken during 2014/15, the ICT governance framework, and ICT policies and procedures were developed and approved during 2014/15.

ICT-related administration. The following ICT-related activities were performed during the period under review:

- Migration to Google Apps for Business;
- Installation of Man 3000 for the telephone management system;
- Updated fibre connection and improved internet connection; and
- Automation of some of the departmental processes.

[7]This target was not determined during the period under review

AUDIT COMPLIANCE CERTIFICATE ON THE ACCOUNTS

OF THE NATIONAL COMMISSION ON RESEARCH, SCIENCE AND TECHNOLOGY

FOR THE YEAR ENDED 31 MARCH 2016

The documentation as compiled by the auditor registered in terms of the Public Accountant's and Auditor's Act, 1951, who was appointed by the National Commission on Research, Science and Technology, has been examined by officials of the Office of the Auditor-General.

In terms of Section 26 & 27 of the Research, Science and Technology Act, 2004 (Act 23 of 2004), I certify that the above-mentioned audit of the annual financial statements for the year ended 31 March 2016 has been carried out to my satisfaction.

WINDHOEK, August 2016

JUNIAS ETUNA KANDJEKE
AUDITOR-GENERAL

AUDITOR-GENERAL
REPUBLIC OF NAMIBIA

PART V:
FINANCIAL REPORT

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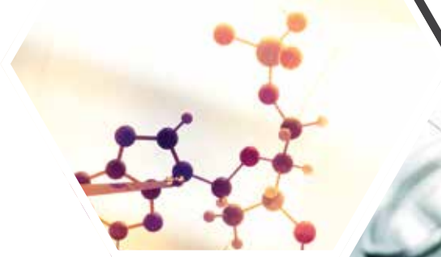


PART V:
FINANCIAL REPORT

GENERAL INFORMATION

Country of incorporation and domicile	Namibia
Nature of business and principal activities	To coordinate, facilitate and develop research science and technology in Namibia
Commissioners	Professor Andre Du Pisani (Chairperson) Dr. Johannes Shoopala (Vice Chairperson) Mr. Markus Von Jeney Mr. Alfred Ilukena Dr. Martha Namundjebo-Tilahun Mr. Johannes Aipanda Ms Sharonice Busch Mr Uda Nakamhela Ms. Hilma Nangombe Ms. Graça D`Almeida Dr Vicky Do Cabo Ms Petrina N. Nakale Ms. Elly Hamunyela Mr. Franz Uirab Ms. Antonia Kapia Ms. Josephine //Haubas Dr. Eino Mvula (CEO) Ms. Enid Keramen (Company Secretary) Dr Martha Kandawa-Schulz Mr. Moses Molatendi Moses
Business address	Hamutenya Wanehepo Ndadi Street Olympia Windhoek
Postal address	Private Bag 13253 Windhoek NAMIBIA
Bankers	First National Bank of Namibia
Auditors	Grand Namibia Registered Accountants and Auditors Chartered Accountants Namibia

COMMISSIONERS` RESPONSIBILITIES AND APPROVAL

The directors are required in terms of the Research,Science and Technology Act (Act No. 23 of 2004) to maintain adequate accounting records and are responsible for the content and integrity of the financial statements and related financial information included in this report. It is their responsibility to ensure that the financial statements fairly present the state of affairs of the Fund as at the end of the financial year and the results of its operations and cash flows for the period then ended, in conformity with International Financial Reporting Standards. The external auditors are engaged to express an independent opinion on the financial statements.

The financial statements are prepared in accordance with International Financial Reporting Standards and are based upon appropriate accounting policies consistently applied and supported by reasonable and prudent judgements and estimates.

The directors acknowledge that they are ultimately responsible for the system of internal financial control established by the Fund and place considerable importance on maintaining a strong control environment. To enable the directors to meet these responsibilities, the sets standards for internal control aimed at reducing the risk of error or loss in a cost effective manner. The standards include the proper delegation of responsibilities within a clearly defined framework, effective accounting procedures and adequate segregation of duties to ensure an acceptable level of risk. These controls are monitored throughout the Fund and all employees are required to maintain the highest ethical standards in ensuring the Fund's business is conducted in a manner that in all reasonable circumstances is above reproach. The focus of risk management in the Fund is on identifying, assessing, managing and monitoring all known forms of risk across the Fund. While operating risk cannot be fully eliminated, the Fund endeavours to minimise it by ensuring that appropriate infrastructure, controls, systems and ethical behaviour are applied and managed within predetermined procedures and constraints.

The directors are of the opinion, based on the information and explanations given by management, that the system of internal control provides reasonable assurance that the financial records may be relied on for the preparation of the financial statements. However, any system of internal financial control can provide only reasonable, and not absolute, assurance against material misstatement or loss.

The directors have reviewed the Fund's cash flow forecast for the year to 31 March, 2017 and, in the light of this review and the current financial position, they are satisfied that the Fund has or has access to adequate resources to continue in operational existence for the foreseeable future.

The external auditors are responsible for independently reviewing and reporting on the Fund's financial statements. The financial statements have been examined by the Fund's external auditors and their report is presented on page 4.

The financial statements set out on pages 5 to 19, which have been prepared on the going concern basis, were approved on 29 June 2016 and were signed on its behalf by:

Dr. Eino Mvula
Chief Executive Officer

Prof. Andre du Pisani
Chairperson
Board of Commissioners: NCRST

Sharonice Busch
Chairperson
Finance and Audit Committee

INDEPENDENT AUDITOR'S REPORT

To the Commissioners of National Commission On Research, Science and Technology

We have audited the financial statements of the National Research, Science and Technology Fund, as set out on pages 6 to 17, which comprise the statement of financial position as at 31 March 2015, and the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and the notes, comprising a summary of significant accounting policies and other explanatory information.

Commissioners' Responsibility for the Financial Statements

The Fund's commissioners are responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards, and requirements of the Research,Science and Technology Act (Act No. 23 of 2004), and for such internal control as the commissioners determines is necessary to enable the preparation of financial statements that are free from material misstatements, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the National Research, Science and Technology Fund as at 31 March 2016, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards, and the requirements of the Research,Science and Technology Act (Act No. 23 of 2004).

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GRAND NAMIBIA
Per: R Beukes (Partner)
Registered Accountants and Auditors
Chartered Accountants Namibia
Windhoek
29 June 2016

COMMISSIONERS` REPORT

The directors submit their report for the year ended 31 March, 2016.

1. Establishment of the National Research, Science and Technology Fund

The National Research, Science and Technology Fund has been established in terms of section 23 of the Research, Science and Technology Act (Act No. 23 of 2004).

The National Commsion on Science, Research and Technology is responsible for the mangement of the Fund in terms of Section 24(2) of the said Act.

2. Review of activities

Main business and operations

Deficit of the Fund was N$ 25,259,090 (2015: N$ 24,645,156 surplus)

3. Events after the reporting period

The commissioners are not aware of any matter or circumstance arising since the end of the financial year that has a material impact on the financial statements.

4. Commissioners

The commissioners of the Fund during the year and to the date of this report are as follows:

Name
Professor Andre Du Pisani (Chairperson)
Dr. Johannes Shoopala (Vice Chairperson)
Mr. Markus Von Jeney
Mr. Alfred Ilukena
Dr. Martha Namundjebo-Tilahun
Mr. Johannes Aipanda
Ms Sharonice Busch
Mr Uda Nakamhela
Ms. Hilma Nangombe
Ms. Graça D`Almeida
Dr Vicky Do Cabo
Ms Petrina N. Nakale
Ms. Elly Hamunyela
Mr. Franz Uirab
Ms. Antonia Kapia
Ms. Josephine //Haubas
Dr. Eino Mvula (CEO)
Ms. Enid Keramen (Company Secretary)
Dr Martha Kandawa-Schulz
Mr. Moses Molatendi Moses

5. Secretary

Ms Enid Keramen was appointed as secretary on 06 January 2014.

6. Auditors

Grand Namibia
Registered Accountants and Auditors
Chartered Accountants Namibia.

Statement of Financial Position

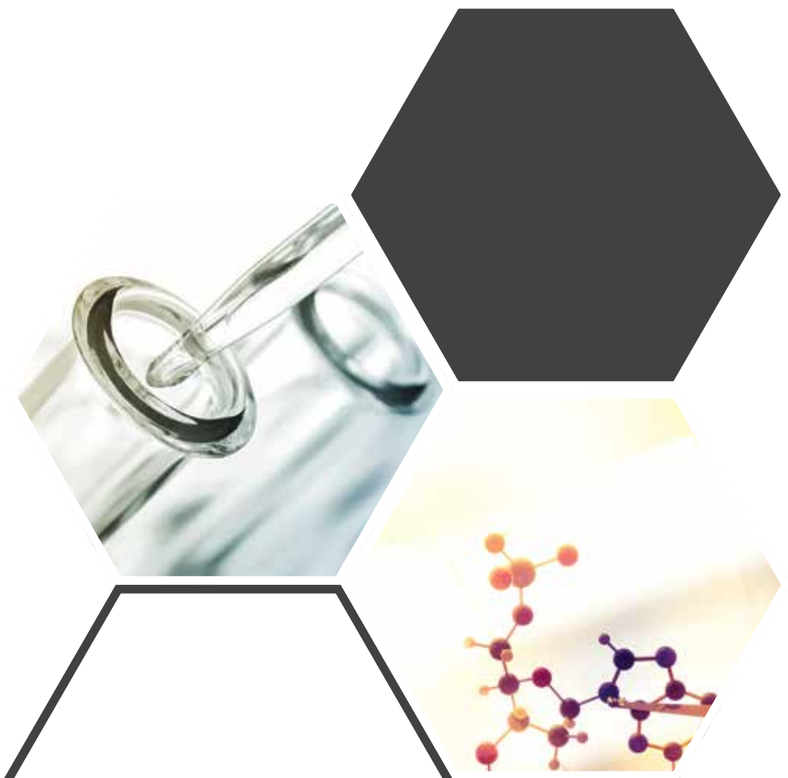
	Note(s)	2016 N$	2015 N$
Assets			
Non-Current Assets			
Property, plant and equipment	3	3,667,714	4,326,192
Intangible assets	4	30,309	111,918
		3,698,023	**4,438,110**
Current Assets			
Trade and other receivables	6	-	1,346,231
Cash and cash equivalents	5	32,408,021	54,833,677
		32,408,021	**56,179,908**
Total Assets		**36,106,044**	**60,618,018**
Equity and Liabilities			
Equity			
Retained income		28,538,909	53,797,999
Liabilities			
Non-Current Liabilities			
Deferred income	9	4,304,410	4,587,435
Current Liabilities			
Trade and other payables	7	2,423,521	1,626,604
Provisions	8	839,204	605,980
		3,262,725	2,232,584
Total Liabilities		**7,567,135**	**6,820,019**
Total Equity and Liabilities		**36,106,044**	**60,618,018**

Statement of Comprehensive Income

	Note(s)	2016 N$	2015 N$
Other Income	11	41,465,288	63,093,845
Operating expenses		(68,290,475)	(39,612,934)
Operating (deficit)/ surplus	**10**	**(26,825,187)**	**23,480,911**
Investment revenue	12	1,569,686	1,164,245
Finance costs		(3,589)	-
(Deficit)/Surplus for the year		**(25,259,090)**	**24,645,156**

Statement of Changes in Equity

	Retained income N$	Total equity N$
Balance at 1 April, 2014	**29,152,842**	**29,152,842**
Surplus for the year	24,645,157	24,645,157
Other comprehensive income	-	-
Total comprehensive income for the year	**24,645,157**	**24,645,157**
Balance at 1 April 2015	**53,797,999**	**53,797,999**
Deficit for the year	(25,259,090)	(25,259,090)
Balance at 31 March 2016	**28,538,909**	**28,538,909**



NATIONAL RESEARCH, SCIENCE AND TECHNOLOGY FUND

Financial Statements for the year ended 31 March, 2016

Statement of Cash Flows

	Note(s)	2016 N$	2015 N$
Cash flows from operating activities			
Cash receipts from Government and other sundry sources		41,182,259	61,689,348
Cash paid to suppliers and employees		(64,356,249)	(36,963,642)
Cash generated from (used in) operations	14	(23,173,990)	24,725,706
Interest income		1,569,686	1,164,245
Finance costs		(3,589)	-
Net cash from operating activities		**(21,607,893)**	**25,889,951**
Cash flows from investing activities			
Purchase of property, plant and equipment	3	(817,763)	(3,239,737)
Total cash movement for the year		**(22,425,656)**	**22,650,214**
Cash at the beginning of the year		54,833,677	32,183,463
Total cash at end of the year	**5**	**32,408,021**	**54,833,677**

Accounting Policies

1. PRESENTATION OF FINANCIAL STATEMENTS

The financial statements have been prepared in accordance with International Financial Reporting Standards, and the Research,Science and Technology Act (Act No. 23 of 2004). The financial statements have been prepared on the historical cost basis, and incorporate the principal accounting policies set out below. They are presented in Namibia Dollars.

1.1 Property, plant and equipment

The cost of an item of property, plant and equipment is recognised as an asset when:

- it is probable that future economic benefits associated with the item will flow to the Fund; and
- the cost of the item can be measured reliably.

Property, plant and equipment is initially measured at cost.

Property, plant and equipment is carried at cost less accumulated depreciation and any impairment loss.

Property, plant and equipment are depreciated on the straight line basis over their expected useful lives to their estimated residual value.

The useful lives of items of property, plant and equipment have been assessed as follows:

Item	Average useful life
Furniture and fixtures	7 years
Motor vehicles	5 years
Office equipment	5 years
Computer equipment	3 years

The depreciation charge for each period is recognised in profit or loss unless it is included in the carrying amount of another asset.

1.2 Intangible assets

An intangible asset is recognised when:
- it is probable that the expected future economic benefits that are attributable to the asset will flow to the Fund; and
- the cost of the asset can be measured reliably.

Intangible assets are initially recognised at cost.

Amortisation is provided to write down the intangible assets, on a straight line basis, to their residual values as follows:

Item	Useful life
Computer Software	3 years

1.3 Financial instruments

Initial recognition and measurement

The Fund classifies financial instruments, or their component parts, on initial recognition as a financial asset, a financial liability or an equity instrument in accordance with the substance of the contractual arrangement.

Financial instruments are measured initially at fair value, except for equity investments for which a fair value is not determinable, which are measured at cost and are classified as available-for-sale financial assets.

For financial instruments which are not at fair value through profit or loss, transaction costs are included in the initial measurement of the instrument.

Subsequent measurement

Financial instruments at fair value through profit or loss are subsequently measured at fair value, with gains and losses arising from changes in fair value being included in profit or loss for the period.

Trade and other receivables

Trade receivables are measured at initial recognition at fair value, and are subsequently measured at amortised cost using the effective interest rate method. Appropriate allowances for estimated irrecoverable amounts are recognised in profit or loss when there is objective evidence that the asset is impaired.

Trade and other receivables are classified as loans and receivables.

Trade and other payables

Trade payables are initially measured at fair value, and are subsequently measured at amortised cost, using the effective interest rate method.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. These are initially and subsequently recorded at fair value.

NATIONAL RESEARCH, SCIENCE AND TECHNOLOGY FUND

Financial Statements for the year ended 31 March, 2016

Accounting Policies

1.4 Provisions and contingencies

Provisions are recognised when:
- the Fund has a present obligation as a result of a past event;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and
- a reliable estimate can be made of the obligation.

The amount of a provision is the present value of the expenditure expected to be required to settle the obligation.

1.5 Government grants

Government grants are recognised as income over the periods necessary to match them with the related costs that they are intended to compensate.

Government grants related to assets, including non-monetary grants at fair value, are presented in the statement of financial position by setting up the grant as deferred income or by deducting the grant in arriving at the carrying amount of the asset.

Accounting Policies

2. NEW STANDARDS AND INTERPRETATIONS

2.1 Standards and interpretations not yet effective

The institution has chosen not to early adopt the following standards and interpretations, which have been published and are mandatory for the institution accounting periods beginning on or after 01 April 2015 or later periods
:

New and revised as at 31 March 2016

The following table contains effective dates of IFRS`s and the recent IAS`s, which have not been early adopted by the Commission and might affect future financial periods:

New standards

IAS/IFRS	Pronouncement	Effective Date
IFRS 15 Revenue from Contracts from Customers	New standard that requires entities to recognise revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This core principle is achieved through a five step methodology that is required to be applied to all contracts with customers.	01 January 2018
IFRS 16 Leases	New standard that introduces a single lessee accounting model and requires lessee to recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value	01 January 2019
IFRS 9	Classification and measurement of financial assets. Incorprating revised requirements for the classification and measurement of financial liabilites, and carrying over the existing derecognition requirements from the IAS 39 Financial Instruments: Recognition and Measurement.	01 January 2018

Accounting Policies

Amendments in International Accounting Standards ("IAS") and IFRS

IAS/IFRS	Pronouncement	Effective Date
IFRS 7 Financial Instruments: Disclosures	Amendment clarifying under what circumstances an entity will have continuing involvement in a transferred financial asset as a result of servicing contracts. Amendment clarifying the applicability of previous amendments to IFRS 7 issued in December 2011 with regard to offsetting financial assets and financial liabilities in relation to interim financial statements prepared under lAS 34	01 January 2016 01 January 2016
IFRS 11Joint Arrangements	Amendments adding new guidance on how to account for the acquisition of an interest in a joint operation that constitutes a business which specify the appropriate accounting treatment for such acquisitions.	01 January 2016
lAS 1, Presentation of Financial Statements	Amendments designed to encourage entities to apply professional judgement in determining what information to disclose in their financial statements. Furthermore, the amendments clarify that entities should use professional judgement in determining where and in what order information is presented in the financial disclosures.	01 January 2016
IFRS 5, Noncurrent assets Held for Sale and Discontinued Operations	Annual Improvements 2012-2014 Cycle: Amendments clarifying that a change in the manner of disposal of a non-current asset or disposal group held for sale is considered to be a continuation of the original plan of disposal, and accordingly, the date of classification as held for sale does not change.	01 January 2016
lAS 16 Property, Plant and Equipment and lAS 38 Intangible Assets	Amendment to both lAS 16 and lAS 38 establishing the principle for the basis of depreciation and amortisation as being the expected pattern of consumption of the future economic benefits of an asset. Clarifying that revenue is generally presumed to be an inappropriate basis for measuring the consumption of economic benefits in such assets.	01 January 2016
lAS 19 Employee Benefits	Clarification of the requirements of to determine the discount rate in a regional market sharing the same currency (for example, the Eurozone).	01 January 2016
IFRS 7 Statement of Cash Flows	Amendments requiring entities to disclose information about changes in their financial liabilities. The additional disclosures will help investors to evaluate changes in liabilities arising from financing activities, including changes from cash flows and and non-cash changes (such as foreign exchange gains or losses).	01 January 2017

3. PROPERTY, PLANT AND EQUIPMENT

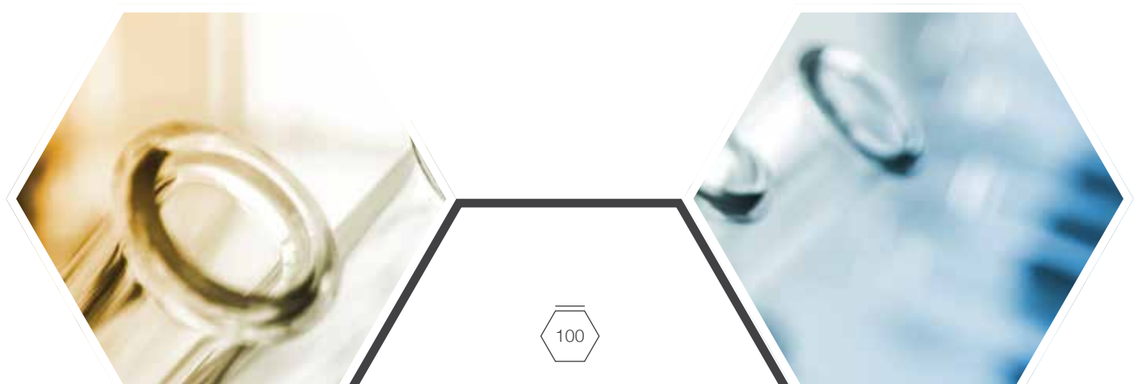
	2016			2015		
	Cost / Valuation	Accumulated depreciation	Carrying value	Cost / Valuation	Accumulated depreciation	Carrying value
Furniture and fixtures	1,764,943	(435,215)	1,329,728	1,489,583	(192,231)	1,297,352
Motor vehicles	1,415,127	(906,716)	508,411	1,415,127	(623,691)	791,436
Office equipment	132,480	(53,896)	78,584	117,683	(29,247)	88,436
Computer Equipment	3,103,526	(1,352,535)	1,750,991	2,575,950	(426,982)	2,148,968
Total	**6,416,076**	**(2,748,362)**	**3,667,714**	**5,598,343**	**(1,272,151)**	**4,326,192**

Reconciliation of property, plant and equipment - 2016

	Opening balance	Additions	Depreciation	Total
Furniture and fixtures	1,297,352	275,360	(242,984)	1,329,728
Motor vehicles	791,436	-	(283,025)	508,411
Office equipment	88,436	14,797	(24,649)	78,584
Computer Equipment	2,148,968	527,606	(925,583)	1,750,991
	4,326,192	**817,763**	**(1,476,241)**	**3,667,714**

Reconciliation of property, plant and equipment - 2015

	Opening balance	Additions	Depreciation	Total
Furniture and fixtures	459,152	978,803	(140,603)	1,297,352
Motor vehicles	1,074,461	-	(283,025)	791,436
Office equipment	99,553	11,426	(22,543)	88,436
Computer Equipment	282,509	2,249,508	(383,049)	2,148,968
	1,915,675	**3,239,737**	**(829,220)**	**4,326,192**



4. INTANGIBLE ASSETS

	2016			2015		
	Cost / Valuation	Accumulated amortisation	Carrying value	Cost / Valuation	Accumulated amortisation	Carrying value
Computer software, other	244,830	(214,521)	30,309	244,830	(132,912)	111,918

Reconciliation of intangible assets - 2016

	Opening balance	Amortisation	Total
Computer software	111,918	(81,609)	30,309

Reconciliation of intangible assets - 2015

	Opening balance	Amortisation	Total
Computer software	193,527	(81,609)	111,918

5. CASH AND CASH EQUIVALENTS

	2016 N$	2015 N$
Cash and cash equivalents consist of:		
Bank balances	32,408,021	54,833,677

6. TRADE AND OTHER RECEIVABLES

VAT Receivable	3,342,666	1,346,231
Provision for write off-VAT Receivable	(3,342,666)	-
	-	**1,346,231**

7. TRADE AND OTHER PAYABLES

Trade payables	2,404,831	946,003
Payroll Accruals	18,690	680,601
	2,423,521	**1,626,604**

Notes to the Financial Statements

8. PROVISIONS

Reconciliation of provisions - 2016

	Opening balance	Additions	Total
Leave Provision	605,980	233,224	839,204

Reconciliation of provisions - 2015

	Opening balance	Additions	Total
Leave Provision	192,940	413,040	605,980

Leave pay is only paid out when the employee resigns. Leave pay is paid out based on the days accumulated

9. DEFERRED INCOME

	2016 N$	2015 N$
Grants related to assets:		
Carrying Value of Motor vehicles financed by the Ministry of Education	508,410	791,436
Opening balance	4,587,436	4,870,461
Release from deferred income	(283,026)	(283,026)
Closing balance	**4,304,410**	**4,587,435**

Deferred Revenue includes Development Grant of N$ 3 796 000 received in 2014 but not yet utilised.

10. OPERATING (DEFICIT)/ SURPLUS

	2016 N$	2015 N$
Operating (deficit)/ surplus for the year is stated after accounting for the following:		
Operating lease charges		
Premises		
• Contractual amounts	1,977,680	1,780,607
Depreciation on property, plant and equipment	1,557,820	910,829
Employee costs	25,327,884	19,341,646
Research and development	2,460,374	205,160

Notes to the Financial Statements

11. OTHER INCOME

	2016 N$	2015 N$
Government Grant	38,139,950	61,430,000
Sundry income	281,256	259,348
Deferred Income Recognised	283,026	283,025
Government Grant- Rental	1,233,619	1,121,472
Resource Mobilisation Funds	1,527,437	-
Total other income	**41,465,288**	**63,093,845**

12. INVESTMENT REVENUE

	2016 N$	2015 N$
Interest revenue		
Bank	1,569,686	1,164,245

13. RELATED PARTIES

Relationships		
Related party transactions		
Commissioners fees	967,135	1,109,972
Government Grants		
Ministry of Higher Education, Training and Innovation(operating lease grants is paid for by the Ministry of Works and Transport)	39,371,200	62,551,472
Key Management		
Salaries	3,370,632	3,034,471

14. CASH GENERATED FROM (USED IN) OPERATIONS

(Deficit)/Surplus for the year	(25,259,090)	24,645,156
Adjustments for:		
Depreciation and amortisation	1,557,820	910,829
Interest received	(1,569,686)	(1,164,245)
Finance costs	3,589	-
Movements in provisions	233,224	413,040
Release to deferred revenue	(283,026)	(283,025)
Trade and other receivables	1,346,231	(1,179,452)
Trade and other payables	796,949	1,383,402
	(23,173,990)	**24,725,706**

Notes to the Financial Statements

15. RISK MANAGEMENT

Liquidity risk

The Fund is reliant on government funding and the absence of adequate alternative sources of funds implies that the Fund could potentially be exposed to liquidity risk in the event that the government struggles financially or there is a delay in the disbursements of grants.

	2016	2015
	N$	N$
Interest rate risk		

The Fund is exposed to interest rate risk as a result of excess cash holdings invested at variable rates.

Credit risk

Credit risk consists mainly of cash deposits. The Fund only deposits cash with major banks with high quality credit standing.

16. FINANCIAL ASSETS BY CATEGORY

The accounting policies for financial instruments have been applied to the line items below:

2016	Loans and receivables	Total
Cash and cash equivalents	32,408,021	32,408,021

2015	Loans and receivables	Total
Cash and cash equivalents	54,833,677	54,833,677

17. FINANCIAL LIABILITIES BY CATEGORY

The accounting policies for financial instruments have been applied to the line items below:

2016	Financial liabilities at amortised cost	Total
Trade and other payables	2,404,832	2,404,832

2015	Financial liabilities at amortised cost	Total
Trade and other payables	946,006	946,006

Detailed Income Statement

	Note(s)	2016 N$	2015 N$
Other income			
Sundry Income		1,808,693	259,348
Government Grant-Operating lease		1,233,619	1,121,472
Deferred Income Recognised		283,025	283,025
Interest received	12	1,569,686	1,164,245
Government grants		38,139,951	61,430,000
		43,034,974	**64,258,090**
Expenses (Refer to page 103)		**(68,290,475)**	**(39,612,934)**
Operating (deficit)/surplus	**10**	**(25,255,501)**	**24,645,156**
Finance costs		(3,589)	-
(Deficit)/Surplus for the year		**(25,259,090)**	**24,645,156**

Detailed Income Statement

	Note(s)	2016 N$	2015 N$
Operating expenses			
Advertising		(1,387,976)	(856,938)
ICGEB Membership Fees		(39,840)	(79,429)
Auditors remuneration		(56,000)	(67,300)
Bad debts		(3,342,666)	-
Bank charges		(40,606)	(46,815)
Cleaning		(160,820)	(141,275)
Computer expenses		(1,180,640)	(158,586)
Space Science Project		(144,715)	(21,740)
National Biotechnology Programme		(320,000)	(184,400)
Depreciation, amortisation and impairments		(1,557,820)	(910,829)
Employee cost		(25,327,884)	(19,341,646)
Project Management Expense		(260,068)	(666,381)
Board and Councils Meetings		(40,488)	(67,129)
Catering Services		-	(9,280)
Relocation Expenses		34,349	(232,043)
Office Expenses		(280,267)	(133,449)
Astrio Quiz		(463,211)	-
Bilateral and Multilateral		(1,865,396)	-
Leasing and Hiring		(244,140)	(68,632)
Insurance		(341,872)	(175,643)
Lease rentals on operating lease		(1,977,680)	(1,780,607)
Consulting fees		(3,241,945)	(1,715,308)
Magazines, books and periodicals		(26,503)	(7,241)
IST Africa		(14,477)	(54,159)
Vehicle repairs and Maintenance		(16,397)	(10,410)
National IKS and Plato Project		(294,132)	(430,480)
Grants on Requests		(4,386,687)	(4,294,041)
Petrol and oil		(153,767)	(69,068)
National Science Fair		(5,323,522)	(1,154,969)
Postage		(13,063)	(26,159)
Printing and stationery		(550,482)	(387,636)
Pearl Millet Project		(294,131)	(133,428)
STI Capacity, legal and policy		(1,070,926)	(102,250)
Estate Repairs and Maintenance		(2,185,714)	(511,936)
Research and development costs		(2,460,374)	(205,160)
Security		(234,910)	(191,665)
Staff welfare		(447,559)	(132,931)
Platform for linkage creation		(587,121)	(360,033)
Telephone and fax		(578,632)	(12,433)
Trainings, Secretarial and Workshops		(1,662,901)	(1,018,692)
Air travel costs		(3,884,102)	(2,947,351)
Local Travel and Accomodation Cost		(1,452,513)	(744,421)
Electricity and Water		(412,877)	(161,041)
		(68,290,475)	**(39,612,934)**

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