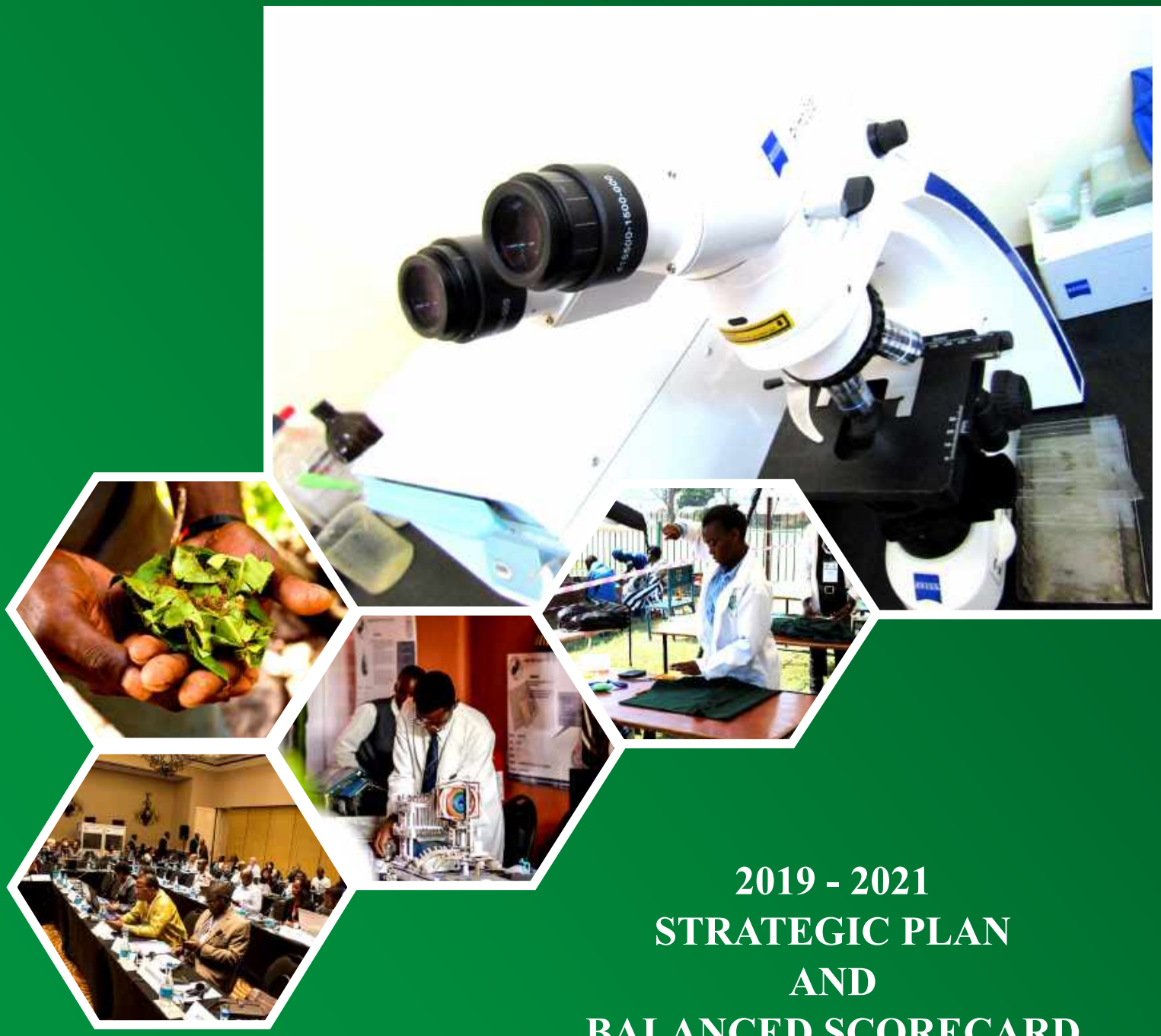
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL



2019 - 2021
STRATEGIC PLAN
AND
BALANCED SCORECARD

Prepared by:

National Science and Technology Council
in collaboration with
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Lusaka

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ACRONYMS

7NDP	Seventh National Development Plan
AU	African Union
BSC	Balanced Scorecard
COMESA	Common Market for Eastern and Southern Africa
IA	Institutional Assessment
IPR	Intellectual Property Rights
JETS	Junior Engineers, Technicians and Scientists
M&E	Monitoring and Evaluation
MDD	Management Development Division
MoHE	Ministry of Higher Education
NSTC	National Science and Technology Council
OD	Organisational Development
PESTEL	Political, Economic, Social, Technological, Environmental and Legal
R&D	Research and Development
SADC	Southern African Development Community
SWOT	Strengths, Weaknesses, Opportunities and Threats

FOREWORD

On behalf of the Councillors, Management and Staff of the National Science and Technology Council (NSTC), it is my pleasure to provide a statement on this 2019 to 2021 Strategic Plan and Balanced Scorecard which will provide the strategic direction to the Council in the next three (3) years.

The Strategic Plan and Balanced Scorecard are products of collaboration of the Council with its key stakeholders and clients. Technical support in preparing the Plan was provided by Management Development Division of Cabinet Office. The Strategic Plan and Balanced Scorecard consolidated the aspirations by both the Council and its Management to re-engineer and transform the NSTC as seen in its new Vision Statement ***"A Smart and Value Centred Science and Technology Council."***

Zambia aspires to transition from being raw material producer and exporter to a value-adding, knowledge-intensive and industrialised economy. Industrialisation is top on the agenda for the Government as evidenced by the approval of the Industrialisation Policy and the Seventh National Development Plan (7NDP). The 2018 Presidential Speech delivered during the Official Opening of the Third Session of the Twelfth National Assembly is also testimony of Government's commitment to the agenda.

Further, the Southern African Development Community (SADC) Industrialisation Strategy and the United Nations (UN) Sustainable Development Goals to which Zambia is party, recognised the significance of investment in science, technology and innovation, placing emphasis on human capital and infrastructure development as the key drivers for industrialisation.

Countries that have industrialised have done so by anchoring their industrialisation agenda on science, technology and innovation. It is for this reason that the Council in this Strategic Plan has responded to the aspirations of the 7NDP and focused its strategies at promoting science, technology and innovation for the purpose of industrialisation and bettering the quality of life in Zambia.

It is my sincere hope that this Strategic Plan will attract participation and support from all stakeholders who are committed to seeing our country achieve its developmental goals.

Dr. Henry M. Musenge

Council Chairperson

NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

ACKNOWLEDGEMENTS

The process of developing this Strategic Plan and Balanced Scorecard was consultative. It involved participation of stakeholders and clients at different levels. It is with this background that I wish to thank all those who contributed to the successful development of this Plan and Scorecard. In particular, I wish to pay particular acknowledgement to the following for their significant contributions:

i. Management Development Division (MDD) of Cabinet Office for technical guidance and facilitating the development of the Plan and Scorecard;
ii. The Ministry of Higher Education (MoHE) for policy guidance and technical support;
iii. Management and Staff of the Council for their technical input; and,
iv. All the representatives of the various organisations who provided valuable information during the strategic planning process.

It is my hope that the implementation of this Plan will enable the Council successfully execute its mandate of promoting science and technology so as to improve the quality of life in Zambia.

Dr. Alfred J. Sumani
Executive Secretary and Chief Executive Officer
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

EXECUTIVE SUMMARY

The National Science and Technology Council (NSTC) is a statutory body established by the Science and Technology Act No. 26 of 1997. The main function or mandate of the Council as prescribed in the Act is to **'promote science and technology so as to improve the quality of life in Zambia'.**

The development of the Council's Strategic Plan and the Balanced Scorecard (BSC) was necessitated by the expiry of the 2014 - 2016 Strategic Plan. This Strategic Plan and BSC were developed using an Integrated Institutional Assessment, Organisation Development and Balanced Scorecard (IA/OD - BSC) strategic planning process. The Plan and BSC respond to the aspirations of the 7NDP.

The Strategic Plan and BSC provide the strategic direction and operational framework for the Council for the next three (3) years. The Plan sets out a Vision of '**A Smart and Value Centred Science, Technology and Innovation Council'.** To realize the Vision, the Council commits itself to the Mission Statement: **'To Promote Science, Technology and Innovation for Industrial Development'.**

The Council will in the next three (3) years focus on the two areas to achieve its Mission and ultimately the Vision. The following are the areas of focus:

- Science and Technology Excellence, and
- Operational Excellence.

To effectively deliver on its mandate, the Council has set for itself six (6) Strategic Objectives. These objectives and their intended results are:

i. **Promote science, technology and innovation** to increase scientific knowledge, enhance product development, increase uptake of research results by industry, compliance to STI standards, improved science centres and development of science parks;
ii. **Strengthen stakeholder linkages** to enhance science, technology and innovation sector coordination;

iii. **Improve financial management** which will result in adequate financial resources and increased financial accountability**;**

iv. **Improve human capital** which will result in high staff performance, motivated staff, a positive work culture and optimal staffing levels;

v. **Improve operational systems and procedures** resulting into improved Council's efficiency and effectiveness; and

vi. **Improve institutional infrastructure and equipment** which will result in creation of a conducive working environment.

In implementing the Plan and BSC, the Council will uphold four (4) Core Values, which are *Innovativeness, Integrity, Objectivity* and *Accountability***.** The successful implementation of the Plan and ultimately the achievement of the set targets will depend on a number of pre-conditions and assumptions.

To facilitate implementation, the Strategic Plan will be operationalised through an implementation plan and costed annual departmental work plans. In order to ensure successful implementation and realisation of the desired impact, the implementation of the Plan will be monitored continuously, to undertake necessary interventions. At the end of the plan period, a final review will be undertaken to establish the extent of the Strategic Plan implementation and its impact.

1. INTRODUCTION

1.1 BACKGROUND

The National Science and Technology Council (NSTC) is a statutory body established by the Science and Technology Act No. 26 of 1997 subsequent to the approval of the National Policy on Science and Technology by Cabinet in 1996.

1.2 STATUTORY MANDATE

The mandate of the Council as prescribed in the Science and Technology Act No. 26 of 1997 is to **'promote science and technology so as to improve the quality of life in Zambia'.** The specific functions are as follows;

i. Promote the development of an indigenous and environmentally friendly technological capacity;
ii. Regulate research in science and technology in Zambia;
iii. Register institutes and centres;
iv. Advise the Government on science and technology policies and activities in Zambia;
v. Determine broad directions, stimulate co-ordination and initiate special projects in science and technology;
vi. Promote and publicise Council national priorities in science and technology research;
vii. Liaise with Government, industry and centres and institutes in science and technology;
viii. Mobilise and distribute financial, human and other resources to management Councils for science and technology research;
ix. Recommend to the Government the establishment of-any new research institutes and centres;
x. Promote the use of science and technology in industry;
xi. Ensure that gender concerns are integrated at all levels of science and technology development;

xii. Collect and disseminate science and technology information including publication of scientific reports, journals and other such documents and literature;

xiii. Establish and maintain a relationship with corresponding scientific organizations in other countries;

xiv. Take all measures that are necessary to popularise science and technology;

xv. Identify and determine national research and development priorities in science and technology; and

xvi. Do all such things connected with or incidental to the functions of the Council under this Act.

1.3 MANAGEMENT AND OPERATIONAL STRUCTURE

In accordance with the Science and Technology Act, the Council comprises thirteen (13) members appointed by the Minister responsible for Science and Technology, these being:

i. two members from any research institute or centre established under this Act;

ii. two members from any public or private university;

iii. a member from a technical college;

iv. an engineer from industry;

v. a member with rich business and commercial experience in the private sector; and

vi. a member each from the ministries responsible for science and technology, environment and natural resources, health, commerce and trade, agriculture and mines.

The Council operates through three (3) Committees, and these are: (i) Science and Technology Technical Committee; (ii) Administration and Finance Committee; and (iii) Audit and Risk Committee.

The day to day operations of the Council are overseen by the Executive Secretary who is the Chief Executive Officer supported by two (2) Managers heading the Programme

Development and Implementation (PDI) and Administration and Finance (A&F) Departments.

1.4 STRATEGIC OPERATIONAL LINKAGES

In the execution of its mandate, the Council works with various institutions which include *inter alia*; Parliament, Government ministries and agencies, research and development institutions, higher learning institutions, industry, media, JETS and Next Einstein Forum. Internationally, the Council has linkages with regional economic blocks, bilateral and multilateral Cooperating Partners.

1.5 RATIONALE

The rationale for the development of this Strategic Plan and BSC is to provide the strategic direction and operational framework for the Council for the next three (3) years following the expiry of the 2014 - 2016 Strategic Plan and the approval of the 7NDP.

1.6 METHODOLOGY

The Strategic Plan and BSC were developed using an Integrated Institutional Assessment, Organisation Development and Balanced Scorecard (IA/OD - BSC) strategic planning process with technical support from the Management Development Division (MDD), Cabinet Office. The process involved two main stages namely; Institutional Assessment and Organisational Development.

The Institutional Assessment involved external and internal analyses of the Institution by conducting a performance assessment, capability analysis and environmental scanning. The internal capability analysis was conducted using the Problem and Objective, Lewin's Simple Change Management Models. The Strengths, Weaknesses, Opportunities and Threats (SWOT) relating to the operations of NSTC in terms of structure, systems, staff, skills, shared values and style of leadership and management were also established using the Mckinsey 7s Model. The PESTEL Analysis was conducted to scan major external developments with implications in the execution of the Council Mandate. In addition, various stakeholders, that is, Council, Management, Staff, Clients and other Stakeholders were engaged to solicit for information on the current and future outlook of the Council.

The views of stakeholders were obtained through one-day engagement sessions for each group which allowed them to freely provide their opinions and building consensus on a number of key issues.

Further, literature review was conducted to ascertain the *"best fit"* for the Council's strategic direction with regard to national policies, and legal frameworks which have implications on its operations. This involved analysing key documents such as the 7NDP and the National Policy on Science and Technology.

The Organisation Development involved determining the strategic direction for the Council in the next three years based on the information gathered from the internal and external analyses. The Strategic Plan and BSC were validated by the stakeholders to build consensus and secure the much needed support for successful implementation. The two documents were then approved by the Council.

2. ENVIRONMENTAL ANALYSIS

2.1 EXTERNAL ENVIRONMENTAL ANALYSIS

An analysis of the Council's external environment focused on Political, Economic, Social, Technological, Environmental and Legal (PESTEL) developments that had or may have an impact on the operations of the Institution. The analysis revealed that during the 2014 to 2016, the Council experienced Political, Economic, Social and Legal developments that had significant implications on the mandate. The detailed analysis of the developments is as follows:

2.1.1 POLITICAL

The re-alignment of line Ministries by merging the Ministry of Science, Technology and Vocational Training (MSTVT) and the Ministry of Education to create the Ministry of Education, Science, Vocational Training and Early Education (MESVTEE). Then later, separation of this Ministry into two Ministries, namely, Higher Education and General Education. This resulted into an opportunity to streamline activities related to science and technology, and further provided for review of the National Policy on Science and Technology.

To optimize these opportunities, the Council will strengthen work planning to deliver on its mandate and expedite the review of the National Policy on Science and Technology.

The launch of the 7NDP and the National Industrial Policy presented an opportunity to scale up promotion of Science and Technology through research and development.

To optimise the opportunity, Council will leverage on the provisions of the 7NDP and the National Industrial Policy to focus its activities and lobby for resources.

2.1.2 ECONOMIC

i) The Fluctuations in the Exchange Rate

The fluctuation in the foreign currency exchange rate to the local currency resulted into the fluctuation in the costs of goods and services which in turn affected budget implementation negatively. For instance, as at December 2014, 1 Dollar was equivalent to 6.34 Kwacha while by December 2016, the Dollar to Kwacha was trading at 1 Dollar to 9.84 Kwacha. In addition, the Inflation rate in 2014 was 7.81%. By 2016 it reached an all-time high of 17.87% resulting into increased operational cost and cost of research projects (Bank of Zambia).

The following measures will be undertaken to mitigate the effects highlighted above:

a) Factor in anticipated fluctuations in planning and budgeting;
b) Prioritise activities to be undertaken during implementation phase; and
c) Develop and implement a resource mobilisation strategy.

2.1.3 SOCIAL

i) Increase in Non-Communicable Diseases

The increase in non-communicable diseases presented an opportunity for research to understand the causes and develop solutions. The Council will use this opportunity to enhance promotion of research in local alternative therapies and indigenous knowledge in general.

The above opportunity notwithstanding, the increase in non-communicable diseases has resulted into reduced man hours as some members of staff are forced to stay away from work due to illness.

To address this negative effect, NSTC will develop and implement a health and wellness policy.

ii) Increased Corruption

The 2018 Corruption Perception index report on corruption placed Zambia on 35th rank as compared to 37th rank in the 2017 report, showing an increase in corruption. The negative image has resulted in the reluctance of some cooperating partners to commit financial resources.

To address this threat, the Council will establish an Integrity Committee, strengthen internal controls and develop and implement a stakeholder management plan.

2.1.4 TECHNOLOGICAL

i) Advancements in Technology

The advancements in new and emerging sciences and technologies provided an opportunity to scale-up activities that are electronically driven (electronic/automated systems) as well as an opportunity for promotion of R&D into new and emerging sciences and technologies.

The following measures will be undertaken to optimise the opportunities:

a) Develop, automate and integrate requisite systems;
b) Enter into strategic partnerships with institutions such as Zambia Information and Communications Technology Authority (ZICTA) and SMART Zambia; and
c) Enhance promotion of R&D in new and emerging sciences and technologies.

On the other hand, the advancements in new and emerging sciences and technologies brought about increased threat of systems being hacked. Further, the emergence of new science (nuclear and modern biotechnology) has received

resistance from the general public due to its potential to pollute the environment coupled with inadequate capacities to manage changing technologies.

The following measures will be undertaken to mitigate the threats:

a) Strengthen internal information security systems;
b) Enhance regulatory bodies for management of emerging sciences and technologies; and
c) Scale up public awareness campaigns on the benefits of new and advanced technologies.

2.1.5 ENVIRONMENTAL

i) Climate Change

The country has experienced the effect of climate change resulting in extreme weather conditions such as droughts, rising temperatures and unpredictable rainfall patterns resulting in increased incidences of new pests and diseases. This has negatively affected the running of research projects whose implementation is dependent on conducive climate conditions.

In order to mitigate the effects of climate change, the Council will revise the funding guidelines to accommodate climate change aspects in project proposal formulation. Further, the Council will skew its funding portfolios towards research projects aimed at addressing climate change.

2.1.6 LEGAL

The following were the legal developments:

i) The Public Finance Management Act No.1 of 2018

The enactment of the Public Finance Management Act No.1 of 2018 provides an opportunity for prudent management of financial resources. The Council will strengthen internal controls to optimise this development.

ii) Patent Act. No.40 of 2016

The enactment of the Patent Act. No. 40 of 2016 has streamlined and strengthened Intellectual Property Rights (IPR) system which will enhance research and innovation management. The Council will therefore scale up sensitisation on the benefits of Intellectual property.

iii) Public Private Partnership Amendment Act No. 9 of 2018

Enactment of the Public Private Partnership (PPP) Amendment Act No. 9 of 2018 provides a platform for resource mobilisation. The Council will therefore enhance collaboration with stakeholders for increased support.

iv) Employment Code Act No.3 of 2019

The enactment of the Employment Code No.3 of 2019 provides for enhanced employee welfare. The Council will endeavour to domesticate the provisions of this Code, so as to improve staff motivation.

However, the law will impact negatively on the financial resources and obligations of the institution. The Council will strengthen financial management controls to mitigate the impact.

2.1.7 STAKEHOLDER AND CLIENT ANALYSIS

a) Clients and their needs

An analysis of the clients' needs is presented in the table below:

Table 1: Clients and their needs

S/N	Client	Needs
1.	Research and Development Institutions (Public and Private)	• Funding for research and development. • Support to research and development of infrastructure. • Linkages with industry for uptake of research and development outputs. • Target certain institutions with a bias in science. • Establish research and development labs in various sectors. • Linkages with other research and development performing institutions and industry for purposes of collaborative and demand driven research.
2.	Higher Learning Institutions (Public and Private)	• Funding for research and development • Support to research and development of infrastructure. • Information on funding opportunities for research and development. • Linkages with industry for uptake of research and development outputs. • Linkages with other research and development performing institutions and industry for purposes of collaborative and demand driven research.
3.	Other Science and Technology Organizations and Associations.	• Support for Science, Technology and Innovation Projects and activities.

b) Stakeholders and their interest

Regarding stakeholders, the analysis revealed their major interests as presented in the table below:

Table 2: Stakeholders and their interests

S/N	Stakeholder	Interest
1	Government Ministries, Departments and Agencies	• NSTC fully delivering on its mandate • Collaboration on promotion of technologies and innovations • Efficient management of financial resources
2	Development Organisations and Agencies	• Collaboration on Science, Technology and Innovation Programmes • Prudent utilisation of funds
3	Civil Society	• Dissemination of Science, Technology and Innovation information for the benefit of all levels of society
4	Media	• Provision of Science, Technology and Innovation content for different broadcast platforms so as to showcase what the country is doing and highlight gaps in Science, Technology and Innovation • Publicity of innovative projects in Science, Technology and Innovation.
5	Industry	• Collaboration on Research and innovation outputs/ results. • Opportunities for joint funding of research and development. • Creation of Industry linkages with research and development performing institutions for purposes of demand driven research

2.2 INTERNAL ENVIRONMENTAL ANALYSIS

This section highlights the operation of the Council and analyses its internal capabilities to establish the strengths, weaknesses, opportunities and threats (SWOT), and provide for optimisation and/or mitigation measures.

2.2.1 PERFORMANCE ASSESSMENT

This section highlights the Council's performance during the period 2014-2016. The assessment was based on an internal self-assessment conducted by staff of the Council with technical support from MDD. The rating was based on a 3-tier rating system, with the respective colour codes as follows:

a) Code 3: Green - for above average performance;
b) Code 2: Yellow - for average performance; and
c) Code 1: Red - for below average performance.

The overall performance of National Science and Technology Council during the period under review was average at **68.97%** with a rating of **2**.

The **Table 3** below summarises the overall performance of NSTC during the period under review:

Table 3: Overall Performance of the Council

	Performance (%)	**Rating**
Overall Institutional	**68.97**	**2**
Core Objectives	**51.20**	**2**
Support Objectives	**74.89**	**2**

This performance was largely attributed to the following:

a) Enhanced staff performance due to availability of qualified staff;
b) Council's strategic engagements with local, regional and international collaborative partners; and
c) Improved ICT infrastructure within the Council.

The Council recorded a number of achievements. Among these are:

a) Enhanced compliance in the registration of R&D institutions;
b) Establishment of the Annual Zambia Science Conference as the Council's flagship event for enhanced local, regional and international collaboration in science, technology and innovation;
c) Increased use of alternative communication platforms such as Website, Facebook, Twitter and the YouTube Channel; and
d) Establishment and operationalisation of Zambia Science and Technology Information Network (ZaSTIN), thereby enabling increased access to E-resources for researchers.

Despite recording major successes, the Council faced some challenges that affected the implementation of programmes during the period under review. The major challenges were:

a) Inadequate and untimely funding;
b) Inadequate transport;
c) Inadequate office space; and
d) Institutional structure not adequately responding to the needs of the science sector.

2.2.2 CAPABILITY ASSESSMENT

The institutional capability assessment conducted for the Council provided an in-depth analysis of the institution's status. The internal analysis identified a number of gaps and provided appropriate interventions as input into the preparation for the 2019 – 2021 Strategic Plan and BSC. Based on the assessment, it was established that the Institution had challenges which will be addressed by the Council to effectively implement its Strategic Plan and BSC.

The SWOT analysis identified the factors within the Institution in respect of Strengths and Weaknesses that would facilitate or hinder respectively, the implementation of the identified interventions. In addition, the analysis identified factors outside the Council in respect of Opportunities and Threats that would facilitate or hinder respectively the implementation of the identified interventions. The analysis revealed the following:

a) Strengths

The Council staff and management identified the strengths or factors within the institution that would facilitate implementation of the proposed interventions to address the identified challenges. The following are the strengths and related optimization measures:

Table 4: Strengths and Optimisation Measures

S/N	Strengths	Optimization Measures
i.	Qualified and skilled human resource to: • Expedite the development of Strategic Plan; • Develop and implement a sensitization programme for staff; • Provide input in the review of the Organisation structure • Provide input in the development, upgrading, automation and integration the requisite system • Develop and implement a skills capacity building programme.	• Involve staff in the review and development processes. • Improve conditions of service for staff.

	• Develop and implement programme to inculcate shared values • Establish an integrity committee	
ii.	Supportive Council to: • Expedite the development of Strategic Plan • Develop and implement a sensitization programme for staff. • Prioritise review of the organisation structure • Develop and implement a skills capacity building programme. • Develop and implement programme to inculcate shared values • Establish an integrity committee	Engage the Council in the programmes and provide updates on progress made and challenges faced.
iii.	Existence of manual systems as baseline to develop, upgrade, automate and integrate the requisite systems	Utilise the manual systems in the automation and integration process
iv.	Availability of qualified ICT staff	Enhance training to develop, automate and integrate systems
v.	Existence of documented values to develop and implement programme to inculcate shared values	Utilise the documented values

b) Weaknesses

The Institutional Capability Assessment also identified weaknesses or factors within the Institution that would hinder implementation of the proposed interventions to address the identified challenges. The following are the weaknesses, and related mitigation measures:

Table 5:Weaknesses and Mitigation Measures

S/N	Weaknesses	Mitigation Measures
i.	Lack of ownership of the Strategic Plan by members of staff	Prioritise the implementation of a sensitisation programme
ii.	Resistance to change may affect the development, automation and integration of requisite systems	Develop and implement a culture remodelling programme

c) Opportunities

The assessment also identified opportunities or factors outside the Council that may facilitate implementation of the identified interventions. These factors if optimized, will improve the performance of the Council. The following are the opportunities and related optimization measures:

Table 6: Opportunities and Optimisation Measures

S/N	Opportunities	Optimisation Measures
i.	Political will to develop operational frameworks and automation of systems	Leverage on policy pronouncement in the development processes.
ii.	Supportive stakeholders in the: •Implementation of a Strategic Plan; •Development and implementation of a sensitisation programme for staff; Review of the organisation structure; •Development, upgrading, automation and integration of the requisite systems; • Development and implementation of a skills capacity building	• Engage stakeholders in the review and development processes. • Enter into strategic MoUs with selected stakeholders.

	programme; •Development and implementation of a programme to inculcate shared values; and •Establishment of an integrity committee.	
iii.	Availability of consultants to provide technical support in the: • Development of Strategic Plan; • Development and implementation of a sensitisation programme for staff; • Review of the organisation structure; • Development and implementation of a programme to inculcate shared values; and • Establishment of an integrity committee.	Timely engage relevant consultants for technical support in the identified areas.
iv.	Policy pronouncement on Science and technology	Leverage on the policy pronouncement to lobby MOF and MOHE for financial Support
v.	Availability of training institutions to support the development and implementation of a skills capacity building programme.	Engage training institutions to conduct training
vi.	Emphasis on national values and principles as espoused by the Constitution of Zambia (Amendment) Act No.2 of 2016.	Development and implementation of a programme to inculcate shared values

d) Threats

In addition to the opportunities, there are threats or factors outside the control of the Council that may affect implementation of the proposed interventions. The threats identified and their related mitigation measures are presented below:

Table 7: Threats and Mitigation Measures

S/N	Threats	Mitigation Measures
	Inadequate and Erratic funding to: • Develop and implement a sensitisation programme for staff; • Develop, upgrade, automate and integrate the requisite systems; • Review and operationalise the Organisation structure; and • Develop and implement skills capacity building programme.	• Continuously engagement with Treasury on resources to implement the identified programmes. • Develop and implement a resource mobilization Strategy • Review of the structure • Enhance skills related to resource mobilisation.

3 STRATEGIC DIRECTION

Having analysed the internal and external environment within which the Council has been and may be expected to operate in the next three (3) years, the Council has set out an operational framework to guide the execution of its mandate, specifically, its programming, decision-making and resource allocation during the period 2019 – 2021 as follows:

3.1 VISION

National Science and Technology Council's vision is:

"A Smart and Value Centred Science, Technology and Innovation Council"

3.2 STRATEGIC THEMES AND STRATEGIC RESULTS

The Council identified two Strategic Themes (key result areas) with their corresponding Strategic Results in order to actualise the Vision. The Strategic Themes are:

i *Science and Technology Excellence* with its Strategic Result being *Industrial Development*. This strategic result will be attained by promoting science, technology and innovation and strengthening stakeholder linkages and

ii *Operational Excellence* with its Strategic Result being *Effective and Efficient Service Delivery*. This strategic result will be attained by improving operational systems and procedures, institutional infrastructure and equipment, and enhancing human capital and financial management

3.3 MISSION STATEMENT

To realize the Vision, the Council commits itself to the Mission Statement:

"To Promote Science, Technology and Innovation for Industrial Development"

3.4 CORE VALUES

The operations of the Council and more specifically, the conduct and behaviour of the staff for the next three (3) years will be anchored on the following core values:

3.5 STRATEGIC OBJECTIVES, INTENDED RESULTS, MEASURES, TARGETS AND STRATEGIES

The strategic objectives demonstrate the continuous improvements to enable the Council attain the desired results in the strategic themes. In the next three (3) years, the Council will pursue six (6) strategic objectives to achieve strategic results and ultimately the Vision.

3.5.1 STRATEGIC OBJECTIVE 1: PROMOTE SCIENCE, TECHNOLOGY AND INNOVATION

The Council, under this strategic objective intends to increase scientific knowledge, enhance product development, increase uptake of research results by industry, compliance to STI standards and quality service, improved science centres and develop science parks by undertaking the following:

a) Engaging relevant stakeholders for review of the Science, Technology and Innovation Policy;
b) Developing and implementing research and innovation development plan;
c) Developing and implementing an investment plan for research and development;
d) Developing and operationalising strategic linkages between R&D and industry;
e) Enhancing the implementation of a communication strategy;
f) Engaging relevant stakeholders for review of the Science and Technology legal framework;
g) Developing and implementing an infrastructure investment plan for science parks and centres; and
h) Enhancing R&D inspections

3.5.2 STRATEGIC OBJECTIVE 2: STRENGTHEN STAKEHOLDER LINKAGES

The Council, under this strategic objective intends to enhance science, technology and innovation sector coordination. To strengthen stakeholder linkages, the Council will focus on the following strategies:

a) Developing and implementing a Public Private Partnership (PPP) research and innovation framework; and

b) Enhancing the implementation of a communication strategy.

3.5.3 STRATEGIC OBJECTIVE 3: IMPROVE FINANCIAL SUSTAINABILITY

The Council, under this strategic objective intends to increase financial resources, and enhance financial accountability by embarking on the following strategies:

a) Enhancing implementation of financial controls;
b) Developing and implementing a resource mobilization strategy; and
c) Establishing a financial sustainability framework.

3.5.4 STRATEGIC OBJECTIVE 4: IMPROVE OPERATIONAL SYSTEMS AND PROCEDURES

The Council, under this strategic objective intends to improve Council's efficiency and effectiveness in service delivery by undertaking the following strategies:

a) Developing and implementing a Service Delivery Charter;
b) Developing, automating and integrating management systems; and
c) Enhancing and implementing a monitoring and evaluation framework.

3.5.5 STRATEGIC OBJECTIVE 5: IMPROVE HUMAN CAPITAL

The Council, under this strategic objective intends to enhance its human resource resulting in improved performance, satisfied staff and a positive work culture by taking the following strategies:

a) Developing and implementing a Performance Management System;
b) Developing and implementing a programme to inculcate core values in all members of staff;
c) Strengthening the implementation of a comprehensive continuing professional development programme;
d) Strengthening the staff welfare programme;
e) Reviewing and operationalising the Organisation Structure; and
f) Developing and implementing a staff recruitment and retention Plan.

3.5.6 STRATEGIC OBJECTIVE 6: IMPROVE INSTITUTIONAL INFRASTRUCTURE AND EQUIPMENT

The Council, under this strategic objective intends to create a conducive work environment by **i**mplementing the following strategies:

a) Developing and implementing an infrastructure investment plan.

The table below illustrates the relationships of the strategic themes, strategic results, strategic objectives, intended results, measures, targets and strategies (initiatives).

Table 8: National Science and Technology Council Strategic Themes, Results and Objectives

STRATEGIC THEME: Science and Technology Excellence			
STRATEGIC RESULT: Industrial Development			
STRATEGIC OBJECTIVE 1: Promote science, technology and innovation			
Intended Results	**Measures**	**Targets**	**Strategies**
Increased scientific knowledge	No. of scientific publications	15 scientific publications produced by 2021	• Engage relevant stakeholders for review of the Science, Technology and Innovation Policy • Develop and implement research and innovation development plan • Develop and implement an investment plan for research and development • Enhance implementation of a communication strategy
Enhanced product development	No. of new inventions	2 new inventions by 2021	
	No. of innovations	10 Innovations by 2021	
	No. of R&D products developed	5 R&D products by 2021	
	% of positive client and stakeholder feedback on quality of services	75% positive client and stakeholder feedback on quality of services annually	
Increased uptake of research results	40% of research results adopted by industry	40% of research results adopted by industry by 2021	• Develop and operationalise strategic linkages between R&D and industry

Compliance to STI standards	Proportion of R&D institutions complying with STI standards	80% of R&D institutions complying with STI standards by 2021	• Solicit for review of the Science and Technology legal framework • Enhance R&D inspections
Improved science centres	No. of science centres rehabilitated and upgraded	1 science centre rehabilitated and upgraded by 2021	• Develop and implement an infrastructure investment plan for science parks and centres
Developed science parks	No. of science parks established	1 science park established by 2021	
STRATEGIC OBJECTIVE 2: Strengthen stakeholder linkages			
Intended Results	**Measures**	**Targets**	**Strategies**
Enhanced STI sector coordination	No. of PPPs in research and innovation established	2 PPPs in research and innovation established by 2021	• Develop and implement a PPP research and innovation framework
	No. of science, technology and innovation fairs held	6 science, technology and innovation fairs held by 2021	• Enhance implementation of a communication strategy
STRATEGIC THEME: Operational Excellence			
STRATEGIC RESULT : Effective and efficient service delivery			
STRATEGIC OBJECTIVE 3: Improve financial sustainability			
Intended Results	**Measures**	**Targets**	**Strategies**
Adequate financial resources	% budget	30% budget increase by 2021	• Develop and implement a resource mobilization strategy • Enhance the financial sustainability framework
Financial accountability	% audit queries	Zero audit queries annually	• Enhance implementation of internal financial controls
STRATEGIC OBJECTIVE 4: Improve Operational Systems and procedures			
Intended Results	**Measures**	**Targets**	**Strategies**

Efficient and Effective service delivery	% compliance to service delivery charter	100% compliance to service delivery charter annually	• Develop and implement a Service Delivery Charter • Develop, automate and integrate management systems
Improved compliance to plans and budget	% of programmes implemented according to plans and budgets	100% of programmes implemented according to plans and budgets annually	Enhance and implement a monitoring and evaluation framework
STRATEGIC OBJECTIVE 5: Enhance human capital			
Intended Results	**Measures**	**Targets**	**Strategies**
High staff performance	% of staff achieving set targets	90% of staff achieving set targets annually	• Strengthen implementation of a performance management system • Strengthen the implementation of a comprehensive continuing professional development programme
Motivated staff	% of positive feedback from staff surveys	80% positive feedback from staff Surveys by 2021	• Strengthen the staff welfare programme
Positive work culture	% of staff adherence to core values	100% of staff adhering to core values annually	• Develop and implement a programme to inculcate core values in all members of staff
Optimal Staff	% staff against Establishment	80% staff against Establishment by 2021	• Review and operationalise the Organisation Structure • Develop and implement a staff recruitment and retention Plan
STRATEGIC OBJECTIVE 6: Improve institutional infrastructure and equipment			
Intended Results	**Measures**	**Targets**	**Strategies**
Conducive work environment	Proportion of staff satisfied with work environment	80% of staff satisfied with work environment	Develop and implement an infrastructure investment plan

4 ENABLING FACTORS

The successful implementation of this Strategic Plan and BSC will depend on the following pre-conditions and assumptions:

4.1 PRE – CONDITIONS

The following pre-conditions are the critical success factors that NSTC will need to ensure successful implementation of the 2019-2021 Strategic Plan and BSC.

a) Supportive leadership and management;
b) Adequate, qualified, competent and committed staff;
c) Ownership of the Strategic Plan and the Balanced Scorecard by all staff;
d) Adequate, efficient and effective operational systems;
e) Positive work culture; and
f) Availability of a comprehensive implementation plan.

4.2 ASSUMPTIONS

These are critical success factors outside the control of NSTC that should prevail for the successful implementation of the Plan. The following are the assumptions:

a) Supportive stakeholders;
b) Enabling Science, Technology and Innovation Policy and legal framework;
c) Stable and favourable economic environment;
d) Political will; and
e) Adequate and timely disbursement of financial resources.

5 PLAN IMPLEMENTATION

To operationalise the Strategic Plan, a costed Implementation (Operational) Plan, broken down into annual work plans, with SMART targets and schedules of activities will be developed, taking into account the available resources.

6 MONITORING AND EVALUATION

Monitoring and Evaluation (M&E) of the Strategic Plan and BSC will be vital for effective implementation and ascertaining its impact. The Operational Plan will be the basis for monitoring and evaluating the performance of the Council at three levels, namely, Individual, Departmental/Section/ Unit and Institutional.

An M&E Framework will be developed to track progress and evaluate performance against set targets and institute corrective measures timely. At individual level, a Performance Management System will be developed to monitor and evaluate the performance on a continuous basis. Review of programme implementation at Departmental/Section /Unit levels will be undertaken quarterly while at Institutional level it will be annually.

A terminal review will be undertaken at the end of the Plan period to determine the full extent of implementation of the Plan and BSC and the overall impact. The terminal review will inform the preparation of the 2022 - 2026 Strategic Plan and Balanced Scorecard.

7 APPENDIX I: 2019-2021 NSTC BALANCED SCORECARD

NATIONAL SCIENCE AND TECHNOLOGY COUNCIL 2019-2021 BALANCED SCORECARD

Vision	**A Smart and value Centered Science, Technology and Innovation Council**			
Core Values	**Integrity, Objectivity, Accountability, Innovativeness**			
Mission	**To promote Science, Technology and Innovation for Industrial Development**			
Strategic Themes	**Operational Excellence**		**Science and Technology Excellence**	
Strategic Results	**Effective and Efficient Service Delivery**		**Industrial Development**	
Strategic Objectives and Strategy Map		**Measures**	**Targets**	**Strategies/Initiatives**
Customer/ Shareholder	Strengthen Stakeholder Linkages ⟷ Promote Science, Technology and Innovation	• No. of scientific publications • No. of new inventions • No. of innovations • No. of R&D products developed • % of research results adopted by industry • Proportion of R&D institutions complying with STI standards • No. of PPPs in research and innovation established • No. of science, technology and innovation fairs • % of positive client and stakeholder feedback on quality of services • No. of science centres rehabilitated and upgraded • No. of science parks established	• 15 scientific publications produced by 2021 • 2 new inventions by 2021 • 10 Innovations by 2021 • 5 R&D products by 2021 • 40% of research results adopted by industry 2021 • 80% of R&D institutions complying with STI standards by 2021 • 2 PPPs in research and innovation established by 2021 • 6 science, technology and innovation fairs held by 2021 • 75% positive client and stakeholder feedback on quality of services annually • 1 science centre rehabilitated and upgraded by 2021 • 1 Science Park established by 2021	• Engage relevant stakeholders for review of the Science, Technology and Innovation Policy • Develop and implement research and innovation development plan • Develop and implement an investment plan for research and development • Enhance implementation of a communication strategy • Develop and operationalise strategic linkages between R&D and industry • Solicit for review of the Science and Technology legal framework • Develop and implement an infrastructure investment plan for science parks and centres • Enhance R&D inspections • Develop and implement a PPP research and innovation framework
Finance/ Stewardship	Improve Financial Sustainability	• % budget • % audit queries	• 30% budgetary increase by 2021 • Zero audit queries annually	• Develop and implement a resource mobilization strategy • Enhance implementation of internal financial controls • Enhance Financial Sustainability framework
Internal Process	Improve Operational Systems and Procedures	• % compliance to service delivery charter • % of programmes implemented according to plans and budgets	• 100% compliance to Service Delivery Charter annually • 100% of programmes implemented according to plans and budgets annually	• Develop and implement a Service Delivery Charter • Develop, automate and integrate management systems • Enhance and implement a monitoring and evaluation framework
Organisation Capacity	Improve Institutional Infrastructure and Equipment; Improve Human Capital	• % of staff achieving set targets • % of positive feedback from staff surveys • % of staff adherence to core values • % staff against Establishment • Proportion of staff satisfied with work environment	• 90% of staff achieving set targets annually • 80% positive feedback from staff Surveys by 2021 • 100% of staff adhering to core values annually • 80% staff against Establishment by 2021 • 80% of staff satisfied with work environment	• Strengthen implementation of a performance management system • Strengthen the implementation of a comprehensive continuing professional development programme • Strengthen the staff welfare programme • Develop and implement a programme to inculcate core values in all members of staff • Review and operationalise the Organisation Structure • Develop and implement a staff recruitment and retention Plan • Develop and implement an infrastructure investment plan

VISION

A Smart and Value Centred Science, Technology and Innovation Council.

MISSION

To Promote Science, Technology and Innovation for Industrial Development

National Science and Technology Council

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